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Help us help you

Last month, Digit did something unconventional, and I've got a lot of feedback about it. Ranging from abuse to high praise, and from selling out in a few areas of India, to Digit's worst showing yet in more conservative parts, it's clear that Digit made a statement, one which we thought was necessary, and which most of you agreed with. I thank you for that.

Coming to this issue, with Diwali around the corner, and the fact that you will soon start getting bombarded with offers left, right and centre, we've tried to time this two part series with a purpose. Although the festival of lights is in November, Team Digit found that many purchases are made in the month leading up to Diwali. If not purchases, then people do decide what they want to buy well in advance. For us, this seemed the perfect time to do our bit in helping you save money.

This month's cover story was born from a very simple question, "How can we get readers to Buy Smarter?" And no, it's not good enough, or possible even, to just test every product that's sold in India. Factor in all of the varying prices across regions, and you understand how hard it is to decide for you, "Here, buy this!"

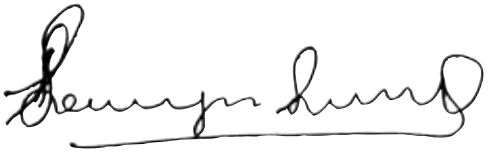
Of course, all those problems are what we try and overcome when we test products in our Bazaar section, or compare them in our comparison tests, and no, we're not going to stop doing that. However, after last month's cover story, we did feel like we needed to do more than just test and provide you with answers. What we really want is for India to start asking the right questions, for every buyer to be able to make up his or her own mind by arming them with the right information. No one knows your needs better than yourself, and if we can show you what's important and what's not, help demystify jargon, and give you little inside scoops into why things are sold a certain way... well, we think it's the best way to accomplish our goal of helping you to buy smarter.

Of course, we also have a hidden agenda, but it's not sinister or evil, don't worry. What we want is to do our bit to help improve the Indian technology market by giving it the kick in the backside it needs from time to time, instead of just lauding its accomplishments. And of course we will not be able to do any of that unless you help us to.

The very first thing we need your help with is to take part in our annual Icons of Trust survey. Available at www.thinkdigit.com/trust this is a survey we conduct in order to praise the brands that you report back to us as offering great products and even better customer service experiences. This will be published in parts in upcoming issues, and will also be made available online on thinkdigit.com for everyone (brands and readers) to see. We're hoping this annual survey will help millions of Indians choose the right brand, based on a brand's past track record. It will also help brands that are lagging behind in terms of the technology used in their products, the services they offer, or just a failure to impress upon buyers such as yourself. We also request you to share the link with as many friends as you have via Facebook, email or otherwise, because we want feedback not just from our readers, but from anyone who has bought a technology product.

The second thing we need your help with is awareness. We would like you to read this month's cover story, and use the knowledge you gain to not just help yourself, but also friends and relatives who are buying products this festival season (or even in the future) buy smarter. Another easy way to accomplish this is to give your copy of the magazine to someone who is going out to buy a product from amongst the categories we've covered, so that they can use it to arm themselves with the right knowledge to buy the best product they can afford.

As always, I also welcome feedback from you on more ways Digit can help, and encourage readers who have had a torrid time with customer service to write in to me, and someone from Team Digit will try and help you get some justice. Also, if you just want some buying advice that this issue couldn't provide you with, write in to agent001@thinkdigit.com.





Robert Sovereign-Smith
Executive Editor
editor@thinkdigit.com

"What we really want is for India to start asking the right questions, for every buyer to be able to make up his or her own mind by arming them with the right information"

Liked or hated this column? Write in to *editor@thinkdigit.com* and let me know your thoughts.

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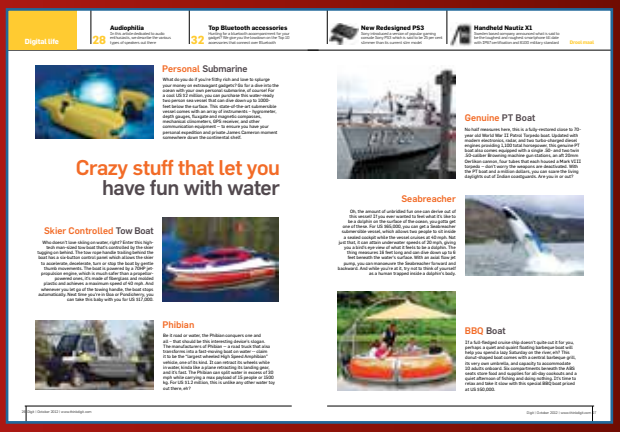
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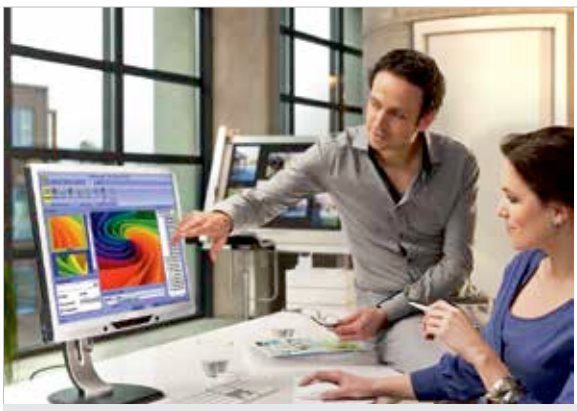
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Published, Printed and Owned by Nine Dot Nine Interactive Pvt. Ltd. Published and printed on their behalf by Kanak Ghosh. Published at Bunglow No. 725 Sector - 1, Shirvane, Nerul, Navi Mumbai. 400706. Printed at Print House (India) Pvt. Ltd. R-847, TTC Industrial Area, MIDC, Rable, Navi Mumbai 400701.
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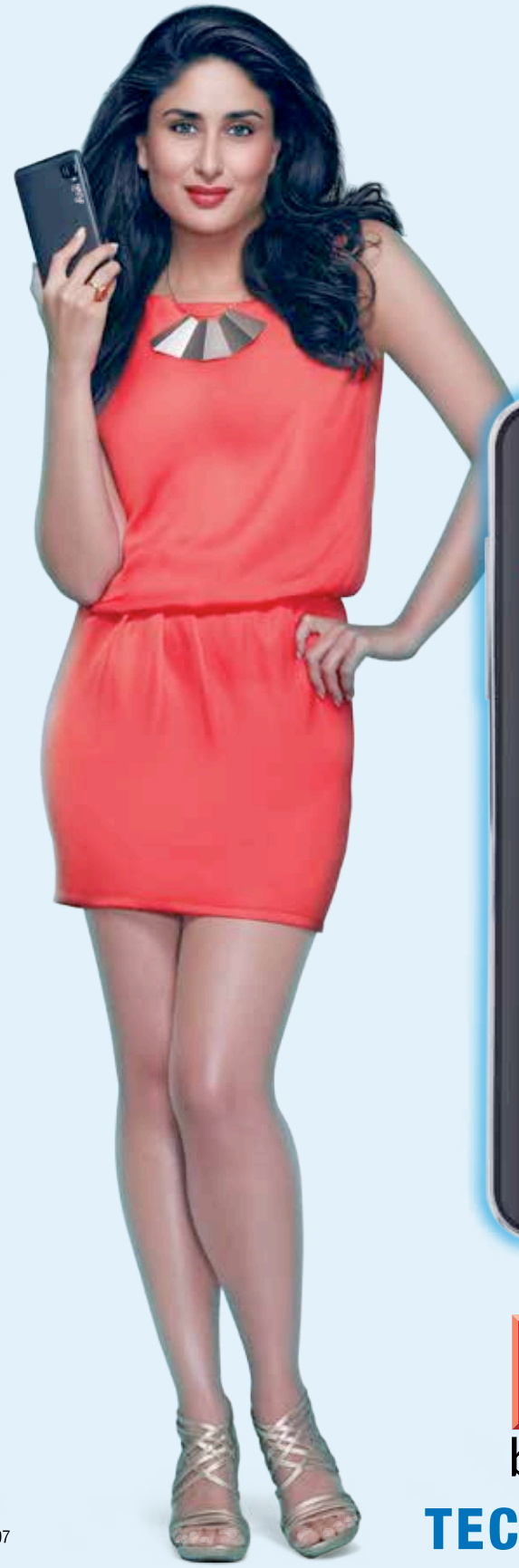
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Feedback for the September 2012 issue of Digit



Hi Digit,
Thanks so much for publishing such a fantastic magazine & Fast Track booklet and for the superb software collection on DVDs. I've read other competing technology magazines such but none seem to match Digit. I'd like to request you to mention some emulator software such as Bluestack and KEmulator since there many people like me who want to run Android, Java , Symbian & BlackBerry apps & games on their PCs. Finally, thanks also for August issue's full offline Wikipedia, Fast Track to Free Everything and September's Tribe Ascend review. Keep it up Digit!

Yugojyoti Muna

Thanks for the kind words, Yugojyoti. We put our heart and soul into bringing out the magazine month after month, and often that involves a lot of sleepless nights and long hours of work. But emails like yours and others help us understand that all that effort is worth it, that we're actually making a difference, however small that may be, into our reader's lives. Siddharth, Jayesh, Anirudh and others from the team have weekly Tribes Ascend sessions, so make sure you follow our Facebook and Twitter pages to know the schedule. Gaming with our readers is fun, to say the least. I've passed your suggestions about the software to Anirudh, and hopefully we should be able to include some of the tools (if not all) in next month's DVD. Until then, happy reading!

Robert

Fantastic job on the September issue. You all did a great job and I liked the idea of you providing a fantastic multi-player game on the DVD (which I could tell by the score you gave). Unfortunately, I couldn't even update Steam as my network speed totally sucks (9 kbps). Keep up the good work.

Miri Agami

We all felt really strongly about the topic of the cover story last month, and obviously didn't mince any words on the cover of the magazine itself. We're glad you liked the issue and the story, as we think it's a common issue faced by tech enthusiasts based out of India. I'm sorry to hear your internet connection is really slow, hopefully you be able to upgrade it eventually and join us in an online frag session real soon. Cheers!

Siddharth

First of all, I want to say that Digit is my favourite magazine and I buy it every month. It has helped me a lot till now. But, I wanted to suggest that you be more tech savvy please. Try to include only technology-related things. (Because it's a tech magazine) Contents of the Omega DVD are awesome but try to improve Alpha DVD. Fast Tracks are very nice, too, but this month's issue of Fast Track wasn't so useful. *Going Green* is a serious issue but it's not related to technology in any way. Hope that you will try to improve your magazine.

Jaskaran Singh

Thanks for writing, Jaskaran. Your suggestion on being more tech savvy is noted, but let me tell you that at no point of our edit meetings do we have a discussion on making the magazine less tech savvy. After all, whom are we writing for if our readers can't up their tech ante by reading our articles? Rest assured that we strive for reaching new heights as far as tech savviness is concerned. But that doesn't mean not throwing a few light-hearted stories in the mix. We think that helps lend the magazine a nice balance in terms of reading it end-to-end. We respectfully disagree with you on your views regarding Going Green not related to technology. All the advances and research underway in reducing our carbon footprint, ensuring minimum impact on ecology are related to advances in technology. But thanks for your suggestion on improving the magazine.

Jayesh

✉ One word to describe Digit – Wow! You guys are simply awesome. This is my first letter to you. I've been reading Digit for over 2 years. It keeps growing and gets better with time just like wine – the older it gets, the better its quality becomes. You have a way of writing even the most complex terms and topics in simple plain English, which is great! The content of the entire magazine is crisp and delightful. The DVD content is very useful and of high quality. As I've been reading Digit for over two years I have a few observations. First of all, can you please enlarge the World View section? I know it's already four pages but extra pages would be a welcome addition. Secondly, about the advertisements: I know they're a must for funds but please try to minimize them as much as possible as they've increased

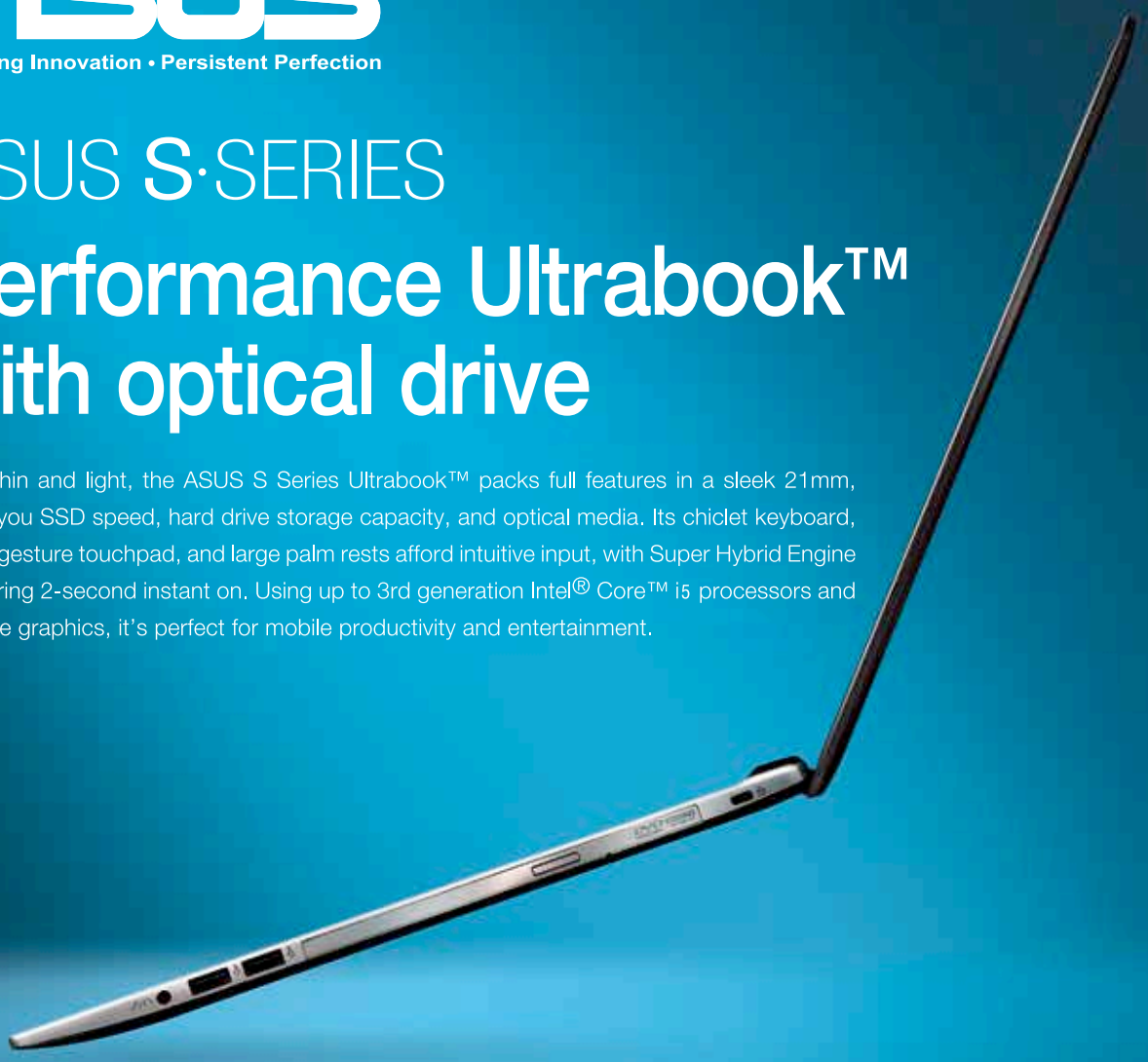
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	S56CA-XX030R Black ■	S56CA-XX056R Black ■	F501A-XX187R White ■
CPU	Intel® Core™ i3-3217U (1.6G, 3M)	Intel® Core™ i5-3317U (1.7G,3M)	Intel® Core™ i3-2350M (2.3G,3M)
OS	Genuine Windows® 7 Home Basic	Genuine Windows® 7 Home Basic	Genuine Windows® 7 Home Basic
LCD	39.6cms (15.6) HD Glare	39.6cms (15.6) HD Glare	39.6cms (15.6) HD Glare
VGA	Intel® HD 4000	Intel® HD 4000	-
RAM	4 GB DDR3 1600	4 GB DDR3 1600	4 GB DDR3 1600
HDD	500 GB 5400rpm + 24G SSD	750 GB 5400rpm + 24G SSD	500 GB 5400rpm
Warranty	1 Year Global Onsite*	1 Year Global Onsite*	1 Year Global Onsite*
Accessory	Bag	Bag	Bag
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HCL Ultrasmart ME Series 3074

HCL introduced its first Ultrabook at ₹51,990. Does HCL stand chance with HP, Samsung, Acer already in the Ultrabook market? We'll have to wait and watch

LETTER OF THE MONTH

✉ Here are some thoughts your August issue generated:

- If there's one thing I really enjoy reading, it is your editorial. The standard of English is very good and your essay is generally excellent, thoughtful and sometimes thought-provoking.
- This month's cover took me by surprise. However you may justify it in your editorial, it reflects badly on the magazines' personality.
- The piece on browsers in this month's issue on pages 104-105 has a serious omission in my view. Lunascape browser, now on version 6, deserves a write-up alongside Maxthon. You'll have to find out for yourself why people like me think it's a serious contender.
- What have you done to your website? It has flashing lights like an ambulance and a police car combined. Or a disco. Customer focus rather than consumer focus, I would suggest. I was on the website trying to find a catalogue of contents from your past DVDs so that I could locate Windows XP Service Pack 3 in a particular month, and I got completely lost in the labyrinth that you've created. Never found the catalogue/spreadsheet that I thought you had. Get a new web designer.
- As for the reviews of cameras, why don't you come to some agreement with www.dpreview.com who do a thoroughly professional job of this. Well, what I'm trying to say is that you need to come up to that kind of standard to be taken seriously.



It's not as bad as it sounds. I still buy your magazine every month and try to separate the information from the noise. Maybe I have just been around longer than most of your readers and the eyes have shrunk in their sockets and can't pop out at all the razzmatazz. But then if it sells, what the heck.

Vijay Singh

Thanks for the generous praise, it keeps us going. And your rather imaginative analogy for our website will be taken constructively. Our web team has long acknowledged the problem and is working towards a solution. Of course, as much as we'd like to speed up the process, these things take time.

Robert

lately. Thirdly, I find a few mistakes in spellings and vocabulary, so make proofreading stricter! And lastly, could you increase the number of pages, making it at least 150 pages? I'm sure all the readers would highly appreciate it. Anyway, those were my whims and fancies. Digit is a really informative magazine and we can't find an equivalent to it in the market in term of both – quality and quantity. Keep up the good work guys and hats off to the awesome team behind the best tech magazine out there! Digit is a true technology navigator!

Nepuni Basena

It's great that you like the World View section, it's a big hit with our readers. We'll definitely think about increasing its pages and the total number of pages of the magazine. For a start, all our special issues (like this one) are generally thicker than regular ones, so ensure you don't miss out on them. While adverts are necessary, as you said, we go a long way in ensuring they are unobtrusive and don't hamper the reading experience. We also try very hard to keep advertisements out of important stories.

Robert

CORRIGENDUM

On the cover of Fast Track to e-commerce, "Top 100 e-commerce sites" should be read as "Top 50 e-commerce sites". We regret the oversight.

✉ I started reading Digit a few months back, and I like your way of presenting content in the magazine. Thank you very much for providing such useful information to tech people like us. I am a Web Developer with Deep Red Ink in Hyderabad and would like more web development related articles in the magazine since I'm a beginner. I hope you can provide it in the coming issues.

And now I want to talk about the magazine and DVD contents. First of all, thanks for providing such beautiful up-to-date content about present as well as future tech issues (I love it). As far as the DVDs are concerned, what you're providing is okay but can be somewhat improved. Please include articles that teach more about topics such as programming languages. It will help many beginners like me in the developer field.

I also want to talk about the Fast Tracks that you've provided upto now. They're awesome...No words to describe them. Thanks a lot. Please continue them in future editions as well.

My suggestions/opinions about Digit:

- Provide better content in DVDs since you're giving dual layer (8GB)
- Give more programming related content in the DVDs
- Please reduce the cost of the magazine. Because of your magazine, I became the Tech-Guru of our school. I just wanted to share my feelings.

Robert and Team are working very hard... GO DIGIT !

Rudra Pratap Singh

For web development, keep an eye out for the Devworx section in the magazine. You can also bookmark *devworx.in* to stay updated on most things related to web and mobile development in India, upcoming trends, etc. We continually try to have a theme on the bundled DVDs, but at the same time ensure there's plenty of variety to keep different readers interested. We do include programming tools from time to time on our DVDs, but may be we need to re-look at the frequency of these initiatives. You can also email *dvd@thinkdigit.com* for any specific requests.

Anirudh

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THE ALL NEW PULSAR 200NS

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Our 4 valve Triple Spark Engine is truly revolutionary. And it delivers optimum performance at all speeds, resulting in greater power and better mileage. The creation of this engine led to a host of other fundamental changes in the new Pulsar. We made a perimeter frame to hold the engine. Brought in a radiator to keep it cool. Changed the suspension to Nitrox mono shocks. And added Petal disc brakes to the front and rear.

The aggressive naked sports styling is also by design: designed to announce that the bike goes from 0 to 60 kmph in just 3.6 secs. There are many other features too, like an underbelly exhaust and 6 speed gears. All of which ensure that the Pulsar continues to be India's No.1 sports bike.

The Pulsar 200NS is available in:
Cherry Black, Mustard Yellow, Tosca Red and Saffire Blue.

The Pulsar Range

Pulsar	*200 NS*	*220cc*	*180cc*	*150cc*	*135cc*
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Einstein's brain
National Museum of Health and Medicine has developed an iPad app that reveals the detailed scans of Einstein's brain

Nitro Pro 8
Nitro Pro 8 is a feature-packed PDF program with simple interface. It is a good alternative over the popular Adobe Acrobat

Eenie Meenie Miney Mo

More than a dozen cameras, a wide range of tablets and some of the biggest game launches in a long time, all at once. The hapless consumer is spoilt for choice but what can he do?

Cameras, cameras and more cameras

Photokina, held in Germany this year, saw the launch of a staggering number of brand new cameras. "*full-frame*" was the buzzword this month with no less than three, ground-breaking full-frame cameras being launched. Camera makers seem to have finally given up on introducing newer and more useless fluff and seem to be finally focusing on the stuff that really matters; namely, image quality and sensor size. Allow us to give you a quick roundup of the cameras that were launched.



Nikon D600

Fujifilm showcased their X-E1, a stripped down version of the superb, but very expensive X-Pro 1, incorporating the same brilliant X-Trans sensor, but sacrificing the hybrid viewfinder. Another camera launched by Fuji was the X-F1, a point-n-shoot variant of the X-E1 mentioned here, sans the inter-changeable lens and a much cheaper, but still good, EXRCMOS sensor. The prices of both cameras are expected to start at around ₹70,000 and ₹27,000 respectively.



Sony RX1

Coming to Sony, they launched a couple of new cameras; the world's first digital full-frame point-n-shoot camera- the RX1 (we say digital because most film point-n-shoot film cameras have always been full frame!) and the Alpha 99, an SLT type camera. Yes, you read that right, finally, a full-frame point-n-shoot camera. Now how will you convince yourself (more importantly, your better half) that you need this? Well, full-frame brings with it vastly improved control over noise, improved low-light sensitivity (for those wonderful night portraits) and excellent image resolution, and we're not talking megapixels here. The fixed, but fast, 35mm lens is perfect for portraits and all those family photography needs and all this in a very pocket-friendly form-factor. The Alpha 99 has the same sensor as the RX-1, but is an SLT camera so should have faster focus and does have inter-changeable lenses. Both cameras are expected to retail at the same price of around ₹1,50,000. Expensive, but then again, they do have full-frame sensors.

More full-frame news; Nikon launched the world's smallest and lightest DSLR, the D600. They only managed to hold onto that title for four days though, Canon immediately responded by launching the world's smallest and lightest DSLR, the EOS 6D. Both cameras are pretty much the same and before you Nikon fanboys start hooting about the 28 AF (39 vs. 11 on the 6D) point advantage, try and remember that those 39 points cover the same area as those on the D7000, which is a DX camera, rendering most of those points redundant on the D600.



Fuji X-E1

Olympus put on a good show as well, introducing the E-PM2, E-PL5 and XZ-2. Both the E series cameras have borrowed the sensor from Olympus's own, fantastic (for a micro four-thirds system), OM-D camera and are both supposed to be priced upwards of ₹33,000. The XZ-2 is a refresh of the XZ-1 and upgrades the sensor to a back-illuminated CMOS sensor from the CCD of the latter. This will, in theory, translate to better image quality and improved battery life. Panasonic also managed to sneak in a micro four-thirds camera, the Lumix GH3, its USP being the, on paper, stellar video recording capabilities and weather-sealed body.

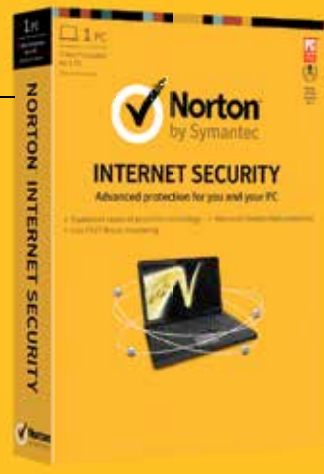


Canon EOS 6D

Tablets for everyone

Next in our list of stories is the tablet market. We're finally seeing some Microsoft Windows 8 based tablets coming out now. With the OS set to launch sometime in October, this is one OS we're keeping a very close eye on. Speaking of Windows 8, at a coding fest held in Bengaluru by the Karnataka Trade Promotion Organization (KTPO), Microsoft set a Guinness World Record by having the maximum number of developers (2567) coding simultaneously for a period of 18hrs straight! Well done Microsoft! Also at the AppFest, JonDeVaan,

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Skullcandy PLYR1
Skullcandy's new gaming headphones feature a foldable boom mic and inline remote for volume control



Epson Moverio BT-100
Epson launched its new Android-based wearable device in India which allows you experience larger than life movies and images



Kindle Fire HD 7

corporate VP for Windows Development announced that developers can keep the first $25,000 revenue that their app generates, and 80% of the rest. This is an interesting move and it remains to be seen what the actual result of the AppFest was. Yes, there were almost 3,000 developers coding, but unless there were some tangible result, the fest will not have really achieved much. Hopefully, we'll finally see some apps in the Windows Marketplace. Still on the topic of Microsoft, Dell announced the Latitude 10 series tablets, featuring a 10.1" IPS panel, Intel Atom processor, 2GB RAM, 128GB SSD, all coupled with an 8MP rear cam and a 720p capable front cam. There are no prices available as yet and we assume those will be available when Windows 8 officially ships this month. Also, in Microsoft-related news, the Milaglow Kupa X11 is on its way to India. A very unusual tablet in the sense that is costs upwards of ₹50,000, but runs on Windows 7 and that too a trial version. The device itself seems to be designed with enterprise users in mind, with the documentation specifically stating that it is compatible with existing "large-scale and small-scale ERP and CRM systems for all industries." That may be so, but come on, Windows 8? Hopefully there will be an update coming soon.

More good news, ASUS has announced that the Nexus 7 tablet will finally be "officially" available in India by November. This long-awaited tablet has been turning heads with its powerful hardware; it's running on a Tegra 3 after all, and it's exceptionally low asking price. We only hope that it actually sells at that low asking price when it finally arrives.

In other news, Amazon announced two brand new kindle fire tablets, the Kindle Fire HDs; one featuring a 7", 1280x800 resolution screen and a 1.2GHz dual-core processor and the other with an 8.9", 1200p screen with a 1.5GHz dual-core processor. The prices



Google Nexus 7

start at $199 for the 7" version and around $299 for the larger variant. This puts the 7" version in direct competition with the Nexus 7 and is a match-up that we are eagerly awaiting to see. Both tablets are quite similar in size, but the latter is exceptionally powerful and runs on JellyBean and the former runs on ICS but will provide a complete Amazon experience when it comes to movies, books, etc. Honestly, we don't know how relevant the Kindle fire would be in India though. We'll be keeping a close eye on this to see how events unfold.

Last, but definitely not least, leaked images of a supposedly "official" iPad mini has been doing the rounds of the internet. A 7" iPad will very likely put a spanner in the works when it comes to Google's and Amazon's plans, hopes and dreams with regards to the Nexus 7 and Kindle Fire HD. This is considering that Apple will price this possible tablet just right. There are indicators of an October launch, but don't get your hopes up just yet, almost everyone thought it would be announced with the new iPhone. With the comparatively lack-luster iPhone 5 being the fastest selling iPhone yet, we wonder how the world will react to an iPad mini.

To wrap up the tablet news, IDC, a research firm, recently released data claiming that an estimated 117 million tablets will be sold this year, a 165million+ the next year, and more than 260 million by 2016. Now those are truly impressive figures. Roughly 60% of the devices are expected to be Apple devices, with the rest being Android and a miniscule 6-10% being relegated to Windows 8. These are just estimates though and it will be nice to see what actually happens.

Games galore

Along with all the above product launches, September also saw the release of some of the biggest titles to launch this year, including Borderlands 2, Torchlight 2, F1 2012 (demo on our DVD), FIFA 13, the Battlefield 3: Armored Kill expansion pack and many more.

Borderlands 2 is the hotly anticipated sequel to one of 2009's surprise hits, Borderlands. The sequels feature far more immersive environments, more characters, a larger open-world and, not surprisingly, a bazillion more guns. We're currently in the process of reviewing the game ourselves



and we can tell you this, we're having a blast!

FIFA 13 and Battlefield 3 need no introduction, suffice to say that the armored kill expansion for the latter brings the largest ever playable maps to Battlefield 3, not to mention a whole slew of new weapons and vehicles to master.

Torchlight was another surprise hit when it was launched and Torchlight 2 carries on that fine tradition by tweaking



the gameplay and vastly improving the overall experience, by keeping the essentials intact; a game to watch out for. F1 2012 is the 3rd game in the Formula 1 series of games officially licensed to Codemasters and they have been hard at work to try and provide the best F1 experience on PC. The differences are quite visible with cars feeling faster, more due to the enhanced environmental feedback than anything else, and a simplified tutorial and racing experience for beginners. A must have game for the true F1 fan and racing fanatic alike.

We'll be reviewing most of these games shortly so keep an eye on out site, and the magazine, for further updates.

REPUBLIC OF GAMERS

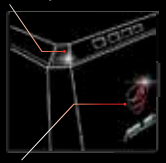
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OS	: Genuine Windows® 7 Home Premium
Chipset	: Intel® Z77
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CPU	: 2nd Generation Intel® Core™ i3-2120 Processor
OS	: Genuine Windows® 7 Home Basic
Chipset	: Intel® H61
Memory	: 2GB DDR3
Graphics	: Integrated Intel® HD Graphics
HDD Storage	: 500GB
Optical Drive	: 24X SuperMulti DVD burner



CM6830 (i5)

CPU	: 2nd Generation Intel® Core™ i5-2320 Processor
OS	: Genuine Windows® 7 Home Basic
Chipset	: Intel® H61
Memory	: 4GB DDR3
Graphics	: Integrated Intel® HD Graphics
HDD Storage	: 500GB
Optical Drive	: 24X SuperMulti DVD burner



CG8270 (i7)

CPU	: 3rd Generation Intel® Core™ i7-3770 Processor
OS	: Genuine Windows® 7 Home Premium
Chipset	: Intel® H77
Memory	: 8GB DDR3
Graphics	: GT 640 3GB DDR3
HDD Storage	: 1TB
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A whirlwind month in the world of smartphones

We saw plenty of action in the mobile space last month, with a host of new handset announcements, including the much-awaited iPhone 5

The past month in the world of mobiles has been an interesting (and busy) one, with quite a few high-profile unveilings, and even a few launches. We also had our fair share of scandalous debacles, from faked ads to buggy releases.

The state of the art is catching up with many of our dreams – with desktop processing power of not so long ago already in the palm of our hands. Faster, smaller, and vitally – more efficient processors and GPUs are making their way into devices rapidly – with multi-cores, multi-threads, and advanced management of system resources already here. Exciting times, to say the least.

This month, we saw Apple finally unveil the controversial new iPhone, Nokia showcase its stretched hopes in WP8-based Lumia devices, as well as new high-powered Android flagships from manufacturers like Sony and LG. Apart from Nokia, Samsung and HTC also showcased their Windows Phone 8 wares in September, ones we can't call flagship devices though, with those companies' extensive and successful Android portfolios.

Apple iPhone 5

A lot has already been said about the iPhone 5, from expressions of disappointment for the lack of innovation, to excitement for the quintessential smartphone's further sophistication and fulfilled potential. The new iPhone looks very similar to its predecessors, the iPhone 4 and 4S, but is much slimmer and lighter, despite a larger display. Certainly a feat of miniaturization, the iPhone 5 is twice as fast, and more efficient.



Hey presto! A new iPhone has arrived!! Time to break the bank!!!

Made of aluminium and glass, the iPhone 5 is 7.6mm thick, and weighs 112 grams. The new 4-inch 16:9 Retina Display has a resolution of 1136x640 pixels, with a pixel density of 326ppi. The new Apple iPhone is powered by the A6 chipset, that's 22 percent smaller than the A5, which powers the iPhone 4S. Apple didn't reveal much, but reports suggest the A6 chipset is a custom design on the ARMv7 architecture, and boasts of a dual-core 1.02GHz processor.

With the more efficient processor, Apple also claims the following battery life for the iPhone 5 – 3G talktime/browsing up to 8 hours, Wi-Fi browsing up to 10 hours, video playback up to 10 hours, music playback up to 40 hours, and a standby time of up to 255 hours. Apple's new iPhone comes with an 8MP iSight camera, capable of 1080p HD video recording. It has an f/2.4 aperture five-element lens, a BSI sensor, and a Hybrid IR filter. For more details about the iPhone 5, visit our online portal, here: http://dgit.in/NIfDZ3.

Windows Phone 8 devices from Nokia, Samsung and HTC

Nokia has all its hopes once again resting on the new line-up of Lumia smartphones, unveiled as the Lumia 920 (with PureView technology) and Lumia 820. As we've spoken of earlier, previous-gen Windows Phone 7.5 handsets will not get the bump up to Windows Phone 8, effectively killing a whole generation of devices.



HTC Windows Phone 8X

Like the earlier Lumia devices, the two Nokia Windows Phone 8 handsets are bright and colourful. Both devices bear a dual-core Qualcomm Snapdragon S4 1.5 GHz 'Krait' processor, Adreno 225 GPU, 1 GB of RAM, 32 GB of built-in storage, 7 GB of free SkyDrive storage, built in NFC and LTE, microSIM only, access to Nokia Music, as well as location services like City Lens. Users will also have access to Nokia Drive, with free voice-based turn-by-turn navigation, offline maps, and a commuting feature. The devices will ship sometime in November, and for now, pricing details are unknown.

Designed with a polycarbonate shell, the Nokia Lumia 920 does come with PureView technology, however, without the massive sensor of the original 41 MP Nokia 808 PureView. It instead sports an 8.7 MP camera with LED 'pulse burst flash', which is capable of 1080p HD video recording at 30 fps. It features floating lens technology, which supposedly rivals the optical image stabilization (OIS) of DLSRs, and enables the sensor to capture more than 5-10 times the light of regular smartphone cameras.

The Lumia 920 has a 4.5-inch curved glass IPS LCD display, which with Nokia's PureMotion HD+ technology,

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LG CINEMA 3D TV
For smarter, next-gen entertainment

There are 3D televisions, and there is the Cinema 3D television from LG Electronics. Straight out of the box, the Cinema Screen design gives this a very unique look, while making it very comfortable for the viewing experience. Its 1mm thick bezel is among the slimmest you will encounter on flat panel TVs sold in the market. It will look brilliant in your living room, with the minimalistic design, without affecting the cinema experience viewing experience. The lack of a frame gives it the edge-to-edge feel, and that helps while viewing 3D content.

Where the LG Cinema 3D televisions have an advantage over the rivals is with viewing 3D content. While its rivals have Active 3D technology, LG uses the Film-type patterned retarder (FPR) technology. With Active 3D, you get active glasses, which are powered by a battery and hook up to the TV wirelessly. The result is that they are very heavy to wear and become a tad uncomfortable when viewing 3D for long durations – issues like headaches, eye strain and even nausea are common reactions of active 3D viewing. Whereas with LG's FPR technology, the non-electronic polarized glasses use a special film attached to the panel. Since it needs no power and there isn't a wireless module in handshake mode with the TV, these glasses are very light. Over long durations, passive 3D is relatively more comfortable to wear and enjoy, without feeling the reactions that are usually attached with the active 3D technology type. Also, passive 3D glasses are less expensive in comparison.

Unlike conventional 3D TVs, LG's Cinema Smart TV has the flicker-free certification. This also helps a lot in reducing eyestrain when watching 3D content. Another upside of this is that it provides brighter 3D reproduction, and there is a bit of less blur as well during fast motion visuals.

It is a given that a lot of your favorite movies from your collection will be in 2D, since 3D Blu-rays have not been in the market for long. Worry not, because the LG Cinema 3D TV will seamlessly upscale 2D content to 3D, and you won't even realize it! This is true for any source connected to the Cinema 3D TV via HDMI, including something like a DVD player, DTH set top box or an HD media player.

No matter what content you are watching – original 3D or upscaled 3D, you can manage the depth level. The lower you set the 3D depth level, the less apparent the three dimensional images. The more you slide it towards the high setting, the deeper and more realistic visuals look. This is mostly left to the viewer to decide how much depth he wants, rather than forcing it automatically on them.

For the gamers out there, you can now enjoy your favourite games in 3D, with the dual play feature. The first step is to up-convert 2D to 3D. Then, if this is a muti-player gaming session you are embarking on, the Dual Play feature lets both users enjoy the game in full screen, on the same TV! Essentially, the TV automatically sends different images to the two glasses being used at that time. No need to compromise with the gaming experience at all.



THE SOUND EXPERIENCE OFFERED BY LG CINEMA 3D TVS HAS BEEN TUNED AND MATCHED FOR 3D CONTENT, OFFERING THE MULTI-DIRECTIONAL EFFECT THANKS TO SOUND ROAMING ACROSS THE SPEAKERS

There is a lot of goodness for those who are watching 2D movies and videos off a USB drive connected directly to the LG TV, as well. Any video that is lesser than 1080p will be automatically upscaled. On a big screen, low resolution content would not look the best, and the enhancement gives it more crispness, colour depth and detailing that would otherwise have been missing.

LG's Cinema 3D TV range includes a magic remote in addition to the conventional TV remote, and has three modes – point, gesture and scroll. This will be very useful when you are browsing the web services on the TV, just like a wireless mouse.

LG's Cinema 3D televisions are equally meant for a wide demographic of users – the tech enthusiasts, those who want to experience 3D, those who want to buy a product that is future proof and also for families where you have multiple people watching 3D at the same time, and active 3D televisions wont offer the most optimum experience to those who aren't directly in front of the panel. The attractive pricing doesn't peg this any higher than most rival 3D televisions out there. And for the brands that have lesser priced televisions, the buyers appreciate the extra and unique features LG Cinema 3D televisions offer, and are ready to pay extra for future proofing their investment. ■



Nikon Coolpix S800c
Nikon introduced its first Android powered Camera at Photokina. S800c will ship with Android 2.3 Gingerbread



Facebook Mobile Ads
Facebook is now reportedly testing mobile ads in third party apps on iOS and Android platform which will target you to the app store and websites

delivers a "better than HD resolution" of 1,280 x 768 pixels (WXGA). The touchscreen will also be navigable with gloves on. The Lumia 920 supports wireless charging with Qi interoperability standards.

The 9.9 mm-thick Nokia Lumia 820 is almost identical on the specs sheet, except for a smaller 4.3-inch 800 x 480 pixel AMOLED display, and the lack of a PureView camera - 8 MP camera with Carl Zeiss optics and dual-LED flash instead (also capable of 1080p HD video recording), coupled with front-facing VGA camera. For more, visit our website: http://dgit.in/UodCzs.



Samsung ATIV S

Samsung was the first to unveil a Windows Phone 8 handset, with its 8.7mm-thick Samsung Ativ S at IFA 2012. It features a 4.8-inch Super AMOLED Gorilla Glass 2 display with a 1,280 x 720 pixel resolution, a dual-core 1.5 GHz Qualcomm Snapdragon S4 Krait (MSM8960) processor, 1GB of RAM, an 8 MP rear autofocus camera with LED flash and 1080p HD recording. The Windows Phone 8-based Samsung Ativ S will come in 16 or 32 GB storage variants. Weighing 135 grams, the Ativ S is powered by a rather large 2,300 mAh battery.

HTC recently also unveiled two new Windows Phone 8 devices, the HTC Windows Phone 8X and 8S, due in November. The HTC Windows Phone 8X runs on a Qualcomm Snapdragon S4 chipset, bearing a dual-core 1.5 GHz processor, the Adreno 225 GPU, coupled with 1GB of RAM. The 8X has a 4.3-inch Super LCD 2 display, with a resolution of 1,280 x 720 pixels (342ppi), and Gorilla Glass 2 treatment, apart from special anti-glare lamination. 10.1mm-thick, the HTC Windows Phone 8X is built on a polycarbonate unibody design, offers 16 GB of built-in storage, and weighs in at 130 grams. It features an 8 MP autofocus camera with a BSI sensor, LED flash, and an f/2.0 lens, with a 28 mm FOV.

The HTC Windows Phone 8S, runs on Qualcomm Snapdragon S4 chipset, with a dual-core 1 GHz processor, Adreno 225 GPU, coupled with 512 MB of RAM. The 8S features a 4-inch S-LCD display with an 800x480



Nokia Lumia 920





Apple iPhone5 pre-orders
Despite the bad critics Apple has managed to pull 2 million pre-orders that is almost the double of iphone 4S



Google Nexus 7
Announced in the Google I/O 2012 the tablet is set to release in India by the month of November starting from ₹12,000

pixel resolution, and a Gorilla Glass screen. Find more details, here: http://dgit.in/OOEA0D.

New Flagships – LG, Sony and Samsung

The LG's new Android flagship, the Optimus G has been officially launched in Korea, and is expected globally in November. It runs on a 1.5GHz Snapdragon



Samsung GALAXY Note II

S4 Pro quad-core processor, combined with 2GB of RAM and a quad-core Adreno 320 GPU. The Optimus G bears a 4.7-inch True HD IPS display said to deliver 470 nits of brightness, avoid screen burn-in, and use 70% less power than a regular LCD when displaying all-white. The Optimus G also features G2 Hybrid Touch technology, with a 30% thinner gapless panel. Depending on the region, the Optimus G will be available with either an 8MP autofocus camera with LED flash, or a 13MP camera. The Optimus G also bears a super-strength 2,100 mAh battery that is rated to last 800 full recharge cycles.

Samsung's newest smartphone-tablet hybrid, the Galaxy Note II, boasts of a 5.5-inch display (1280x720) and is powered by a 1.6GHz quad-core processor under the hood. The device runs on Android 4.1 Jelly Bean and boasts of a whopping 2GB of RAM just like the Galaxy Note 10.1. The Note II also has an 8MP rear facing camera and a 1.9MP front facing camera. The device comes with three storage options – 16/32/64GB. The Galaxy Note II is quite slim measuring a mere 9.4mm in thickness and light as well, weighing a mere 180 grams. The device will be available in two colours - marble white and titanium grey – and houses a 3,100mAh battery.

Sony has unveiled three Playstation Certified smartphones in its Xperia range called the Xperia T, Xperia V and Xperia J at IFA Berlin 2012. The Xperia T is Sony's flagship, and in a market dominated by quad-core processors, bears a dual-core 1.5GHz Krait processor and Adreno 225 GPU, coupled with 1GB of RAM. It also features a 13MP camera that boasts of the Sony Exmor R sensor with 16x digital zoom. Shipping with Android 4.0 ICS, it will receive an upgrade to Jelly Bean soon. It features 16GB of built-in storage expandable up to 32GB via microSD card. Also onboard is a 4.6-inch Reality Display (1,280x720) with Mobile BRAVIA engine. Sony also announced the Xperia TX, which is identical to the Xperia T but is aimed for the Asian market. For more details about the Xperia T, V and J, click here: http://dgit.in/SKUAlm.

The last, but not the least flagship unveiled this month, the Motorola Razr i, takes processing power on a phone to the next level. An Intel-based Android 4.0.4 ICS smartphone, the Motorola Razr i is powered by a 2GHz Intel 'Medfield' Atom Z2460 single-core 32nm processor with Hyper-Threading (implying two threads) coupled with 1GB of RAM. The Medfield Atom Z2460 processor is the same as the 1.6GHz offering on the Lava Xolo X900, but overclocked to 2GHz. This makes us wonder as to battery life and heating issues on the Razr i with its higher-clock, for it was something the Lava Xolo X900 itself faced.



Motorola Razr i

The Razr i features a 4.3-inch Super AMOLED Advanced display with a 540x960 pixel (qHD) resolution. It also bears an 8MP autofocus camera with LED flash and 10fps burst mode, capable of 1080p HD video recording, and HDR. It also features a 0.3MP front-facing camera, 8GB of built-in storage (5GB user-available), active noise cancellation with dedicated mic, and a 2,000 mAh battery. It is just 8.3 mm thick, and weighs in at 126 grams – admirable, with the Kevlar-coating. It runs on a 2,000 mAh battery, which according to Motorola, will provide at least one full day of continuous use.

Debacles Abound

While Nokia Lumia 920 did initially impress the industry with its new PureView technology, a faked set of ads soon tainted the image. To demonstrate the effectiveness of the optical image stabilization technology and the floating lens, Nokia aired an advertisement, of a happy couple riding around on a bike, while the guy films the girl with the Lumia 920. The ad looks really well done, given that it was shot on a cellphone, but the only problem is, it wasn't.



LG Optimus G

For a fraction of a second, you can see the couple pass in front of a reflective surface, in which what is clearly visible is a white van with a complete camera crew sitting in it. Once the fakery was revealed, Nokia followed it up with a public apology on their blog along with a video that they claim was actually shot on the new phone. No reflective surfaces in this one for sure.

Given that the Nokia's lifeline has been hanging by a thread, this massive fiasco of a fake advertisement would definitely impact their reputation badly. One can't help but wonder if Nokia is just tethering on desperation now.

Apple to had its fair share of issues with iOS 6, including some update problems for some users, who couldn't connect to Wi-Fi after, and extremely buggy Maps app – a replacement of Google's Maps service with Apple's own app. Glitches include wavy roads (a road across Hoover dam takes a plunge into the river beneath), monuments/structure/land bodies misnamed (Coral Sea, Berlin in Antarctica), missing cities (The second biggest city in Sweden, Gothenburg), lack of detail, etc.

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Archos 101 XS 10.1
Archos has built another decent business making budget Android tablet with Android 4.0



Turtle Beach N11
Turtle Beach will releasing entry-level Ear Force NLa, N11 stereo headsets for the Wii U faithful till 2013

News from around the Web

Amazon finally announced and launched its India Kindle Store online, while Facebook went on a clean-up drive, and Twitter unveiled a spiffy new design

The internet and its associated services did not evolve much, with few launches, and few updates making their presence felt. The usual suspects such as Facebook, Twitter, LinkedIn, and Bing, made a few changes to their products, with some carrying out maintenance activities, and others introducing refreshed designs. However, Amazon took a big step forward in India, more on that below:



Amazon's India Store lets you buy the Kindle eReader in Rupees

Amazon India Kindle Store

Amazon launched the India Kindle Store on Amazon.com, found at amazon.com/kindle-storeindia. Users get access to wide selection of e-books, including Indian authors, and exclusive works, priced in Indian Rupees. The popular Amazon Kindle e-book reader is also available via Croma retail stores. For now, it looks like only the 6-inch Kindle E-Reader Wi-Fi will be available.

Amazon also launched Kindle Direct Publishing (KDP), a free and easy way for authors and publishers to make their books available to Kindle customers in India and around the world on both Kindle devices and free Kindle reading apps. So far, Amazon's only real foray in the Indian market had been with Junglee.com, a product aggregator that tries to help consumers find the best deals online, and offline in India.

These initiatives might face the full brunt of India's government policy shortly however, even resulting in shutdown of Amazon's operations in India. According to reports, the Indian government's policy on FDI in retail has a section that forbids foreign retailers (like Amazon.com) to engage in any sort of online e-commerce activity. The new regulations restricts foreign retailers to operate through a bricks and mortar store only, and not indulge in e-commerce, with no exceptions.

Twitter and LinkedIn redesigned

Twitter will be seeing some changes with respect to user profile pages. For starters, Twitter has introduced the ability to set "header images" just like the "cover photos" on Facebook. The new profile also moves the profile photo from an obscure corner on the left to dead center. Even the photo stream has been moved up to draw attention.

The rollout of the new profiles for now is just optional, but eventually, all profiles will follow suit and be upgraded to the new look. LinkedIn in the meanwhile redesigned its Company Pages, in a bid to simplify its core products, and increase engagement between job seekers and employers on the professional networking website.

LinkedIn in a blog post said that the redesigned Company Pages have better visuals and less stuffed with widgets. The company reveals that it has introduced a new and improved algorithm to make sure that the updates posted by companies are customised for the user visiting the network, ensuring the user gets to see the maximum number of relevant posts.

Facebook cleans up its act

Facebook has also started some maintenance activities, finally deleting unwanted photos from servers, and removing fake pages and profiles. The company has fixed a glitch that allowed links to deleted photos to stay live long after a user thought they'd been banished from the site.

Photos that users have deleted are quickly removed from Facebook profiles and newsfeeds, but if you happened to have a link to the deleted pic, that link stayed live for some time. An update to the Facebook network, however, has fixed the problem, a spokesman for the social network said.



LinkedIn redesigned

Facebook announced stepping up efforts to keep its brand Pages free from 'fake' Likes. The social networking company believes the move will benefit the legitimate users and Page owners. While updating its integrity system, Facebook says new security measures will automatically detect and delete Likes received by malware, hacked accounts or purchased in bulk as well as those who have been deemed as deceived users. The move will help remove less than 1 percent of any given Page's Likes.

Finally, very soon users will now be able to search Facebook photos within the Bing search engine.

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* As per ISO/IEC19752 standard

Crestra/Ricoh/05/12



PS Vita joins the club
Sony set to release PlayStation Plus for the PS Plus members this November with features like Instant Game Collection



Assassin's Creed III
Get ready for the new episode of Connor with added realistic elements to the game along with high end graphics

Don't get lost with Apple Maps, turn to these free alternatives

In a very short time after its release on iOS 6.0, Apple Maps has been the object of ridicule and frustration. We recommend these free alternatives

Nimish Dubey
readersletters@thinkdigit.com

If you are among those who have been very disappointed with the new maps on iOS 6, you are in very good company. Fortunately, there are a number of free apps out on the iTunes App Store that will let you find your way around town, without paying anything more than data charges. They might not be as good as Google Maps, but while we wait for a Google Maps app (will one ever come?).

Navfree GPS Live India

Perhaps the best free navigation app for those in India, Navfree claims to operate on what it says is "map data created by a community of thousands of users around the world." Yes, we know that may not sound too reassuring to some people, but the app does work rather well for well-known areas. It gets data from OpenStreetMap and also has the massive benefit of working offline (it is a 157 MB one time download). It comes with features like navigating to an address, points of interest, the option to send location to your social networks also to tweak to night mode, if need be.

Global Navigator Free

Its interface might not set the world on fire, but there is no doubting the utility of this handy app. Actually, the app lets you choose from a variety of maps - including Google Maps, Yahoo! Maps, Bing Maps, and Google Earth - as you make your way around town. You can save routes and do local and global searches, but do so online if you have unlimited data connection, because this app heads to the Web to pull apps. You will need to upgrade to the Pro version if you want offline browsing. Still, if it is just a quick navigation fix you are looking for with lots of maps to choose from, then this is not a bad option at all.



Global Navigator Free finds your way

PD Maps Worldwide Edition

Another app that works by letting users access a number of mapping services through its interface, PD Maps can summon up maps from OpenStreet, Yahoo!, Google, Bing, Panoramio and a few others, and in a rather innovative twist, lets you choose not just the mapping but also the routing service. So one could actually choose to see a map in Bing and opt for Google's routing service, which is neat but not recommended, as it does take forever to load even on a 3G connection. Which incidentally is something we need to warn you about - there is no offline navigation here (unless you are willing to pay for it), so be ready to dole out data charges every time you go navigating.

Waze

It is called the social GPS app by many people and remains one of our firm favourites among free navigation options. Although it first made waves because it allowed users to share traffic data with each other, alerting people to jams on the way, and also to swap messages in the process, Waze is also a very nifty navigator in its own right and works very briskly too. It comes with social media connectivity as well as the ability to join or create driving groups to find out what's happening on routes you frequently use. The spellings of some Indian locations can be a bit weird but we love the speed with which the app works and its social angle. And it is totally free - no hidden print - with maps that get updated fairly regularly.

Glympse

We can hear the howls of protest from those who have used this nifty little app in the past. Yes, Glympse is not classically a navigation app - it is designed for the user to be able to share their location and travel route with a select group of people. But it DOES have a navigation aspect. If you are sent a person's location, you can use the app to get directions to either that location or their destination, using Google Maps online. No, not classical navigation as we know it, but very very handy for those occasions when you have to see a person rather than visit a place and do not know where they are. Just make sure both of you have Glympse installed on your devices.

Google Maps

If you are really yearning for the Google Maps experience, well, it is just a URL away. Point your browser to http://maps.google.com and you will be able to see Google Maps in all its glory and get navigation options that include walking, driving and public transport. No, it won't work as smoothly as it did through the native app but it's still handy



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Holding an amazing record of acquiring 11 companies so far Google just added one more to its list by taking in the Instagram competitor

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Find best deals in shops around you

DelightCircle is an app to help you pick out the best deals in the shops around you, and also hand you points for just walking into them. A must-have for all ye Android and iOS shopaholics. Available for Android, BB and iOS, DelightCircle is a free app which specialises in telling you about the best shopping deals as well as new product arrivals available in your vicinity. We tried out the iOS and Android apps in a number of areas of Delhi and came back impressed. At 3-4 MB, the app is not a stiff download, and one can log in by either registering (it is free) or using your Facebook ID. You will have to give the app permission to access location information as that is essential for its functioning. Once all that is done, you can get set to check the best discounts and new products in town.

You start off by searching either for deals in your vicinity or just browsing for offers in general. In the latter case, the app will also show you how far you are from the outlet which is providing the offer. There are a number of product categories in which you can check out offers – home decor, groceries, footwear, restaurants, electronics, apparel, etc. Selecting an offer will show you the details (what discount, what products, et al) under each one, and in the case of a store, will also give you details of the new products that have arrived there.

While DelightCircle is an awesome app for those who believe in following and spending on the big brands and outlets, it does tend to come up short when one looks at smaller shops and relatively non-descript brands, which have not signed up for the service. And for obvious reasons, one cannot add the names of these shops on one's own. It also needs to be pointed out that the app works best on a 3G connection - yes, it can get by on EDGE/GPRS but only if you have the patience of a saint who is trying to please a God who comes with a really long penance requirement.



We be shopping for deals

We cannot really argue with the fact that DelightCircle does deliver a dollop of shopping delight for those ceaseless shoppers who are always on the look out for great deals. If you are one of those who can seldom resist the call of the mall or the high-profile market, this is the app that you simply must have. Read more: http://dgit.in/NL5kDt

Beyond Infinity Blade, Horn rises

When it comes to gaming on the iPad, most people tend to agree that *Infinity Blade* pretty much lays down the benchmark in terms of gameplay and graphics. But what if someone could take those amazing looks of *Infinity Blade* and blend a solid storyline and elements of puzzle solving into it? Well, that is what Phosphor Games Studio (they who gave us the eerie *The Dark Meadow*) and Zynga have tried to deliver with Horn, a blacksmith's apprentice in the mystical city of Rynes. He lives with his aunt and is on the brink of manhood (these gaming heroes almost always are) but then wakes up one day to find himself in a strange tower.



Infinity Blade, who? Horn blows it away to smithereens

Stepping out, he sees a world replate with lush grass, flowing water and (here comes the catch) monsters that seem right out of some medieval Transformers film. They are huge and generally are not fond of human company, which means that Horn has to pick up weapons and battle them time and again. The fights are reminsicent of Infinity Blade as you take on brutes that are many times your size and move ponderously but with destructive intent. Gameplay is refreshingly fluid and intuitive, overall.

What really stands out about *Horn* is the game's overall presentation, which is simply breathtaking. The graphics are absolutely top notch, the music superb and the voice-acting (something that does tend to get ignored on mobile platforms) is brilliant. Top that off with a storyline that does enough to keep you riveted and we have perhaps a game that can rival Infinity Blade in the flaunt-iPad-as-a-gaming-device stakes. Read more about the game here: http://dgit.in/SN0imO



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28 **Audiophilia**
In this article dedicated to audio enthusiasts, we describe the various types of speakers out there

32 **Top Bluetooth accessories**
Hunting for a bluetooth accompaniment for your gadget? We give you the lowdown on the Top 10 accessories that connect over Bluetooth



Personal Submarine

What do you do if you're filthy rich and love to splurge your money on extravagant gadgets? Go for a dive into the ocean with your own personal submarine, of course! For a cool US $2 million, you can purchase this water-ready two person sea vessel that can dive down up to 1000-feet below the surface. This state-of-the-art submersible vessel comes with an array of instruments – hygrometer, depth gauges, fluxgate and magnetic compasses, mechanical clinometers, GPS receiver, and other communication equipment -- to ensure you have your personal expedition and private James Cameron moment somewhere down the continental shelf.

Crazy stuff that let you have fun with water

Skier Controlled Tow Boat

Who doesn't love skiing on water, right? Enter this high-tech man-sized tow boat that's controlled by the skier tugging on behind. The tow rope handle trailing behind the boat has a six-button control panel which allows the skier to accelerate, decelerate, turn or stop the boat by gentle thumb movements. The boat is powered by a 70HP jet-propulsion engine, which is much safer than a propellor-powered ones, it's made of fiberglass and molded plastic and achieves a maximum speed of 40 mph. And whenever you let go of the towing handle, the boat stops automatically. Next time you're in Goa or Pondicherry, you can take this baby with you for US $17,000.





Phibian

Be it road or water, the Phibian conquers one and all – that should be this interesting device's slogan. The manufacturers of Phibian -- a road truck that also transforms into a fast-moving boat on water -- claim it to be the "largest wheeled High Speed Amphibian" vehicle, one of its kind. It can retract its wheels while in water, kinda like a plane retracting its landing gear, and it's fast. The Phibian can split water in excess of 30 mph while carrying a max payload of 15 people or 1500 kg. For US $1.2 million, this is unlike any other water toy out there, eh?



New Redesigned PS3

Sony introduced a version of popular gaming console Sony PS3 which is said to be 25 per cent slimmer than its current slim model



Handheld Nautiz X1

Sweden based company announced what is said to be the toughest and roughest smartphone till date with IP67 certification and 810G military standard



Genuine PT Boat

No half measures here, this is a fully-restored close to 70-year old World War II Patrol Torpedo boat. Updated with modern electronics, radar, and two turbo-charged diesel engines providing 1,100 total horsepower, this genuine PT boat also comes equipped with a single .50- and two twin .50-caliber Browning machine gun stations, an aft 20mm Oerlikon cannon, four tubes that each housed a Mark VIII torpedo -- don't worry the weapons are deactivated. With the PT boat and a million dollars, you can scare the living daylights out of Indian coastguards. Are you in or out?

Seabreacher

Oh, the amount of unbridled fun one can derive out of this vessel! If you ever wanted to feel what it's like to be a dolphin on the surface of the ocean, you gotta get one of these. For US $65,000, you can get a Seabreacher submersible vessel, which allows two people to sit inside a sealed cockpit while the vessel cruises at 40 mph. Not just that, it can attain underwater speeds of 20 mph, giving you a bird's eye view of what it feels to be a dolphin. The thing measures 16 feet long and can dive down up to 6 feet beneath the water's surface. With an axial flow jet pump, you can manoeuvre the Seabreacher forward and backward. And while you're at it, try not to think of yourself as a human trapped inside a dolphin's body.





BBQ Boat

If a full-fledged cruise ship doesn't quite cut it for you, perhaps a quiet and quaint floating barbeque boat will help you spend a lazy Saturday on the river, eh? This donut-shaped boat comes with a central barbeque grill, its very own umbrella, and capacity to accommodate 10 adults onboard. Six compartments beneath the ABS seats store food and supplies for all-day cookouts and a quiet afternoon of fishing and doing nothing. It's time to relax and take it slow with this special BBQ boat priced at US $50,000.

TDKs new offerings
TDK announced four new speakers: Wireless Weatherproof Speaker; Wireless Boombox; Wireless SoundCube and Wireless Charging Speaker at IFA, Berlin



Jarre Aeroskull
No those aren't funky shade-holders, but a cool speaker designed by Jarre Technologies

AUDIOPHILIA: Types of speakers

We give you the basic soundbytes on speakers and their types. Which one resonates best with you?

Nimish Sawant
nimish.sawant@thinkdigit.com

We all have seen speakers evolve over time. Back in the early 90s, as kids, we were blown away with the cupboard-sized speakers that we saw in the Micheal Jackson hit ***Black or White***. In this day and age, speakers have shed their bulk. Where back in the day the audio sources were equally hefty, the audio source for which current generation speakers are designed can fit in your pocket.

So what really is the science behind these everyday instruments? What decides a speaker's design? We explore various types of speakers and how they work. And also get back to the age-old form vs function debate.

1 HORN SPEAKERS

Remember the logo of the famous recording label called HMV? It had a dog peering into a triangular thing. It is the same thing that you see atop those old gramophones. It is called the Horn Speaker, one of the earliest form of loud speakers. Horn speakers are passive components and do not use electricity. The thinner part of the horn near the driver element is called the 'throat' and the wide opening at the other end is called the 'mouth'. Mechanical gramophones used them as early as 1857, but nowadays you do get electric horn speakers as well.



Due to the conical design of the horn speakers, the horn speaker does not amplify sound from the driver element but tends to improve the coupling efficiency between the driver and the air. The smaller diameter high pressure condition at the throat of the horn speaker is converted to a larger diameter low pressure condition at the mouth. This increases the sensitivity of the speaker thereby leading to an increase in the volume of the sound. To get a more bass-heavy sound, the length of the horn mattered in direct proportion.

2 ELECTRODYNAMIC LOUDSPEAKER

This is the loudspeaker that is most commonly used in the speakers all around us. It uses an electromagnetic coil and a diaphragm to create sound. It comprises four main parts – a stationary magnet, a coil of copper wires, a suspender spider and a cardboard/paper cone which acts as a diaphragm which is suspended. As you pass current through the copper coil, also known as the voice coil, electricity is generated, which interacts with the magnetic field of the permanent magnet to cause displacement. This displacement causes the suspender spider and in turn the diaphragm to vibrate thereby producing sound. A particular speaker is designed to produce a specific range of frequency. Different diaphragm materials will produce different kind of sounds.

Good quality speakers have a woofer, a mid-range driver and a tweeter included within an enclosure. Each of these sub-parts can cater to different frequency bands – the mid-range tweeters take care of mid-range frequencies, woofers take care of low frequencies and tweeters are concerned with higher frequencies. Using an electrical circuit known as a crossover which comprises inductors, capacitors among other electrical components, the signal coming from the source can be split up into various



frequencies – low, mid, high – and each of these frequencies can be channeled to the respective speakers which are optimised to output them. As for the enclosure, it's a very vast topic and perhaps deserves a separate write-up in itself.

3 WIRELESS SPEAKERS

They are very similar to normal speakers except for the fact that they transmit audio signals using radio frequency (RF) waves instead of using cables. The wireless speakers comprise

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Bose SoundLink Air
Bose recently announced its first Apple AirPlay device - the SoundLink Air which allows you to play music from your Apple devices over WiFi



Speaker-fitted bed?
Time4sleep has come out with a Sound leather bed that has a speaker section fitted into the head-rest.



a normal speaker unit along with an RF transmitter and receiver and antennas. The stereo system has a transmitter which will convert electrical signal to radio waves. These radio waves are broadcast by the antenna on the stereo system, which are received by the antenna and receiver on the wireless speaker. This signal is then converted back to electricity. An amplifier boosts the power of the signal thereby driving the speaker. Nowadays a lot of speakers incorporate bluetooth technology, where as long as your speaker or headphone is seen as a bluetooth device, it can be paired to play music off any bluetooth enabled device such as your phone or tablet. While they help in reducing that menance called wires you will still need to power these speakers by either connecting them to a power source or using batteries. The sound quality may not be audiophile-grade, but you still have the convenience of setting up the speakers anywhere.

4 FLAT-PANEL SPEAKERS

With our increasing affinity towards slim-everything and minimalist design, it is only natural for bulky speakers to make way for something more aesthetic and which just disappears in the background. Enter flat panel speakers, which can be hung on walls or



made in neutral colours which make them less conspicuous. It is difficult to make electrodynamic flat panel speakers for the simple reason that it is difficult to vibrate the entire diaphragm evenly, while being placed so close to the coil. As a result the frequency response is not so great. But there are work-arounds.

Voice coils are mounted on flat panels which act as sound sources. Light materials such as styrofoam are used to make flat panel speakers.

5 ELECTROSTATIC SPEAKERS

This is completely different in principle from an electrodynamic speaker, in the sense that it uses a high voltage electric field instead of magnetic field to



drive a statically charged thin membrane. This thin membrane is the diaphragm that pushes the air molecules to produce sound. It is surrounded by metal panels (stators) that receive the audio signal from the amplifier. There is a small gap between the stators and the membrane which is covered by spars which prevents the membrane from getting in contact with the stators. The diaphragm (membrane) get its charge from the power supply which charges it positively. It stays constantly biased that way. Whereas the stators are connected to the amplifier. The contacts from the amplifier pass through a step-up transformer and connect to the stators. This causes the stators to be oppositely charged. The diaphragm gets pulled towards the negatively charged stator whereas the positively charged stator pushes it. As the sound-waves pass through the amplifier, the polarity on the stators keeps changing, thereby causing a constant back and forth motion of the diaphragm which ultimately produces the sound.

Apart from being flat in nature and aesthetically pleasing, this speaker has a uniform force across the full surface of the driver. It is much lighter than a traditional electrodynamic speaker provided the air displacement is the same in either case. Another important factor is that there is fairly little lag between the original audio signal and the audio output. In electrodynamic speakers, the pronounced lag can make distortions very prominent.

6 PIEZOELECTRIC SPEAKERS

Piezoelectric speakers as the name suggests work on the piezoelectric effect: which is basically that charge accumulates in certain materials such as crystals, ceramics, etc., based on the mechanical stress applied. In a piezoelectric speaker, there is a thin polarised ceramic plate which is attached to a diaphragm film. When voltage is applied to the ceramic plate, it starts vibrating thus converting electrical energy into mechanical stress thereby producing the sound. They are most commonly found as beepers in your electronic devices or as tweeters in computer speakers. They have a threshold for higher frequencies and are resistant to loads that would harm voice coils in most of the high frequency drivers. They are also comparitively cheaper and do not take up much space.

One of the major disadvantages is that its frequency response is not that great as compared to traditional speakers, which is



the main reason why it is used in non-critical single frequency applications. They can also be used in sonar applications, where they act as sound transmitters as well as receivers.

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Ringya App
Ringya lets you snap photos of your business cards and paper lists to create contact groups on your phone



Casio Exilim EX-H50
Looking for a superzoom camera without the bulk of a DSLR? Casio's Exilim EX-H50 is a pretty slick proposition announced at Photokina 2012

Cool Bluetooth gadgets worth the money

Who doesn't like surrounding themselves with Bluetooth accessories for their electronic gadgets? We celebrate this facet of human nature

Priyanka Mathur
readersletters@thinkdigit.com

How convenient would life be if everything turned wireless? In the present world that sees technological advancements every minute, it wouldn't be wrong to believe that everything can be present at our fingertips. Let us discuss some of the cool Bluetooth-capable gadgets, that are now your wireless puppets.

Polaroid PoGo Instant Mobile Printer

We'll start with my favourite. The Polaroid's PoGo printer(₹3,835) prints 2x3 -inch-coloured photos under a minute directly from your phone or digital camera. It runs on ZINK (Zero Ink) technology. The photo paper has microscopic crystals that are activated by heat in the printer to produce colour. The device has a range of over 35 feet, and the rechargeable battery runs for about 15 prints. The photos are smudge-proof with a glossy finish. They are also water- and tear-resistant. Shop today at http://dgit.in/MZGj7A.

InsectDroids

This one is for the smart kids. A company named D-RED came up with a new iOS app called InsectDroids, for children of ages 5+. It is designed to control small plastic bugs of the same name. You can make these insects scamper about on the floor using your iPhone or iPad. It comes with a rechargeable battery. The toy will cost you close to ₹2,500 (http://dgit.in/S5x2d3).

Medisana TargetScale

The Medisana TargetScale is a Bluetooth-capable weighing scale that shows you accurately your body mass index (BMI), body fat and water, plus muscle and bone mass aside from your weight. The "smart scale" has flashing rings which gives it a futuristic look, more like the Star Trek transporter. It works in conjunction with a VitaDock app, and sends data to your iPhone or iPad so that users can analyse their progress on the go. It will cost you USD 130 (http://dgit.in/PMtyO6), and it isn't available in India.



Polaroid PoGo Instant Mobile Printer



Medisana TargetScale: Weight Scale from the Future

Qi-wear Stereo Bluetooth Sunglasses

Stereo Bluetooth connectivity and eye protection in one package. The Q-i-wear Stereo Bluetooth Eyewear by iharmonix is designed with dual microphones to cancel ambient noise for clear communication and noise-isolating ear-tips to reduce noise levels by up to 42 decibels. It has on-frame controls and can deliver up to 4 hours of talk time, 8 hours of music play and up to 7 days on standby when fully charged. They come with scratch-resistant and replaceable lenses in clear, gray and amber. It'll cost you USD 300 (http://dgit.in/LPaN7X, no available shipping to India).



InsectDroids: Bluetooth-controlled bugs

Logitech diNovo Mini Keyboard

It's compact, it's wireless and it takes full control of your home entertainment PC setup. The keys are twice the size of a BlackBerry, but it encourages thumb-typing. The control pad lets you change from touch-pad-style control to directional up-down-left-right controls by sliding a small switch. The keyboard has a 45-feet range and its battery should run for two weeks of on-and-off use. The diNovo Mini is also compatible with the PlayStation 3, but lacks Apple and Xbox360 support. A well-integrated mouse-pad, backlit keys, multiple connectivity options and media buttons make

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HP Pavilion dm4-3010tx
Not yet settled with Ultrabook? HP Pavilion dm4-3010tx is one of the best options for all the laptops out there priced at Rs 50,690



Dell Latitude 10
Dell has launched its Windows 8 tablet Latitude 10 with Intel's Atom Z2670 CPU and 2GB of RAM



Qi-wear Stereo Bluetooth Sunglasses



Logitech diNovo Mini Keyboard

the diNovo a valuable asset. Buy it for just ₹4,999 (http://dgit.in/LIpr5B).

Cobra Tag

How often do you forget your car keys, or your smartphone when you leave the room? Cobra Tag is designed to hang on your keychain, and uses the Bluetooth technology so you never lose your phone or your keys. It creates a two-way separation alarm between your Android or BlackBerry smartphones and the tag. If you walk away with your phone, and the connection is broken, both your phone and the tag start emitting a high-pitched noise reminding you to come back for the keys. If that's not enough, the Cobra Tag app can send you a text message, email or tweet to inform you that you've lost your belongings. And for the unmindful people like us, it sends a map to locate the whereabouts of your device. Take note that this device will cost you close to ₹3,200 (http://dgit.in/NjXHCu).

Beam Bluetooth Toothbrush

Now flash your tooth, with Bluetooth. It is true that for most of you, brushing your teeth would not be on top of your priority list. Beam Technologies came up with this high tech toothbrush with sensors, that monitors your oral hygiene habits and sends analysis to your smartphone via Bluetooth. To lure people into brushing



Cobra Tag: So you don't leave anything behind



Lego Mindstorm NXT Robot Kit

for 2 minutes (dentist recommended) it also allows you to play music while brushing. Parents can keep a track of their child's brushing habits by pairing all Beam Brushes to the same smartphone. Later versions will track how much time you spent in scrubbing certain areas of your mouth, and help improve your oral hygiene. So, there's no way out for the sloth in you. What's next, Bluetooth floss? It costs USD 50, and its sales are yet to reach India.

Lego Mindstorm NXT Robot Kit

This shows the real potential of the Bluetooth technology. The Lego Mindstorm NXT 2.0 for you geeks features 32-bit microprocessor, a large matrix display, 4 input and 3 output ports, and Bluetooth and USB communication link. It has ultrasonic, touch and colour sensors and 3 motors to make your robot alive. Basically, it's a bunch of electronic parts, motors, gears and cams that can be put together to create different robots that respond to



Beam Bluetooth Toothbrush



OnStar FMV: Rear View mirror to your help

programs you create and transmit via Bluetooth. Once it's together, you can wirelessly tell your robot to move, spin, make noises and even pick up a ball with its claw. It can be easily programmed using a software on your Mac or Windows with an intuitive drag-n-drop interface. The programs are transmitted to the robot from up to 25 feet away. Show off your creation, or take it apart and start over. There's no limit to what you can build with this kit. Go ahead and buy it for just ₹18,739 at http://dgit.in/Lce7sd.

OnStar FMV

Once found only in General Motors vehicles, the OnStar FMV- "For My Vehicle" is now available as an add-on rear view mirror for a wide variety of other cars. Who knew safety could come in this little a package? The GPS enabled device offers accurate turn-by-turn voice directions, hands-free phone calls and all sorts of vehicle assistance. Sync your phone via Bluetooth and make calls without taking your eyes off the road. OnStar FMV provides Automatic Crash Response, 24/7 emergency services, stolen vehicle location assistance and roadside assistance. It will be your favourite assistant on road. This behind-the-wheel peace of mind costs you USD 300 plus installation charges, and about USD 200-300 a year for the OnStar services. Unfortunately, we don't have this service in India as of now.

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THIS IS ONE FAB TAB!

And then the techno-gods smiled. They had successfully shrunk the clunky PC. Or, made the cell-phone bigger, depending on the way you look at it. Lo and behold! The tablet PC was born. It went on to become a staple of every backpack. Today, whether you want to save time or waste it, the tab is the way to go.

So, what's "fab" about the Reliance 3G Tab with seemingly so many options available in the marketplace today? Well, for one, it comes with everything. Literally. The Tab runs on Android 2.3 Gingerbread OS. The roomy 7″ multi-touch capacitive touchscreen is ultra-responsive. Under the hood of this refined machine you'll find a 1.4GHz processor, 4MB of internal memory and 512MB RAM to boot. Not to mention 32GB of expandable memory.

Now here's the fun part. The Reliance SIM is pre-loaded with talk time and free 3GB of data, so you can browse the net, chat, kill time on Facebook and what not. Reliance's unparalleled 3G network allows you to use the dual cameras to make free video calls to other Reliance phones or tabs for 3 months. It also comes pre-loaded with McAfee Mobile Security for 1 year. And just so you feel you've got bang for your buck, you get 2 months subscription for free movies from Bigflix.com! Apps for Facebook, Twitter, Gmail, YouTube and Google Maps come pre-installed as well. Now it's up to you to decide – a boring old tablet, or the fully loaded, fab Reliance 3G Tab?

put these on your tab

What makes a tab really fab? The yummy goodness of apps, of course. Here's our selection of the finest from the app world to max out your Reliance 3G Tab with.

INSTAGRAM – Who doesn't love this nifty app that turns everyone into a professional photographer? Don't forget to share your pics with the world on sites meant for those who are Instagrammed.

MX VIDEO PLAYER – We've all been through this: you've borrowed your friend's external drive and copied a bunch of movies. Trouble is, some of them are in formats that don't play on your tab. With the MX Video Player, you can kick back and watch your favourite flick, no matter what .xyz format it's in.

TEMPLE RUN – Is it possible to develop a game more addictive than the legendary Angry Birds? The answer: Temple Run. Don't forget to get the newer, more addictive versions.

TED – The official TED (Technology Entertainment and Design) app is guaranteed to make you smarter. Watch the brightest minds in the world share their brilliant ideas. And exercise those grey cells of yours too.



Heavyweight Veteran *vs* Lightweight Newbie

WHY THE DSLR?

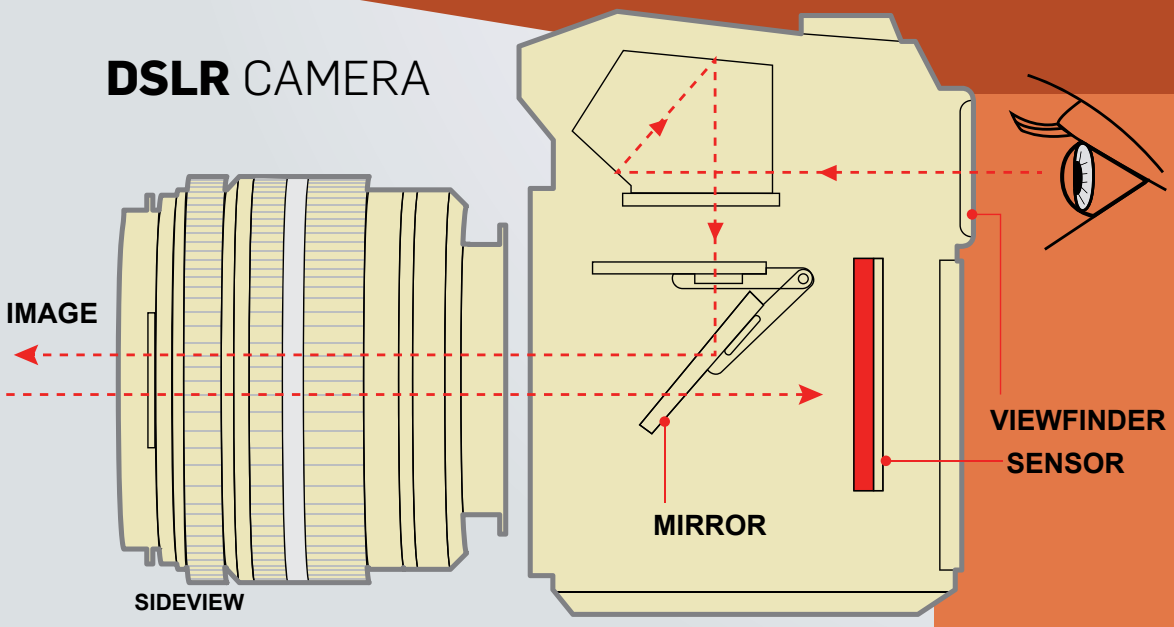
The modern day DSLR is an evolutionary marvel, and precisely why it's the most favored tool for photography amongst the professional and amateur community alike. With a versatile body that can be shaped in favor of being light weight, or in favor of being as tough as a tank, these cameras also incorporate the most cutting edge imaging technology.

USP

Besides being an ergonomic delight, these cameras have become a symbol of professionalism. Offering the abilities that range from stopping a speeding bullet in midair to capturing the long arm of our galaxy. A DSLR is the best means of experimenting, and the most effective tool for creating.

THE HOW

What makes DSLRs unique is their ability to display the image that comes 'Through The Lens' and into the viewfinder. This is achieved using a mirror. The mirror is placed right in front of the sensor, which bounces the light through the prism and into the viewfinder. This eliminates any lag betweenwhat he sees, composes for, and consequently shoots.



Reigning heavyweight champion in photography, DSLR, take on the challenge of the latest, portable Mirrorless ILC. We try to explain the differences between the two types of cameras and how they work

WHY MIRRORLESS

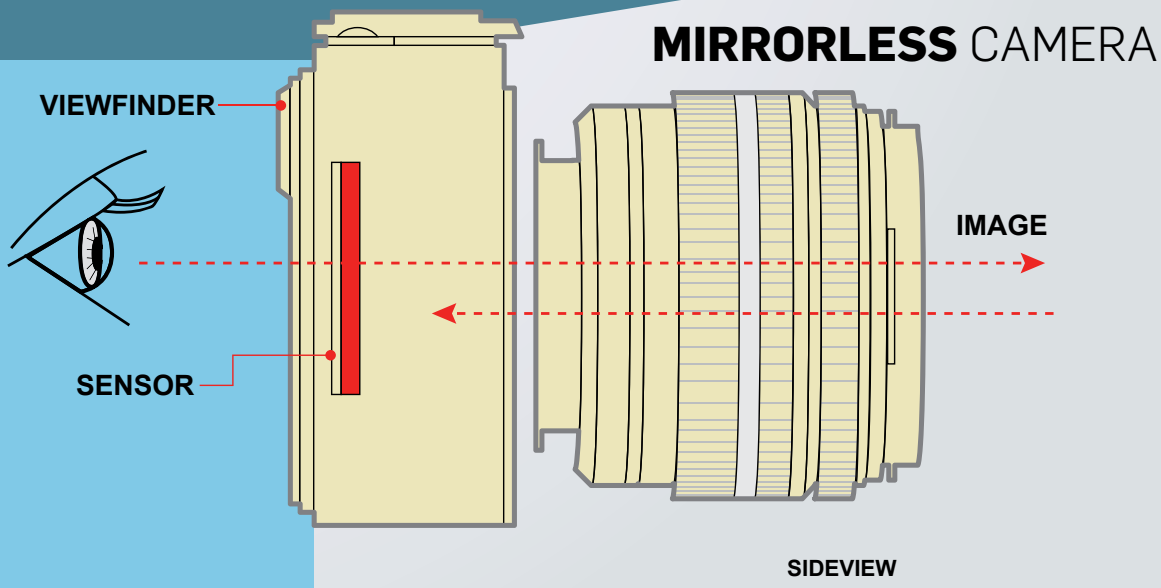
Nobody likes to lug around a heavy camera and a gigantic lens, unless you're a professional photographer. For those who don't want to bother with the bulk of DSLR cameras and lenses, the Mirrorless Interchangeable Lens Camera is the perfect companion thanks to its compact form factor.

USP

Besides the ridiculously slim profile, MILCs offer the same ability as DSLRs to work with interchangeable lenses. This allows the anorexic MILCs achieve the same kind of versatility as today's DSLRs.

THE HOW

The MILCs take advantage of the miniaturization of the LED display. The lens collects the light and shoots it directly onto the sensor, from where the digital signal is enhanced and projected onto the screen on the back of the camera. Unfortunately, in situations of low light coupled up with high ISO they tend to develop significant noise on the LED screen, sometimes making it near impossible to frame the shot.





Panspermia?
This isn't what you think it is. Panspermia is the theory that life exists throughout the universe and that asteroids are its distributors

The NEO program
This program is an intiative by NASA which lists and catalogues all Near-Earth-Objects currently discovered and under observation

How will we deal with a massive asteroid?

A 400m diameter asteroid is enough to wipe out the entire human race! What will we do if one such asteroid comes hurtling towards our planet?

Anirudh Regidi
anirudh.regidi@thinkdigit.com



The impact of a super-massive asteroid. This one is the size of a small moon!

At last count, there were over a thousand near-Earth asteroids (NEOs) that we know of, which is assumed to be only about 20 per cent (or lesser) of the actual number. Now consider the following statistics, the Earth is hit by a 45m asteroid about once every 100 years, a 300m asteroid every 10,000 years, a 1-6km asteroid every 1,000,000 years, and a 6km+ asteroid every 100,000,000 years.

Of these, the 45m asteroid can level a small town even if it blows up in the atmosphere, a 300m asteroid can level the UK or vaporize billions of tonnes of water if it lands in the oceans. A 300m asteroid by itself will not cause extinction, but the vaporized sea water can create such dense clouds that we probably won't see the sun again till the Earth freezes over and we're mostly extinct! This from an asteroid the size of an aircraft carrier! A 1km+ diameter asteroid will wipe out all life on Earth and cause massive tectonic shifts, a 6km+ asteroid, with sufficient speed, will even knock the Earth out of orbit and literally melt a vast section of the Earth's crust with the sheer pressure of the impact. Such an impact might even render the Earth unviable for life for millions of years (the dinosaurs might have died to an asteroid like this).

Tracking these monsters

If this wasn't scary enough, did you know that in 1989, a massive asteroid missed us by just 6 hrs and we didn't know about it till long after it crossed the Earth's orbit, or that such events happen once every 2-3 years and we are completely oblivious? You might think that with the vast number of electronic eyes keeping an eye on space, something as large as an asteroid will not go unnoticed; but the problem with space is that it is vast, mind-bogglingly vast. Everything happens at an incredible scale, but also at an incredibly slow rate (in human terms). An asteroid might be hurtling towards us at over 25,000 km/hr, but it would still take years to reach us even from Jupiter. If you consider that distance (more than 200 million kms), pinpointing a tiny rock (at that scale) in space is an almost impossible task, and even if we had a thousand such asteroids hurtling towards us, we would be none the wiser unless we knew exactly where to look.



An object of destruction or source of life?

The task is much easier now of course, advanced radar and fancy satellites are helping us, not to mention the vast supercomputing power that is being utilized just to track all the known objects in the sky. Nowadays we could, in theory, plot the course and predict the time of impact of an Earth-bound asteroid by as much as a few decades in advance. In a worst case scenario, that time would be less than a decade, but we'll still have a few years to respond.

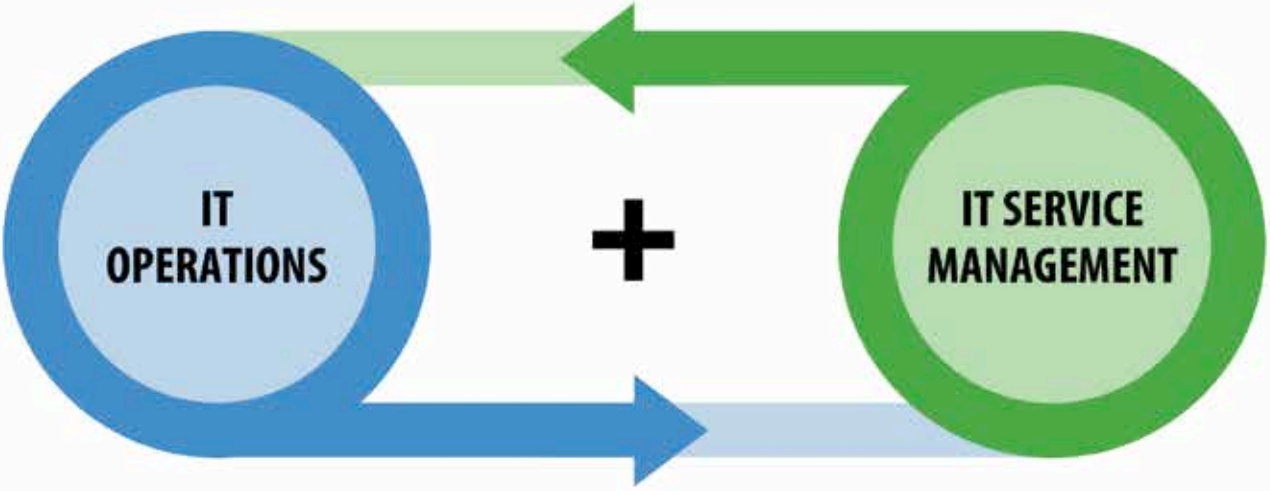
What is an asteroid?

We've always thought of asteroids as massive chunks of rock, the primordial "ooze" from which the planets were formed and that is partly true. The truth is that a lot of the asteroids that we are aware of are actually just amalgamations of debris, vast clumps of "boulders" and dust and are mostly just empty volume. If such an asteroid were to hit the Earth,

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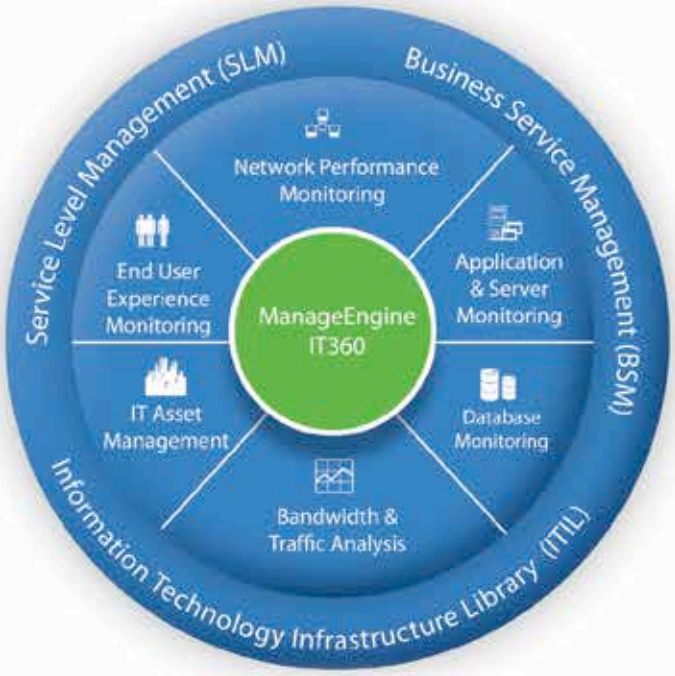
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The Oort cloud
A theoretical cloud of debris that encircles are solar system. This cloud might be the source of most of the asteroids we find

A potential resource
NEOs may be hazardous space objects, but they can also be a source of precious resources, even refuelling points for future space missions

the damage would still be catastrophic, it's like the difference between getting shot with a bullet from a sniper rifle or the shot from a shotgun, the effect would ultimately be the same.

The problem we run into here is how to deal with these asteroids. An asteroid that is a single solid chunk would be comparatively easy to deal with, but a debris cloud would just absorb the impact of kinetic projectiles and nuclear weapons (we'll come to that later) and regroup again if scattered. Such imaginative ideas as solar sails won't work and we would have to try something as exotic as gravity tethers. Another problem is that large asteroids usually have a couple of mini-moons in tow, meaning that an impact would involve not one, but maybe 2 or even 3 separate asteroids.

Another aspect to consider is that while an asteroid might seem to be very hard, many are actually hollow and may even have vast quantities of ice, frozen just beneath the surface. The continuous venting of such ice adds to the complexity when it comes to tracking and predicting the orbit of such bodies.

Solutions

There has been no shortage of ideas when it comes to trying to stop an incoming asteroid, not to mention dozens of movies and an even larger number of books. NASA and many other space agencies have even conducted detailed studies and have even published papers on the subject. There are primarily two things you do to an asteroid, destroy it or deflect it and what we choose to do will depend on the size and composition of the asteroid.



A debris field trailing a newly forming planet

A militarized moon

The moon is one of the best hopes we have to stop an incoming asteroid. The advantage that the moon has over the Earth is that it has a non-existent atmosphere, meaning that rockets (missiles) can be launched at a fraction of the fuel cost of a launch from Earth, and that the gravity is so low, that we can actually build a massive mass driver, a sort of electromagnetic rail gun, that can hurl massive chunks of rock into space at incredible speeds. The reason we need this is because if we have to slow down or destroy a massive asteroid, we need a launch platform for the launch of projectiles at a massive scale if we even hope to do anything to an asteroid. Most asteroids, the large ones, are moving so fast and have so much momentum, that even a few 100 nuclear missiles might just barely push it off course by a fraction of a degree; that fraction of a degree will be all that will be needed though, given sufficient warning.

With debris cluster asteroids, kinetic impacts are completely ruled out and nuclear missiles have limited use. Unlike on Earth, the actual shockwave from a nuclear blast would be minimal because there is nothing to propagate it. That said, the sheer heat of the blast might serve very well in vapourising portions of the asteroid and given enough time and a sufficient number of missiles, we might actually succeed in reducing its size to a bare minimum. A more feasible, but long-term plan, involves the placement of a sufficiently large spacecraft or artificial moon near enough to such an asteroid that the gravitational attraction between the two will be enough to change the trajectory of the cluster. A gravity tether if you will.

So can we survive?

Yes, we can. We would need the cooperation of every single country on the Earth, their stockpile of missiles, booster rockets, knowledge and skill, but yes, we can survive an imminent collision if we can detect it in time. If we don't detect the asteroid in time (which is actually quite possible)? Well, let's just hope it's a large asteroid, then we won't even be aware that something is wrong and won't care either way!

Asteroids: The source of all life?

It has long been surmised that asteroids were the source of most of the water on our planet. It might very well be true that the impact of massive asteroids brought water to the surface of the Earth, but how would that be possible? As mentioned in the article, asteroids are not what you may think they are. Many of them are possibly vast, hollow, honeycombed structures encasing enormous quantites of frozen water and/or other organic compunds. Multiple collisions (with the Earth and other planets) over the course of millions of millennia would have deposited these vast quantites of water on the planets. Most planets when formed, were literally molten balls of fire. It is hard to imagine the immense amount of fricrtion and pressure that was involved at the time planets form, but it was hot enough to completely vapourize all water from the surface of most planets. Asteroids might prove to be the answer as to how water actually made its way back to planets such as ours. Planets that managed to develop an atmosphere over time, sufficient enough to trap the vaporizing water and prevent it from escaping into the vast depths of space.

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Burn failure, MMC password unknown, laptop BIOS password reset & more...

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Q DVD burning failure

I recently updated my Windows 7 PC. The computer is showing Error 0xc0aa0301: DVD burning failure. Please help me with this.

Naresh Ambulgekar

A Go to the following website and run the tool http://dgit.in/OCfYhl If you still face problems after that, then update the firmware of your optical drive, you can find that on the support page of your optical drive's manufacturer. Then if your issue isn't resolved, open regedit.exe with Admin rights and delete the following key.

`HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E965-E325-11CE-BFC1-08002BE10318}`



Upgrade your optical drive's firmware

Delete the drive from the Device Manager and restart your computer, it'll automatically detect and reinstall the drive. Hopefully, your problem should be resolved by this step.

Q Drive disappearance

I am having a problem with my laptop. The DVD drive is not showing up in my computer there are 2 partitions of my drive named C: and D: but the DVD drive (E:\) is not showing up. Whenever I insert any CD/DVD it does not read. I checked up in device manager and found that CD/DVD ROM driver is missing. I checked here http://support.microsoft.com/kb/314060 but could not go with the steps please help me. System config given below:

- Acer Travelmate 2420
- Intel celeron M @ 1.50 GHz
- 40 GB HDD
- 64 MB Graphic Card
- Windows XP SP2
- 512 MB DDR2 RAM

It cannot read any CD, so I am thinking of repairing XP using a USB device. If repairing will make the drive work then please tell me how to setup boot menu for XP SP2 on a USB device. Thanks.

Tanmay Agarwal

A Your laptop seems pretty old, you'll have to figure out if it is still in working condition. If you have any Linux Live boot disc images then you can create a bootable USB stick using the tool from www.pendrivelinux.com. Boot into Linux and see if you can still access your optical drive. If it is working then you can follow the steps mentioned on the Microsoft page you've mentioned. It required you to modify a few registry entries or you could run the tool given here http://dgit.in/OCfYhl To learn more about modifying the registry, go to http://dgit.in/S5jn7i. Do keep in mind that modifying the registry is slightly risky, so do have a repair DVD ready and create a backup before your proceed.

Q MMC password forgotten

I am a subscriber of Digit and a great fan of the magazine. Help me with these problems:

1. Help me remove the password from my MMC which I forgot.
2. How to get rid of write protection on the MMC?

Siddharth Verma

A You haven't provided any details regarding the MMC, so what we are suggesting here are mostly general solutions.



Flick the latch to remove write protection

1. If you've been using the MMC with some device like a phone or camera, then try connecting the phone/camera to the computer via USB cable. Most likely you'll be able to access the MMC in this manner.
2. You could try to access the same under Linux, it should show up.
3. Go to the manufacturer's website, you'll find tools to unlock your MMC, albeit most of them will format the card in the process.
4. If your MMC has one of those latches on the side which can be flicked to remove write protections then you could give that a go too.
5. Insert the MMC in your phone and search for a file called `mmcstore.txt` Transfer the file to a computer and open it. Your password should be there along with a few garbage characters.

Q Offline wiki woes

I am having problem installing the offline Wikipedia. I followed the instructions which you have listed but I am having some problems. Actually installation never ends just after it is on the verge of completion and it shows around 1192 hours remaining in time left. I tried it many times but same thing happens.

Shrinil Pandya

Lenovo Store launched in Chennai

Currently, Lenovo has a strong footprint of four exclusive stores in Chennai. Lenovo has exclusively partnered M/s Ziptech Infosolutions Pvt Ltd for the new store

A The 1200+hrs shown is just a bug in the program. The WikiTaxi importer will normally take about 1-2 hrs to import the database judging by the indicated speed in your screenshot (1200-3000 pg/sec). Don't worry about it, that is perfectly normal and even we saw that same estimated time period when we were trying out the software for ourselves.

Q Laptop BIOS password ?

I have forgotten my laptop's BIOS password. How do I go about recovering it? Please help me out.

Ashwin Kumar

A The laptop's BIOS password can be reset in the same way a desktop's BIOS password is reset. Go through the following steps.

1. Switch off your laptop
2. Remove the power cord
3. Remove the battery pack
4. Read the laptop's service manual to figure out from where the CMOS jumper is accessible.
5. Open the laptop's plastic chassis and short the CMOS jumper for 5-15 seconds, for additional instructions refer to the laptop's manual.

If you cannot find a CMOS jumper then you can remove the CMOS battery for 15-60 seconds and reset the password. However, removing the CMOS battery will reset all settings so you'll need to enter the BIOS menu and load the default settings once you are done with the reset.

The CMOS battery should look somewhat like the image below.

Q Restoration blues

I am Prasanna and I recently restored my computer to an earlier time. When I restored the PC, I was unable to uninstall the softwares I had installed. My anti-virus was not working and when I tried to install a new anti-virus, the system is hanging. I was not even able to uninstall my current anti-virus solution. I tried doing it in the safe mode. But the problem still exists.

Prasanna Mohan



Laptop CMOS battery

A Your restore point stores data pertaining to your

- Registry
- Files in Windows File Protection
- Local user profile

So when you do restore, you'll lose the registry entries related to the software installed within the restore point's time period. So the uninstall shortcuts will cease to exist and those files will no longer be linked to each other. You'll have to either undo the last restoration to get them back (your earlier problem will most likely resurface) or delete them manually and then reinstall the software.

Navigate to the software directory manually and try running the uninstallation executable. As for your Anti-Virus, go to their web site and you'll find the removal tool. That should remove all traces of the particular anti-virus. We've put down links to some of the more popular anti-viruses.

- AVG - http://dgit.in/UjRcSD
- Avast - http://dgit.in/PnQBfS
- Norton - http://dgit.in/SYLg3Q
- Bitdefender - http://dgit.in/QiJxAm
- Kaspersky - http://dgit.in/U8FPi3
- Trend Micro - http://dgit.in/QiJN28

Q Netbook acting weird

I have an Acer Aspire One D255 netbook having an Intel Atom processor @ 1.6 GHz, with 1 GB RAM. After I played your DVD on my netbook and installed AVAST antivirus my netbook is acting weird. Whenever I try to turn it on, it hangs. I cannot seem to get anything working. Please help me out.

Abhishek Roshan

A Did you by any chance happen to install two anti-viruses on your laptop? Multiple security suites are known to meddle around with each other to wreck system performance altogether. Enter safe mode and remove AVAST. Press F8 just before the Windows startup logo comes on to enter safe mode.

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Live wire detector

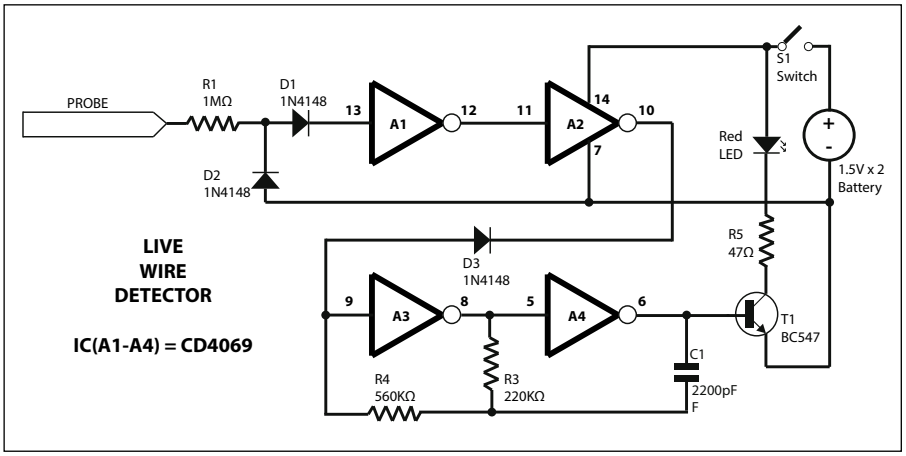
Find 'em concealed wires without electro-cuting yourself

Mithun Mohandas
readersletters@thinkdigit.com

There are instances when you wish you were like Raiden (or Pikachu for those born in the late 90's) and have the ability to sense and manipulate electricity. We have something that can sense and let you know if there is a live wire concealed underneath something(wall/plaster/floor). This nifty little gadget is way helpful if you've recently moved to a new place and are wary as to where all the power lines exist in the house. A more dangerous use is to detect water pipes by passing current through the pipes, however, electricity takes the path of least resistance, thus only one route will be noticed. **Do not attempt this at all as this is very dangerous and you can electrocute anyone who uses the same water source,** especially if you happen to live in an apartment complex. Stick to a metal detector if you wish to detect concealed water pipes.

These nifty things come in various avatars under various names, common being EMF detector (technically most accurate), broken wire detector etc. Powerful and much more sensitive variants of the circuit are used by construction staff. The Bosch DMD4K is one such tool, however, forthe purpose of this article we'll concentrate on just the EMF detection.

The working is pretty simple, a probe is made using a strand of copper wire which is brought near the live power source. The first two gates A1 and A2 buffers the voltage picked up by the probe. In order to increase sensitivity of the probe you can coil the copper strand.



Circuit diagram

Gates A3 and A4 generate a constant pulse with the help of resistors R3, R4 and capacitor C1.

Whenever any AC voltage is picked up, during the positive half of the cycle, the output at pin no 10 of the IC goes high, which turns on the oscillator part of the circuit (i.e. A3 and A4), this makes the LED blink at whatever frequency the oscillator is running, in this case 1000 Hz. So the LED seems to stay on to the human eye when actually it's blinking rapidly.

Never touch the probe of the circuit to an exposed live wire under any circumstances. The sensitivity of the circuit depends on the probe at the end. If you happen to find a phone's pick up coil then you can significantly increase the sensitivity. You can come with various ways of implementing this circuit, if you wish you can add a decade counter and modify the circuit so that the closer you get to the live wire, the more LEDs you can have turning on simultaneously. Then you can combine four such circuits placed at four corners of a square to create a tool which can tell you the alignment of the concealed live wire. Here are a few tools which have implemented the same. http://dgit.in/PYShOO http://dgit.in/UlLNaX.

Another great circuit that we came across was using Arduino here at http://dgit.in/RB1SNU which utilises an LED whose brightness is varied according to the distance from the live wire. An improved version of the same is also featured on Make magazine's Youtube channel - http://dgit.in/Tai6P7 This version uses a LED bar graph which shows the level of the EMF in the vicinity, it's not accurate andthus, isn't indicative of any actual values, This is similar to using a decade counter but way easier and better looking. Experiment and modify the design to come up with more useful gadgets.

What you'll need

Component	Value
R1, R3, R4, R5	1M , 220K, 560K , 47
IC (A1-A4)	CD4069
D1, D2, D3	1N4148 diodes
C1	2200pF capacitor
T1	BC547 NPN Transistor
2 Batteries	AA / AG13
LED	Any colour
S1	Switch (Push to ON)

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WIKIPEDIA

Our favourite free encyclopedia, Wikipedia, can be a bit daunting at times. A gargantuan source of curated information, at times you need the right tools and approach to navigate the voluminous nature of Wikipedia's articles. Here are a few tricks to simplify and optimise your Wikipedia experience.

Keyboard shortcuts

Who doesn't love keyboard shortcuts, right? And luckily, most essential webware and programs including Wikipedia have carried forward the tradition of enabling and implementing keyboard shortcuts.

Since Wikipedia is essentially a website, it is accessed through a browser.

For the latest version of all mentioned browsers running on Windows operating system, the shortcut keys for Wikipedia are as follows:

- Mozilla Firefox: `[Alt]+[Shift]+[Access Key]`
- Google Chrome: `[Alt]+[Shift]+[Access Key]`
- Opera: `[Shift]+[Esc]+[Access Key]`
- Safari: `[Alt]+[Access Key]`

What's an access key? It could be any key on your keyboard. For example, to jump to the search bar of Wikipedia on Google Chrome, press `[Alt]+[Shift]+[F]` on your keyboard — in this instance, the F key is an access key of the shortcut combination. For reading the history of a particular article in Wikipedia, press `[Alt]+[Shift]+[H]` on your keyboard. And if you ever get bored and want to have some fun with Wikipedia, try pressing `[Alt]+[Shift]+[X]` and voila a random article loads. Fun, isn't it? For a full list of supported shortcuts and their instructions, visit http://dgit.in/PYwFiz



Wikipedia 63
Music Player Daemon 64
Photoshop CS6 65
Illustrator CS6 66
AfterEffects CS6 67
Premier Pro CS6 68
Quora 69

Tips & Tricks has its own page numbers, and does not follow the rest of the magazine's page numbers. This is done to ensure that you can cut out and save T&T in a separate folder for later reference.

Wapedia.mobi

While the full-fledged Wikipedia experience is nice and great for the PC browser experience, ever wished there was something much simpler and bite-sized to deal with on your smartphone or an older Internet-enabled JAVA phone? Enter Wapedia, a mobile version of Wikipedia. It's so light and bandwidth-friendly, Wapedia.mobi should be your preferred destination to access Wikipedia while on the go. To access Wapedia, just point your mobile browser to http://wapedia.mobi. If you're an Android or iPhone user, you can also download the Wapedia app from Google Play Store and iTunes, respectively.

Wikipedia layer on Google Maps

We're quite sure you must've checked out Google Maps at some point of time or the other, but have you tried loading layers?

- Open maps.google.com in your web browser
- Hover your mouse on "Traffic" near the top-right corner. The list collapses and expands.
- Click on Wikipedia in the expanded list and check it.
- You'll now notice Wikipedia entries for all POIs spread across the map.

This is a great way to find more information about a particular POI on Google Maps, if a Wikipedia entry exists for that particular place.



Wapedia on mobile

Offline Wikipedia

Wikipedia is a great source of information, not always reliable but good enough to help you in times of need. To carry an offline version with you for those times when internet access is lacking (college Wi-Fi!) this is what you do:

- The entire, text-only offline dump was provided on our August DVD (Omega), so if you have that issue, just pop it into your drive and follow the instructions.
- Alternatively, head over to http://www.wikitaxi.org, download it and follow the instructions on the website itself.
- WikiTaxi does have a few issues and will sometimes not import the database or not detect the database file. In such a scenario, you need to manually enter the address and filename of the WikiTaxi database. Also be sure to run the program as an administrator on Windows Vista or later.

Portable Offline Wikipedia

Now that you've got the encyclopedia offline, do you know that you can carry it with you on a pen-drive wherever you go? Here's how..

- Follow the steps in the previous tip to the very end.
- Copy the *.taxi database file that you create with the importer and paste it into the WikiTaxi folder.
- Open a new notepad windows and enter "Wikitaxi.exe <databasename>.taxi", where databasename is the name of the extracted database.
- Save the file as say, Wikipedia.bat. You can call it what you like, but save it as a batch file.
- Copy the entire contents of the WikiTaxi folder (including the *.taxi file) onto

a pen-drive with sufficient capacity.

- Run the *.bat file you created to access your encyclopedia from anywhere.

MUSIC PLAYER DAEMON

Your music is on your laptop but you want to play it on speakers connected to a desktop on the same network. How do you do this? Enter MPD.

MPD is a remarkably lightweight, fast and full featured music player with a client-server architecture. Using MPD, you can stream music or control playback to any other device on the same network. Music playback is controlled by the dozens of MPD clients out there (both graphical and console-based) that support nearly every major desktop and mobile OS, including Linux, Windows, OS X, Android, iOS, Symbian, Windows Mobile, Palm OS and and browser extensions.

Though MPD ports exist on Windows, they aren't fully stable, so we recommend setting up the MPD server on a Linux machine. The client, of course can be any supported platform. Let's get started!

Use MPD as a music player

This is a fairly trivial use for MPD, but an important one nonetheless, as it requires us to set up the server properly. To install MPD, issue one of the commands depending on your distribution:

- Ubuntu/Debian:
  `sudo apt-get install mpd`
- Arch Linux:
  `sudo pacman -S mpd`
- Fedora:
  `sudo yum install mpd`

After the installation, MPD has to be configured with details of your music directory, playback options, sound outputs etc. MPD can be configured to run as a system service or on a per-user basis, and we'll be choosing the latter, because it's safer and more versatile. To get started, create the following files and folders in your home directory:

```
mkdir -p ~/.mpd{,/playlists}
touch ~/.mpd/{mpd.conf, mpd.db, mpd.pid, mpd.log, mpdstate}
```

Now copy the default configuration found in /usr/share/doc/mpd/example into the mpd.conf file we just created. This default config file is heavily documented and is thus very user-friendly. Open the file, uncomment and edit the following values:

- music_directory
  `"/path/to/music/folder"`
- playlist_directory
  `"/home/<username>/.mpd/playlists"`
- db_file
  `"/home/<username>/.mpd/mpd.db"`
- log_file
  `"/home/<username>/.mpd/mpd.log"`
- pid_file
  `"/home/<username>/.mpd/mpd.pid"`
- state_file
  `"/home/<username>/.mpd/mpdstate"`

Behaviour of symbolic links can be configured under the 'Symbolic Link Behaviour' section. You can also add a password to prevent unauthorized access. MPD can use multiple output devices simultaneously, including streaming over HTTPD. The default output device is usualy ALSA, so if you're using ALSA as the default sound output device, no further configuration is required. However, if you're using PulseAudio, simply uncomment the lines pertaining to PusleAudio. Similarly, to enable HTTP streaming, uncomment the relevant audio_output section. You can leave the port as the default (8000) unless you happen to be using it already, in which case change it to any other available port. Once you've set up the configuration file, stop the mpd daemon

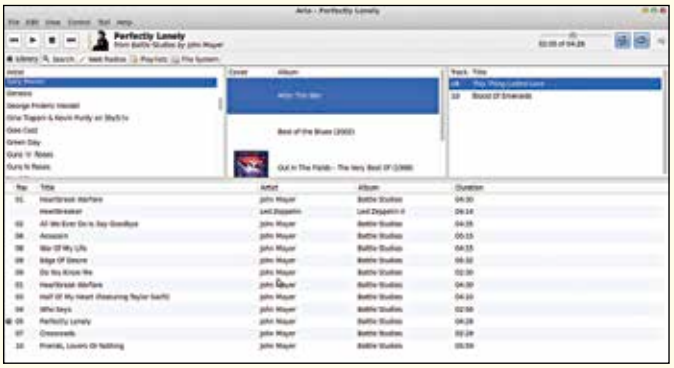
```
sudo service mpd stop
```

and stop it from running as a system daemon:

Ubuntu: `sudo update-rc.d mpd disable`

Arch Linux: Make sure mpd is not present in the DAEMONS array of `/etc/rc.conf`

Then restart it by simply running 'mpd' as a non-root user. Unless you receive an error message, you have set up MPD correctly! To playback the music from MPD, you'll need an MPD client. A full list of all the clients available can be viewed here – http://dgit.in/RtwpNI



Ario is a graphical MPD client for Windows and Linux

Stream music on network

Streaming music over a local network (Wired / Wireless) is a fairly trivial affair once MPD has been set up as a server. If you just want to playback the music being broadcast by MPD, just enter the server computer's IP address and the port used for HTTP streaming into a browser. For eg. If your host has an IP of 192.168.1.3 and if you're using the default port 8000, just entering http://192.168.1.3:8000 into the address bar should start playback.

If you want to control playback from the client machine, you'll need an MPD client for the client OS. Ncmpcpp and PMS are two popular console-based MPD clients. Ario is a popular graphical MPD client that runs on Windows and Linux. Auremo (http://dgit.in/UoFPJ7) is a client for Windows that supports Windows 8 as well.

Use your smartphone as a media remote

Smartphone apps for iOS and Android not only let you stream your music over HTTP which is really handy, but they can also be used as media remotes to independently control music playback, search for songs and manage playlists.

MPDroid (http://dgit.in/OctuIr) is a free and fully featured MPD client, while MpoD is a native client for iOS devices (http://dgit.in/RtAeCB). To set up these apps, you'll need to enter the details of both, the



MPDroid can control playback and stream music from MPD

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100% GENUINE

Windows 7

MPD server and the HTTP streaming server.

Scrobble Music to Last.fm

There are several ways to scrobble music played by MPD. Most MPD clients offer this feature, but our plugin of choice is called *mpdscribble*, which is a background process capable of sending data to both Last.fm and Libre.fm simultaneously. Install mpdscribble from the default repository for your distribution and edit the file `/etc/mpdscribble.conf` with your Last.fm login details. Next, activate the daemon by setting

```
MPD_SYSTEMWIDE=1
```

in the file `/etc/default/mpdscribble`. Restart the service with

```
sudo service mpdscribble restart
```

and your music should now be scrobbled flawlessly!

Playback music from Last.fm streams

MPD can also playback music from Last.fm streams, for which you'll need to edit your ~/.mpd/mpd.conf and add the following section to it:

```
playlist_plugin {
        name "lastfm"
        user "lastfm_username"
        password "lastfm_password"
}
```

To start the playback, use the following command:

```
mpc load "lastfm://name/of/stream"
```

PHOTOSHOP

We had last covered Photoshop in this space when it's beta came out. Now that the Creative Suite 6 has been officially released, and the dust has settled, we're bringing together some of the best tips and tricks that we came across in some of the more important software in the latest series of creative tools from Adobe.

Photoshop was designed well as a photo editor, but it now performs task above and beyond it's call of duty. Photoshop CS6 now provides improved 3D support, better handling of vector paths and even video. Here are a few of the more interesting tricks that you'll find useful if you use it day in day out.

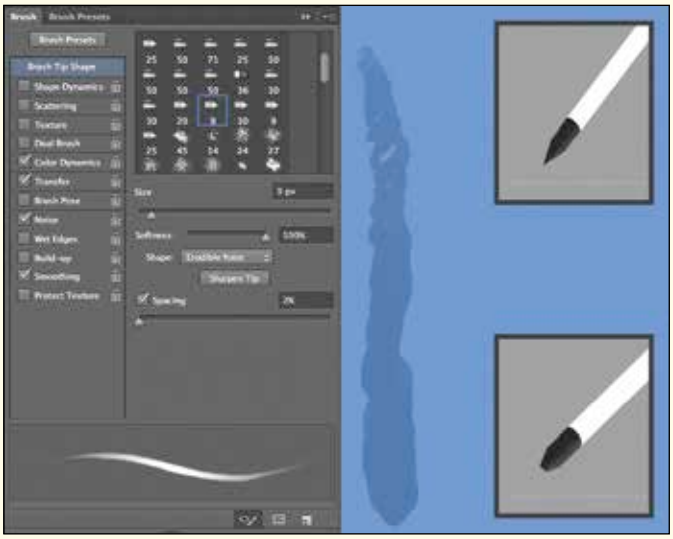
Erodible Brushes

A new addition to Photoshop CS6, an erodible brush lets you draw a line as if you would have done with a pencil or a crayon, i.e., it erodes away as you use it. Photoshop also offers airbrush tip shape which is designed to used with a tablet to create thinner or thicker lines, depending on the pressure you apply when operating the tablet.

You can select an erodible brush from the brushes pull down menu. An erodible brush looks like a pencil. Once you select that brush a new window is seen which shows how worn-out or sharp the brush is. You can fine-tune the eroding properties in the brush panel which lets you select the brush type from the following: Erodible Point, Erodible Flat, Erodible Round, Erodible Square, Erodible Rectangle, Erodible Triangle and Custom. The softness of the brush determines how easily it will wear out, the higher the softness the faster will it wear out.

Type Styles

InDesign guys have been enjoying for quite some time now. Essentially, you can save the text formatting styles as style presets and then apply them to selected text and/or paragraphs in your file. This especially beneficial for the designers who use Photoshop to create website mockups, this will help them by saving time and smoothing the production workflow.

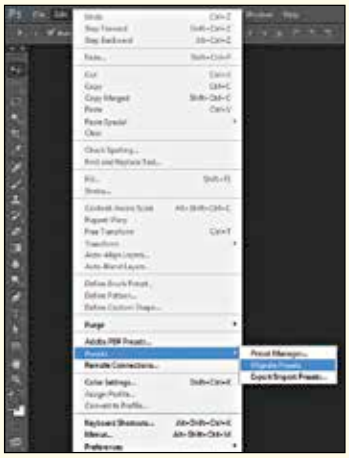


Erodible Brushes in Photoshop CS6

You can bring up the Character Styles and Paragraph Styles Panel from the Type menu in the main menu bar. You can define the new style by selecting some text and making changes in either the Character Panel or the Paragraph Panel. Once you're done just hit the "New Style" button in either of the style panels and you're done.

Preset Migration and Sharing

If you have been working on Photoshop for some time you'll have collected and organised your own collection of presets and it can be one hell of a task shifting all of them to the new version. You can migrate your presets from the older version you have on your system by going to `Edit > Presets > Migrate Presets`. The Presets menu also provides an option to Import or Export your presets so that they can be saved or shared with your friends and co-workers.



Import presets from older versions

Auto Recovery and Background Saving

How many times have you lost hours of work because you forgot to save the file? This will not longer be the problem with Photoshop CS6. It introduces two new features *Background Saving* and *Auto Recovery*. Background Save feature allows you to continue working while the save is in progress which was not possible in the earlier versions of Photoshop. This bumps up your productivity. You can also get Photoshop to keep saving your work incrementally by going to `Edit > Preferences > File Handling` and selecting the time interval after which to save.

Performance Enhancements

There is no denying that Photoshop is a resource hog, but you can tweak its innards to extract

the maximum performance out of it on an old system or boost your productivity on a fast system. Here are a few performance enhancements which will help speed things up:

- **Watch the Efficiency Indicator –** You'll find the "Efficiency" indicator at the bottom of your Photoshop window, if it falls under 100% it means that you are using the hard drive for memory and Photoshop becomes slower
- **Close Unused Document Windows –** Like Windows having many unused documents takes up memory. Close any unused document that you may have opened
- **Purge History & Clipboard –** Photoshop's History feature is quite useful but it hogs a lot of memory. If you're not using it, purge the history by going to Edit > Purge > All
- **Set drawing mode to Basic –** `Preferences > Performance > Graphics Processor Settings > Advanced Settings > Drawing Mode > Basic`
- **Turn off Animated Zoom –** `Preferences > General > Animated Zoom > Uncheck`
- **Turn off Flick Panning –** `Preferences > General > Enabled Flick Panning > Uncheck`
- **Adjust Photoshops Memory Use –** This has to handled tactfully, you can get away with something as low as 40% but this entirely subjective and instead of plugging in arbitrary values it's best to adjust this based on your physical memory capacity and individual need. You can do this by going to `Preferences > Performance > Memory Usage`
- **Disable anti-aliasing on guides and paths –** `Preferences > Performance > Graphics Processor Settings > Advanced Settings > Anti-alias Guides and Paths > Uncheck`
- **Use less Video RAM –** `Preferences > 3D > Available VRAM for 3D > 30%`, this is particularly useful for anyone using a computer with a video card that shares VRAM with primary RAM
- **Turn off Image Previews –** This may seem a bit harsh but if you're really hard-pressed for memory than you should do this. Change `Preferences > File Handling > File Saving Options > Image Previews > Never Save`
- **Set Cache Levels to 1 –** Note: This change impacts effect plugins and effect quality so use it with caution. The default value is 4 for a reason. Change the cache level by going to `Preferences > Performance > History & Cache > Cache Levels > 1`

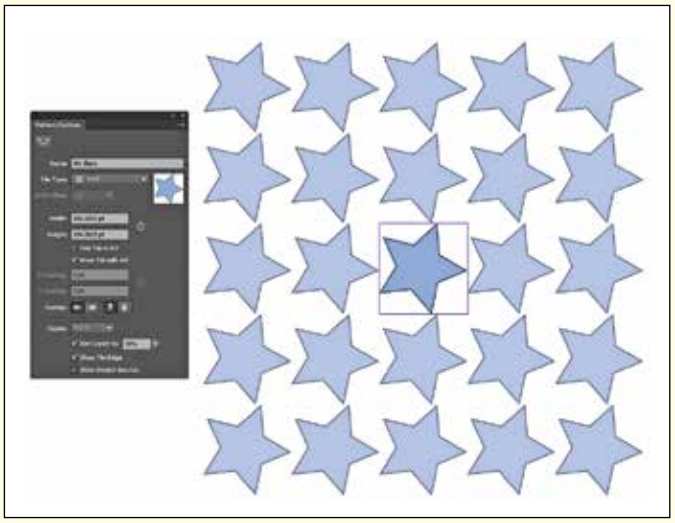
ILLUSTRATOR

Illustrator has been the mainstay of graphic artists for a long time. Illustrator CS6 features a completely revamped rendering and tracing engine along with many other finer improvements suggested by users.

Pattern Creation

Previously exercises in pattern generation would used to end with frayed nerves and frustration, it was an endeavor undertaken only by the most patient. The new Pattern Creation panel takes away all the complexity involved in creating seamless patterns. Creating a new pattern is as simple as selecting the object(s) that you want to included in a pattern and then navigating to `Object > Pattern > Make`.

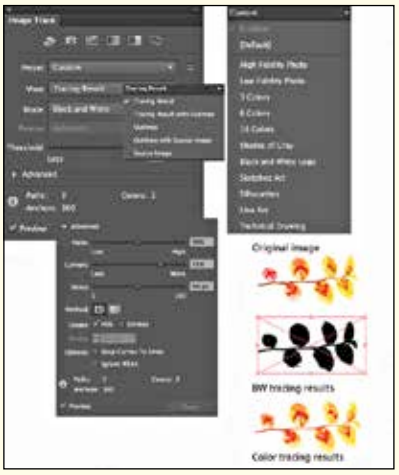
A dialog box will pop up – it tells you that a new pattern has been added to your Swatches panel. Hit Ok and you'll see the pattern repeating itself in a simple grid. You can tweak the pattern add or remove shapes/object, specify the overlap mode, change the grid type and so on. Applying the pattern is as simple as selecting the Pattern swatch for Fill. You can go back and edit the pattern in the Pattern editing mode by double-clicking on the Pattern swatch.



Pattern Creation in Action

Image Tracing

Illustrator CS6 brings to the fore a completely revamped tracing engine. The new tracing engine albeit good, works well with photos and allows quick and exact vector silhouettes but the presets don't work well when you want to trace sketches or textures in fact the Live Trace feature in Adobe Illustrator CS5 does slightly better compared to the one in the latest avatar when you use the presets.



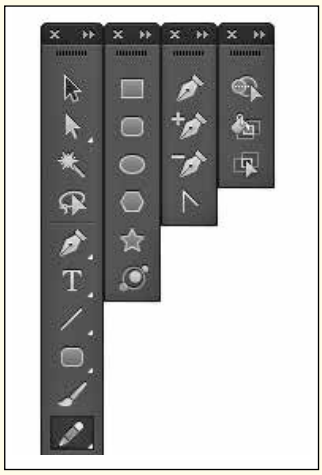
New and improved Image Tracing

A point to keep in mind is that we're talking about presets, and 99% of times the presets don't yield the exact result you want, you'll have to manually tweak the tracing settings to get the desired result. You can access the new tracing features from the Image Trace panel (Window > Image Trace).

You have an access to all other panels and tools which was not available in the previous version. Even the presets available have also changed for e.g. the new "Silhouettes" preset allows you to quickly create vector silhouettes.

Reset Workspace

How many times have you cluttered your workspace with myriad of panels, and then scratch your head when you can't find something. Illustrator CS6 provides an ability to reset the workspace to a default position by clicking on the "Reset <workspace>" option where <workspace> is



Dock hidden toolbox menus

the name of your workspace e.g. Essentials.

Dock Hidden Tools

This will be a welcome option for those of you who use Illustrator day in day out. The new Illustrator CS6 allows you to tear off and dock tools separately thus allowing you to create your own custom frequently-used toolbox.

To do so click and hold any particular tool icon in the Tools panel to reveal hidden tools. Now click on the vertical bar at right of the tool area to tear off those tools, you can now drag around that box and dock it anywhere you like.

AFTER EFFECTS

After Effects has been sort of a Swiss Army knife for any video post-production effect. After Effects now works faster than ever with the Global Performance Cache and many small tweaks for overall productivity. Here are a few of the better tips that we came across.

Pro Imports

After Effects CS6 simplifies working with files from Avid Media Composer, Symphony and Apple's Final Cut Pro 7 video editing applications. Adobe has acquired the Pro Import utility from Automatic Duck which allows you to import all your media and clips from the external project at once.

The editing timeline becomes a composition in After Effects, all your effects will be translated and recreated. Effects and parameters from the other application like position, scale, rotation, titles and speed changes will be carried forward to your new composition.

3D Camera Tracking

3D Camera Tracking is a brilliant new feature that had been introduced this time around, it builds on the previous Warp Stabilizer function. This feature analyzes your footage in the background and tries to track the 3D features to create a solved camera. You can then easily place solids, text, footages and nulls at various points in the 3D space using the previously solved camera, thus realistically compositing them into your scene.

To use it select the clip in the Timeline and applied the Camera Tracker from the Tracking Panel. In the first step it analyzes the clip in the background and then it solves the camera. and then spreads multicolor points all over your scene. Mindwell though, this is a very resource intensive process and having a GPU will be a big plus. You will need to select three distinct points in the to position a "target" in that plane, you can increase or decrease it's size by alt-dragging and move it around by ctrl-clicking. Simply hovering the mouse over a triangulation of points will position a "target" in the plane that passes



through those three points planes. You can select more than three points by click-dragging around several points which seem to be on the same plane as the one you are tracking.

You can then add text or solid on the plane you selected by right-clicking on the target and select the desired option from the context menu.



Placing text on a solved camera

Video Tools Workflow

With CS6 your video production workflow has been made much more streamlined than before. In the yester years sharing media assets among post-production applications has required you to render and export your work from one application before importing it into another. This was very inefficient and time-consuming. If you want to change the original asset you'd have to redo the entire cycle of rendering and importing again, not to mention the extra disk space this multiple renderings would occupy on the hard-disk.

You can create an After Effects composition and dynamically link to them, from Adobe Premiere Pro or Encore or you could replace the clips in Premiere Pro with a dynamically linked After Effects compositions. To do so select the clip you want to replace in the sequence, right-click on the link, select "Replace with After Effects Composition" from the context menu, select a dynamically linked composition from the file dialog that pops up.

A caveat here is After Effects takes time to apply the actions and make the final data available to Premiere Pro or Encore. Sometimes this additional processing time delays preview or playback.

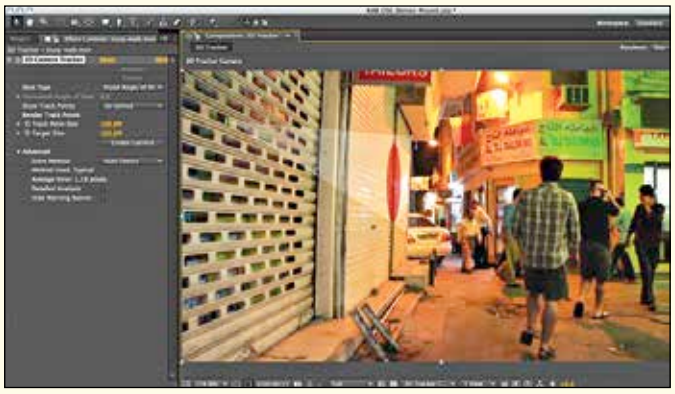
To reduce the playback lag, you can do one of the following:

- take the linked composition offline
- disable a linked clip to temporarily stop referencing a composition
- render the composition and replace the dynamically linked composition with the rendered file

Additional Scripts

The best part about After Effects is that it is extensible, you can modify the behaviour with a lots of plugins and scripts that are available online. Adobe itself provides a package which has a collection of hosts of scripts for editing keyboard shortcuts (KeyEd Up), converting Adobe Swatch Exchange (.ase) files (Swatch You Want, kuler Shapes), doubling and arranging the layers in a composition for comparison purposes (Double-Up), launching scripts (Launch Pad), creating project folder hierarchies (Folder Setup), modifying a composition's motion blur settings interactively (Active Shutter), , setting up layers in After Effects for Encore menus (Encore Tools), separating shapes in a shape layer (Explode Shape Layer), and adjusting the alternate RAM preview setting interactively (Purview).

This scripts work on all versions from CS4 to CS6. To install just unzip the unzip the archive and place the contents in C:\Program Files\Adobe\Adobe After Effects CS6\Support Files. You can also use Active Shutter, Folder Setup, Launch Pad, Purview, and Swatch You Want as dockable panels by placing the scripts (and associated .png files) in a ScriptUI Panels subfolder of the Scripts folder, and then choosing them from the application's Window menu. Grab the script from: http://goo.gl/MldyM



Choose a plane by selecting three or more points

PREMIERE PRO

For a long time Premiere Pro has been living under the shadows of FCP and Avid Media Composer. This time around Premiere Pro CS6 comes packed with a host of new features with a view to increase it's professional user base.

Reference and Program Monitor

The Reference Monitor behaves like a secondary Program Monitor. You can use a Reference monitor to compare the frames of a sequence or to view the same frame of a sequence using different view modes. You can set the Reference Monitor and Program Monitor so that both of them monitor the same frame. You can do this doing either of these two commands:

- `Reference Monitor's panel menu > Gang To Program Monitor`
- `Program Monitor's panel menu > Gang To Reference Monitor`

Hover Scrub

A welcome addition to Premiere Pro CS6, now when you hover your mouse over any clip in your project panel it will be played at the rate as the which your mouse movers over the clip and all this without having to select the clip first.



Mark "in" and "out" points in a clip

You can also select the 'in' and 'out' points for your clip while you're hover scrubbing. Set in and 'out' points on the fly by hitting the 'I' key when you get to a desired in point and the 'O' key when you get to a desired out point.

Warp Stabilizing & Rolling Shutter Repair

To do this in the earlier versions you would've had to export the file to After Effects and once you've made the corrections import it back into Premiere Pro. This time around in Premiere Pro CS6 the Warp Stabilizer and Rolling Shutter Repair

have been integrated into the application itself.

It is a common problem for DSLR and other CMOS sensor-based cameras is that they typically have a lag time between scanning lines of video. Although the Warp Stabilizer effect has a rolling shutter repair effect within it, may be times when you want to repair a rolling shutter problem, but you do not need to stabilize the shot. Using both of these effects is super easy just drag and drop the effect from Effect from the Effects panel and you're done.

QUORA

On the surface, Quora might seem like another ask a question-get an answer website, but scratch the surface, and you soon realise that Quora is much, much more than just that. Quora is a platform that encourages people to write succinct questions and high quality answers to these questions that are engaging and informative.

Since its inception, Quora has grown with features that aim to provide a better experience to the user in terms of the quality and variety of content they are able to view. Quora provides a number of ways to interact with other members and to curate a feed of personalized content, but taking advantage of some of these features is something that newcomers may have trouble with. In order for you to make the most of this wonderful platform, we've compiled a list of some of tips and tricks to using Quora effectively.

Getting Started

First things first, what is Quora? According the official definition, Quora "aims to be the easiest place to write new content and share content from the web" (from http://www.quora.com/about/) Put simply, it is a medium for creating and discovering content that you find interesting, in the form of questions, answers, or standalone posts. The site also actively encourages you to interact with other Quora users, so there is certainly a 'social' aspect to it. However, Quora is NOT a social network along the lines of Facebook / Twitter / Tumblr. Quora is not place to post status updates or photos of yourself, nor is it a place where your worth is measured by your follower:following ratio. Neither is it a younger version of Reddit (no trolling allowed!), though it does have a similar looking upvote/downvote and credit system. On Quora, your 'worth' is measured by the quality of your activity; the type and frequency of questions you ask, answers you write or upvote, and posts you curate on boards (more on this later).

Quora's features

Like we said, Quora is about more than just questions and answers. Quora provides several tools aimed at enriching your experience on the site. Some of these are:

a. Promoting Questions / Answers – Quora encourages quality content, so if you find a really intriguing question or a particularly well written answer, you're allowed to 'promote' it to a set number of people. By doing

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so, the question/answer will show up in the feed of people who're following you or the topic under which that question is filed. Promoting something will cost you credits, depending on the number of people you decide to promote it to.

b. Views – Probably Quora's most controversial feature, Views on Quora are a way to let people know who has been viewing a particular question, answer or post and what led that person to that question. They're meant to be an analytical tool to writers, to enable them to better understand their audience. The feature is completely optional, but gives you a better understanding on who's interested in what type of content. Quora respects your privacy, so this feature is not available on adult content.

c. Embedding Content – All items posted on Quora can be shared with anyone on the internet, provided credit is given to the author. To make this process easier, Quora lets you embed content from Quora onto other websites. To use this feature, just highlight the text you want to embed, and select embed. The site generates some HTML code that you can add to your website. You can also add a Quora 'follow' button to your website – Use the HTML code on http://b.qr.ae/qfollow and select a button style. Paste this code in the relevant section of your website/blog to let people follow you from outside the main website.

d. Ask to Answer and Invite to Answer – If you'd like to see your question answered by a specific person (an expert in the field, perhaps, or someone who's answered a lot of similar questions) you can request them to answer the questions, in return for Quora credits. You can also ask someone who's not on Quora (but who is in a position to answer your question) to answer the question by using the 'Invite to Answer' feature.

Quora Etiquette

Quora is moderated on the basis of the 'Be Nice' policy (http://www.quora.com/Be-Nice-Quora-policy) , which asks that all Quora users treat each other with "civility, respect, and consideration". Quora is not a place to start flame wars or troll others mindlessly (save that for Reddit or The Verge's comment threads) Users are supposed to respect other users' viewpoints and beliefs, even if they strongly oppose their personal ones. Though Quora doesn't have a definite policy on upvoting/downvoting answers, it's acceptable to upvote an answer that is well written, answers the question satisfactorily and enriches the Quora universe. You can also 'Thank' users for their answers and posts by clicking on the grey 'Thank' button. As for downvoting, any content that is too in-your-face, a rant, irrational or doesn't really answer the question should be downvoted.

Using boards effectively

Boards on Quora are among its most underused features, and taking advantage of boards can enhance your experience on Quora many times over. Though boards are typically used to curate interesting content, they can also be used for other purposes. You can create a 'Read it Later' (private) board where you can post long, interesting answers that you haven't had the time to read fully. You can use it as a research tool to post relevant answers or links about a particular topic. If you're collaborating with a fellow Quora user on a topic, you can start a board where both can post. You can use it as a personal blog or diary to post. Boards can also be used as a general purpose bookmarking tool if you want to have all your interesting links in one place.



Quora as a searchable item in Android's Search app

Quora Hacks

There are a lot of little known features on Quora that can further enhance your Quora experience. Some of them are:

a. Convert virtually any page (question, topic or board) into an RSS feed by appending /rss to the page's URL. This feed can be added to a feed aggregator such as Google Reader for easy browsing. This is particularly useful if you're interested in a particular page but don't want to receive a barrage of notifications. Or if you want to follow a board or question from a mobile device that's not running iOS or Android (Yes Blackberry and Windows Phone users, we're looking at you), you can add the feed to a feed reader on your device.

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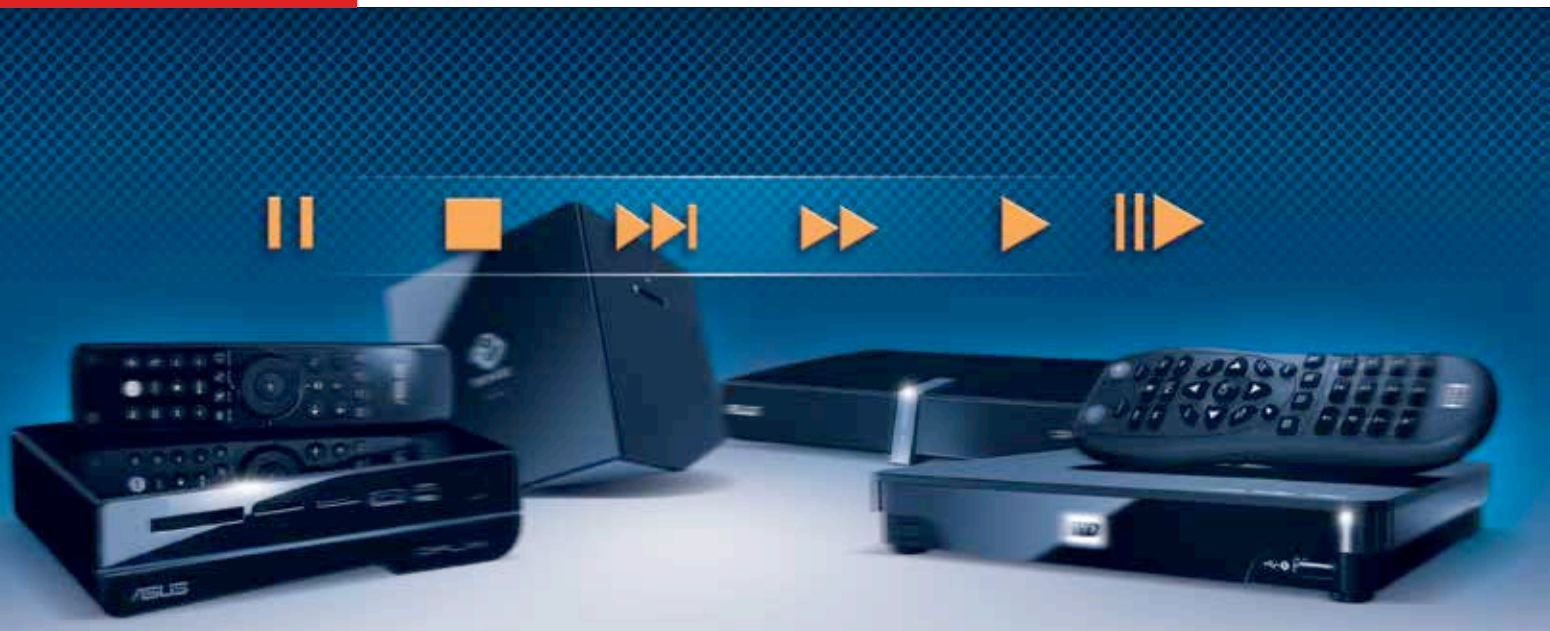
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66 **External drives test**
We try and solve your external hard drive and flash drive buying conundrum through this article

76 **Bazaar**
The latest, greatest and most anticipated products in the market reviewed with a score to rate their calibre



Ahoy Maties!

13 HD Media Players walk the plank...

Avast ye landlubbers, perched in fore o' yer HDTV without anythin' t' watch. `Tis time ye got yersef one o' these...

Vishal Mathur
vishal.mathur@thinkdigit.com

Stop denying it. Most of us with broad band internet have a lot of movies, TV serials, and more stored on our computers. Terabytes of it in some cases. For arguments' sake, let's assume you have only downloaded or ripped DVDs and Blurays that you have already purchased, and this collection of yours is merely a legal backup. It's not right to pirate, we all know it, and yet as hard as you try, you end up playing pirate.

OK, so moving beyond the pirate tag for now, we come across the next fork in the road towards entertainment bliss. You have all your movies, probably stored on a PC/laptop or on an external hard drive *(we've tested those too this month, see page 66)*, now how do you get it from there to your HDTV?

Shiver me timbers, the reason you bought the darn thing for so many doubloons was to be able to kick back with your lass, some grog in your hand, and watch your favourite flicks. But nay, instead you squint at your PC / laptop screen, two feet from yer nose, straining to hear what Jack Sparrow says on his way to Davy Jones Locker! Far from ideal this.

That's where HD media players come in. Just plug in a hard drive, memory card, pen drive, or basically any USB storage, and play back files stored on it. Some even have integrated Ethernet ports or Wi-Fi, to enable you to do it all over the wires/air, DLNA style! If the ability to create home networks is not enough, some of these also throw in the ability to stream from noted web services, effectively turning your HDTV into a smart device at a fraction of the cost...

FINDING THE CREW

The categories

The thirteen HD media players we got were lined up for inspection, belts tightened, shoes spit polished, and hooks attached to stubs. It became pretty obvious that four groups were emerging.

It would be mighty unfair to pit sprogs against buccaneers, and thus we looked at specs to decide what these four categories should be.

The first category is for the entry-level media players, which do not offer any extras such as Ethernet connectivity or built-in Wi-Fi. The second category has devices with web access

Skullcandy PLYR1
Skullcandy's new gaming headphones features a foldable boom mic, inline remote for controlling the volume, and selecting trio of EQ



LG Optimus G
LG has officially launched its new flagship in Korea and is expected to release globally in November. Optimus G is estimated at ₹48,500

HOW WE TESTED

When comparing HD media players, we ensured that everything that would impact the performance was kept constant throughout.

The updates
Before we started, we checked if there were any updates available for the software, and if there were, we downloaded and installed them as recommended.

Videos and formats
We handpicked a bunch of 1080p, 720p and SD videos in various popular formats – MKV, MP4, AVI, m2ts, RMVB and MOV that we played back on all devices one by one. The performance of these videos was a huge chunk of the performance testing, including quality and playback start times.

The display
The media players were connected via a Panasonic HDMI cable to a Samsung Series 6 LED television, and always in the same input source, with the picture and audio settings constant throughout. Even the power source was kept exactly the same, to allow for a completely level playing field.

The storage
We used the Seagate Backup Plus 1TB (USB 3.0) drive in NTFS format, and a Seagate Sandisk Cruzer Blade, 16GB USB drive in Fat32 format, running the files off a single-layer folder structure.

The network
To test streaming services, we used a Cisco-Linksys X2000 Wireless N router (A/B/G/N), which was connected to a Windows 7 Ultimate PC running a PS3 media server. The distance between the router and the media players was also kept constant.

The remote
In order to test the remotes, we measured performance from identically measured distances, and ensured that there was never any interference, physical or otherwise, between the remote and the players.

We also looked at the features provided, and marked everything down, as shown in the table on page 62.

and streaming capabilities, but only via Ethernet. Incidentally, there is no price limitation in the first and second category, since the devices are clustered based on hardware criteria. Yes, some manufacturers may offer the optional Wi-Fi dongle, but we consider that as a separate expense since it doesn't come out of the box with the device. The third category includes media players costing up to ₹8,000 and get inbuilt Wi-Fi capabilities. The final category is the ones which feature the high-end media players, costing above ₹8,000, and offer a wide gamut of features.

PRETTY LASSES

Design and ergonomics
Unlike Blu-ray and DVD players, HD media players don't have similar designs. You get to see a wide variety of form factors across the board.

The O!Play Mini is a basic media player offering from ASUS, and is the cheapest in this test. The desk area it takes up is pretty similar to a USB hard drive, which is small. It's not built to look like a budget media player at all, and the shiny plastic used on the top of the device has a pretty decent imprint design.

All the connectors can be found at the back, and only the USB port and the memory card reader are in the front. Now this is handy, but with something this small, we think aesthetics should have won here, and these slots could have been at the back instead of spoiling the show. This is painfully obvious when you see the thing sitting there with a USB cable running out of it into an external drive.

Being devices that usually sit near your TV, which is also, usually a focus area of your living room, it's good to see that even budget or affordable media players take note of this. The Amkette Flash TV HD, for example, is reminiscent of a rounded coffee table coaster, and is not much thicker (base to top) than a Tata Sky HD remote. The device easily slides inbetween the base and screen of most HDTVs – good for those of you with space commanding a premium. It will just as easily sit on top of a set-top box or a Blu-ray player as well. Despite the slim design, the connectivity options are all there – HDMI, component and composite out. Our only complaint is the single USB port, and just one SD card slot.

The O!Play HDP R1/2A is significantly larger than the



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Borderlands 2 is out!
The sequel of the popular game from Gearbox developers is available now. Shoot and loot was never this exciting

Intel Haswell
Intel recently showcased its 20nm Haswell chip which is 20 times more power efficient than Ivy Bridge and due to release in 2013



ASUS O!Play Mini

O!Play Mini and Flash TV HD, but that's only because of the category it happens to fall into. It's about as big as two 3.5-inch desktop hard drives kept one on top of the other. The front and the sides are built of shiny plastic, but the top has a matte finish, which is good because matte finishes attract fewer fingerprints and hide dust collection better. On the left you will find a USB and an E-SATA port – the E-SATA also doubles as another USB port. The AV connectivity ports are on the back, along with optical audio and an Ethernet port.

Seagate's GoFlex TV is about the same size as the ASUS O!Play HDP R1/2A. Pop open the front panel and you see a slot for a 2.5-inch GoFlex hard drive. Remember, though, that this slot is only for Seagate GoFlex portable drives, and you can't connect just any drive you want to here. The sides have vents to keep the system cool, particularly when there is a drive slot-in. The USB port is on the back, along with composite, component and HDMI for video, and optical out for audio. The finish is just the right mix of glossy and matte black.

The WD Live Hub, when it was first released, did change the way HD media players were perceived. Rather than just being something to get your media on to your TV, it brought with it a sense of style and purpose. The Live Hub is only slightly wider and deeper than the O!Play HDP R1/2A, but is 50 per cent slimmer. Consider the fact that there is a 1TB 2.5-inch internal hard drive packed into this form factor, and you are even more impressed.

Although this device has a fan to blow warm air out the bottom, it still is one of the coolest running and most silent devices in this test.

If you happen to hate flashy looking colours distracting you from your TV screen, you are even given the option to turn off the LED logo that's on the front. On the back you find all the AV connectivity options, the Ethernet port and a USB ports – there's another in front. This is one of only two devices in this comparison test that actually have a physical power on/off key – the Boxee Box is the other.

The O!Play Air looks exactly like the O!Play HDP R1/2A, except that one of the sides gets multiple card readers and the front gets an LED indicating the status of Wi-Fi connectivity. The tone of design similarity continues with the O!Play Mini Plus, which has exactly the same form factor as the O!Play Mini, but for a different top panel finish and an additional E-SATA and Ethernet port. The diamond patterned design on the top panel looks very classy, but sadly, just like its lower priced sibling, the front is ruined by a USB port and a memory card slot.

The O!Play HD2 is, and there is no other way of putting this, enormous. Of course this is partly because it has a slot for a 3.5-inch internal desktop drive for additional storage. If you don't plan on throwing in a TB or three of desktop storage, this will be an irritation, if you do, an acceptible inconvenience.

The design seems quite confused as well. The lines and curves don't seeem to follow a theme. The glossy build doesn't help matters, and it has a whole range of ports on the front – USB, E-SATA, CF card, SD/MMC and MS/MS Duo. No arguing with the sheer variety of devices that you can connect to this. The AV connectivity ports and Ethernet are on the rear panel. Will it win any awards for good looks, certainly not, but the idea seems to be simple – make the storage and connectivity ports easy to access for everyone (and thus improve ergonomics), looks be damned!

With the 2012 refresh of the WD Live, the bar has been raised that much higher now. Compared to the version it is phasing out, the thickness and the width of the player has been further reduced. One USB port shifts from the side to the front panel while the other one remains at the back where the with AV connections are.

It is a slightly darker shade of grey, with a block of black on the front where the power LED is placed. Speaking of which, the front LED on this one is just a dot, unlike the full WD logo that is lit up on the front of the Live Hub.

Out of the box, the Portronics LimeBox looks more like an Atom-based media centre PC. The design is quite unique, and the combination of white and light green gel quite well. The power on/off button on the arch stands out. On the top is the SD card slot, with a well-deployed cover. On the back are 2 USB ports, along with the HDMI out, composite video, optical audio and Ethernet port. More than anything else, this HD media player will have your guests asking questions about it!

The Amkette Evo TV looks like a cross between the WD Live and the Apple TV – in a good way. The form factor is very compact, and it's a combination of a matte and glossy finish. There are 3 USB ports on one side plus a memory card slot, while on the back you will



ASUS O!Play HDP R1/2A

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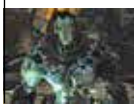
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Darksiders 2
The unique protagonist returns with killer art style, savvy level design, and ferocious combat



HP Envy m4
HP announces thin and light Envy m4 with i3 and i5 processor, up to 8GB RAM and 1 TB HDD

find a fourth USB port along with HDMI out, composite out and the Ethernet port. When it comes to looks, this thing wins hands down, beating all other contenders by a mile.

The Boxee Box really does have a unique and eye-catching cube-ish design, which was conceived by the same people who designed the Xbx 360 – which perhaps explains the green! Yes, green, and not just your regular green, think fluroscent green. The base is that colour, and it contrasts well with the combination of glossy and matte black of the device.

Also, the base is rubberised – this will help the frequent re-cablers amongst us from accidently tuggin on the wrong cable and causing floor and media player to meet. There's an illuminated Boxee logo on the front that glows – yup, you guessed it, it's green. It's green when you connect it to the network, and turns orange when not connected or in standby mode.

Now unique designs are not always the most ergonomical, and the Boxee ends up being a lot larger than most of the other media players in this test, and can be a little bit of a pain to seat into your pre-built entertainment setup if you have a space crunch. Of course, because it's big, it also fits in all the necessary connectivity options easily – HDMI-out, two USB inputs and a memory card slot. The O!Play Gallery looks exactly like the HD2, and offers a similar set of storage connectivity options. Surprisingly, the composite and component video outputs have been done away with. The addition is the iPod connectivity. The uninspiring design could have been tweaked, considering the extra price this device is selling for.



WD TV Live (3rd Gen)

WALK THE PLANK!

Features & performance

Basic media players

Between the two contenders, Amkette Flash TV HD and O!Play Mini, it was pretty much a runaway win for the Flash TV HD – the startup was quicker, file playback started faster and HD and SD content playback slightly better than on the O!Play Mini.

It's neck-and-neck in terms of features, but the Flash TV HD takes the advantage in the build and ergonomics scores. It also has slightly better picture reproduction, and the same videos seem a tad crisper and livelier than on the O!Play Mini. This was most visible when playing back 1080p and 720p files.

Upscaled content looks almost the same on both devices, with edge noise somewhat visible. The remotes for both devices are basic, but neither had an optimal key layout. It will be more of a case of getting used to either.

Both offer very basic on-screen interfaces, and there really is nothing to differentiate the two. You see categories of media – video, photos and music, and the customary settings menu. No options to tweak these either.



ASUS O!PLAY Air

Media players with ethernet connectivity

This category consists of media players that offer web connectivity over the wired route, but without integrated wireless.

ASUS' O!Play (9.9 seconds) has the quickest startup time, with the Seagate GoFlex TV (13.9 seconds) a close second. WD Live Hub takes a while to start up and get ready – just under 40 seconds. All three devices are pretty comparable after that to the time taken to select and start playback of a chosen file off a USB drive. The WD Live Hub's final HD quality and up-scaled SD reproduction quality is superior to the other two though. We really liked the fact that you can tweak the brightness and contrast settings on the O!Play, to make videos looks livelier. Being able to tweak the output to suit your personal preference is a huge bonus as far as we're concerned. The overall picture quality of the Live Hub, with settings fixed, is the best and the O!Play comes a very close second.

The Seagate GoFlex TV handles original HD content brilliantly, but the upscaled content seems to miss out on the expected crispness. Surprisingly, Seagate doesn't have the 24p Cinema Mode option, something that seems pretty basic for a device that will playback HD videos. With the WD Live Hub, you can tweak the colour depth between 8-bit and 12-bit and also "set resolution to match frame rate", which is their version of the 24p mode.

WD's unique Mochi UI adds to the visual appeal, making the rivals' UI look more dated than they actually are! However, it goes without saying that Seagate's UI is better laid out than the one on the O!Play – which suffers from clutter because of huge icons. We were surprised how quick the file playback times were on the Seagate GoFlex HD when streaming content on the network, where the WD Live Hub was surprisingly sluggish.

The remote of the WD Live Hub is the most comfortable to use, and for the fingers to get used to. The remotes for Seagate's GoFlex TV and ASUS' O!Play aren't the easiest for the finger-memory (using without looking), but get the job done. The price of ₹13,500 for the Live Hub is fairly steep, which is why we believe the ASUS O!Play HDP-R1 (which costs just

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Huawei Ascend G600
Huawei launches its new Ascend G600 with Android 4.0.4 with a dual-core 1.2GHz CPU, a 4.5-inch qHD display



Nikon D600
Nikon launched its full frame DSLR with 24.3MP FX format CMOS sensor and Expeed 3 processing engine

	BEST BUY digit OCTOBER 2012		BEST BUY digit OCTOBER 2012		
	CATEGORY 1 Media Players, without web connectivity		**CATEGORY 2 Media Players with Ethernet, but no integrated Wi-Fi**		
Manufacturer and Model name/ number	**Asus O!Play Mini**	**Amkette Flash TV HD**	**Asus O!Play HDP R1/2A**	**Seagate GoFlex TV**	**WD Live Hub**
MRP	3400	3,995	4,600	8,750	13400
Performance (Out of 35)	18.2	19.2	20.8	20.2	29.0
Features (Out of 35)	14.1	16.4	16.5	17.7	26.9
Design (Out of 30)	11.3	13.8	14.7	16.6	22.4
Final Score	43.7	49.3	52.0	54.5	78.3
Video & Audio Playback Capabilities					
MPEG 2 MPEG 4 Divx HD MKV AVI FLV M2TS RMVB MOV	Y/Y/N/Y/Y/Y/Y/Y/N	Y/Y/Y/Y/Y/Y/Y/Y/Y	Y/Y/Y/Y/Y/Y/Y/Y/Y	Y/Y/Y/Y/Y/Y/Y/Y/Y	Y/Y/Y/Y/Y/Y/Y/Y/Y
24p Movie Mode	Y	Y	Y	N	Y
HDMI Deep Colour/x.v. Colour	N	N	N	N	Y
HD upscale resolution	1080p	1080p	1080p	1080p	1080p
AV Connectivity ports					
HDMI	Y	Y	Y	Y	Y
Component Video	N	N	N	N	Y
Analog Video	Y	Y	Y	Y	Y
Optical/Coaxial Audio	Y/N	Y/N	Y/N	Y/N	Y/N
Web connectivity					
Integrated LAN/Integrated Wi-Fi/	N/N	N/N	Y/N	Y/N	Y/N
Pull Movie Info	N	N	N	N	Y
Storage					
USB inputs	1	1	2	1	2
Memory card slot	Y	Y	Y	N	N
Internal Storage	N	N	N	Optional	Y
Size and Weight					
Dimensions (mm)	151.85 x 106.7 x 29.03	120 x 120 x 18	181 x 125.3 x 47.7	N.A.	198 x 154 x 31.75
Weight (in gms)	175	N.A.	491	N.A.	550
Controlling the device					
Universal remote	N	N	N	N	N
Remote app for smartphones (iOS and Android)	N	N	N	Y	Y
Volume Control on remote	N	N	Y	N	N
Performance & Tests					
Player startup time (press power key to menu display) in seconds	13.5	10	9.9	13.9	37.7
USB Playback					
1080p MKV movie startup time - (Press Play - till movie starts - in seconds	11.3	5.7	5.2	7	7.8
720p MKV movie startup time - (Press Play - till movie starts - in seconds	12.4	4.7	4.6	4.6	4.7
SD AVI movie startup time - (Press Play - till movie starts - in seconds	2.5	6.5	5.5	5.7	4.9
Streaming					
1080p movie startup time - (Press Play - till movie starts - in seconds	0	0	15	12.3	28.7
720p movie startup time - (Press Play - till movie starts - in seconds	0	0	13	10.2	15.4
SD AVI movie startup time - (Press Play - till movie starts - in seconds	0	0	4.1	11.3	6.4

₹4,600) is a superb deal – it's in now way inferior in the aspects that really matter.

Media players with Wi-Fi connectivity

The third category, with the biggest chunk of contenders consists of entry-level HD media players with integrated Wi-Fi. There are three O!Play series players from ASUS and the very competent WD Live.

Among the three O!Play cousins, the O!Play Air has the quickest startup time, a better user interface, and is at par with the other two in terms of SD and HD quality reproduction. Not a surprise, considering the image-processing engine is probably identical. Both the Air and the Mini Plus handled wireless media streaming very well. The HD2 had issues with the DLNA handshake, and refused to play ball despite its siblings hooking up almost instantly. WD doesn't have any issues with quality while streaming content, but the playback does







CATEGORY 3 Entry Level HD media players, with WiFi				CATEGORY 4 High-end HD media players			
Asus O!PLAY Air	**Asus O!Play Mini Plus**	**Asus O!PLAY HD2**	**WD TV Live (3rd Gen)**	**Portronics LimeBox Smart TV**	**Amkette Evo TV**	**D-Link Boxee Box**	**Asus O!Play Gallery**
5,850	6850	6,950	7500	8499	9,995	9999	11500
21.5	20.7	22.8	30.0	19.0	19.5	29.5	18.9
21.7	21.4	23.0	26.5	14.9	17.4	26.3	23.8
15.5	16.8	14.0	22.6	15.9	15.7	19.0	14.9
58.7	59.0	59.7	79.1	49.8	52.5	74.8	57.6
Y/Y/Y/Y/Y/Y/ Y/Y/Y/Y	Y/Y/Y/Y/Y/Y/ Y/Y/Y/Y	Y/Y/Y/Y/Y/ Y/Y/Y/Y/Y	Y/Y/Y/Y/Y/Y/ Y/Y/Y/Y	Y/Y/N/Y/Y/Y/ Y/Y/N/N	Y/Y/Y/Y/Y/Y/ Y/Y/Y/Y	Y/Y/Y/Y/Y/Y/ Y/Y/Y/Y	Y/Y/Y/Y/Y/Y/ Y/Y/Y/Y
Y	Y	Y	Y	Y	N	Y	Y
N	N	N	Y	N	N	Y	N
1080p	1080p	1080p	1080p	1080p	1080p	1080p	1080p
Y	Y	Y	Y	Y	Y	Y	Y
N	N	N	Y	N	N	Y	N
Y	Y	Y	Y	Y	N	Y	Y
Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Y/Y	Y/Y	Y/Y	Y/Y	Y/Y	Y/Y	Y/Y	Y/Y
N	N	N	Y	N	N	Y	Y
2	2	3	2	2	1	2	3
Y	Y	Y	N	Y	Y	Y	Y
N	N	Optional	N	N	N	N	Optional
181 x 125.3 x 47.7	151.85 x 106.7 x 29.03	230 x 178 x 60.5	125 x 100 x 30	190 x 150 x 78	118 x 118 x 26	115 x 115 x 115.5	230 x 178 x 60.5
479	175	730	190	N.A.	277	N.A.	720
N	N	N	N	N	N	N	N
N	N	N	Y	N	N	Y	N
Y	N	N	N	N	Y	Y	N
11.7	22.7	18.8	34.1	51.7	62.8	46.4	23
4.7	6.1	6.6	4.9	5.3	4.9	11.02	10.9
4.9	6.9	5.7	4.7	3.8	4.9	5.4	8.6
4.4	8.1	6.1	4.6	4.7	5.1	2.7	16
4.4	11.4	0	28	0	0	12.25	0
2.9	10.5	0	11.8	0	0	11.3	0
3.9	10.1	0	2.4	0	0	5.88	0

take longer to start. It matches up well with the Air and the Mini Plus in terms of video startup time, off a USB drive. The HD2 is the slowest in that respect. Again, the resolution tweak options on the Live are pretty much the same as the Live Hub owing to very similar software, and you get the same colour depth and 24p modes.

Without any doubt, in our quality analysis, HD and upscaled SD content looks best on the WD Live, with the O!Play following in second place. For upscaled content, WD Live wins by displaying the least amount of edge noise without sacrificing sharpness.

In terms of interface, the WD Live is the best, with the Mochi UI carried over from the Live Hub. Separate tabs for videos, pictures, online services, games and even Live TV via the Slingbox app. You will need to sign up for the Slingbox service to use this. O!Play devices have very basic UI, but they are very functional.

Interestingly, all three ASUS players in the same category have considerably different looking remotes, but none come close to the comfort offered by the WD Live remote. It is identical to the WD Live Hub's remote. It's also a lot bigger than the compact ones we're used to with previous generations of WD Live, but the additional functionality the larger size offers is a boon. One thing we did notice was that none of the media players offer backlit remotes, which is a bit perplexing.

High-end media players

First up is the Portronics LimeBox. This is an Android 2.3 OS-based media player, which offers the ability to play back media and also acts as a all-rounder letting you download apps from the Play Store, download and play games and browse the web.

Looking specifically at media playback capabilities, and it does fairly well. It was able to playback any and all formats that we threw at it, but the picture quality isn't all that great. Both HD and upscaled HD content looked quite dark for some reason, and there was noise across the entire screen, irrespective of the video we played.

Also, by default, the playback doesn't fit across the entire area of the display, and you have to dig really deep within the settings to find the overscan function to fix this. To add to your misery, this page has a black background, so it's sort of



Canon Pixma MG5450
Canon releases high-end printer with Wi-Fi connectivity, two paper feed trays, faster print speeds with support to smartphones



HP X6000
HP launches wireless mouse with four-way tilt scrolling and can be used on most surfaces, including glass



D-Link Boxee Box

a hit and a miss game while you guess what setting will work for your TV. You have to choose one setting, go all the way back to the video playback screen and then check if it actually worked. If not, rinse and repeat.

The remote is well laid out though, and while some keys are quite small, your hand can get used to them easily. However, the UI response isn't precise at all – sometimes there is no response to a key press and sometimes there is too much of the same! Surely a software update can solve some of these issues, but at the moment, pigs will fly before we recommended this device to anyone. We welcome an updated device from the company, and will happily post an update on our site if and when the problems are ironed out.

Amkette's Evo TV is another Android OS-based media player, and this one puts forward a much better show. There are 4 USB ports on the device, so you can pretty much keep most drives plugged in, and you can also buy other accessories from Amkette such as a webcam to make Skype calls, for instance. The separate home screen layer is where the really unique interface is. The sideways sliding tiled UI works well with conventional key presses, but the highlight of this device is its motion sensor remote! Now this is a feature that has pretty decent response times and precision, but sometimes it just starts acting up for no reason. We've posted a video online of this, check out the video at http://dgit.in/PBKWmI to know more. Let's just say it's a great idea, and if it worked seamlessly would allow you to take your simple HDTV and make it a smart TV on the cheap. The problem is it doesn't work well all the time, and can in fact get quite frustrating to use. This would be no problem if it was just another simple media player, but given that it has to compete on a different level to try and deliver smartness to your TV, well let's just say we're looking forward to version 2 of the product eagerly to see if the bugs get ironed out.

The device was able to play back all files we threw at it, except a single MP4 video. The video quality for original HD content is quite good, but there aren't any tweaks that you can do in terms of colour depth, frame rates etc. Overall, we think the Evo TV will appeal more as a casual gaming device that also lets you download apps off the Play Store and browse the web, but as a media player, it seems to miss the point, or seems to lack some sense of focus.

D-Link's Boxee Box is absolutely phenomenal when it comes to HD and upscaled SD reproduction. The ability to tweak multiple settings for noise, colour depth (that goes up to 32-bit) and colour modes just makes a lot of positive difference in the final image you see on the screen. Original HD content seems very lively, and even upscaled content is pretty much at par with the brilliant WD Live. The bonus is a lot of web-based services you can use, and download apps as well. The cool looking interface is a tad overwhelming for a newbie, but once you get used to it, it'll become a breeze to navigate. The remote works very well, and is rather unique – four directional keys, a play/pause key and a return key on one side, with the other side of the remote housing a complete QWERTY keypad!

ASUS O!Play Gallery looks exactly like the HD2, and this doesn't do the Gallery any good. At the risk of sounding harsh, when amongst the other sleek and unique looking players, this player looks plain ugly.

Not surprisingly, the picture quality is exactly the same as the HD2, since the hardware is identical. The additional features include the ability to pull movie info via Gracenote, and the UI has been given a brown coloured makeover. It is very basic, and once you get used to it, is simple to navigate. Picture quality is good, but in the company of the Boxee Box, the bar has been set a tad too high for the Gallery.

VICTORY!

For this comparison, we have one award for the best performer, three awards for Best Value across the categories, and also an Editor's Pick.

WD Live

This is the overall best performer in the HD media player test. It has the sleekest form factor, visually brilliant UI, most comfortable remote among all. However, what really set it on its way to victory was the fact that both HD and upscaled SD content is undoubtedly the best of all the devices in this test. And at an MRP of ₹7,500, a very good buy!

Amkette Flash TV HD

This is the Best Value in the first category. Very good performance and video quality, a refreshing design and is pretty much a steal for a mere ₹3,995 on the price tag.

ASUS O!Play HDP R1/2A

In the second category, this device faces some serious competition from the WD Live Hub in terms of picture quality, but the huge price difference tips the scales in favour of the O!Play HDP R1.

D-Link Boxee Box

This device has the most unique design, excellent video playback quality almost at par with the WD Live, the widest range of web services and a remote that remains functional, sleek and feature-rich, all at the same time. Worth considering, if the price of ₹9,999 is within your budget.

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Edimax first Road Show Series
EDIMAX Technology commenced its first road show series for tier II & III cities at Ahmednagar, Nasik. The road show attracted 30+ partners from around Nasik

7-platter Helium HDD Platter
Hitacht (HGST) demoed its helium-based HDD platform where Helium used in place of air will increase the storage density while decreasing power consumption



Terabyte Rises

As you create more digital memories, you need more space to store them. We present you with some tempting options

Nimish Sawant
nimish.sawant@thinkdigit.com

With the festive season just around the corner, most of us will be socialising a lot and some of us will also be going outdoors. One common thing which we will be indulging a lot in either cases is creating memories. We will be shooting a lot of photographs, capturing a lot on video and so on. But to hold all these digital memories, you will need more storage space. The fact that there is never enough memory is a given. We want more. And in this festive season, you may just want to consider investing in a drive that will hold all your memories and allow you to carry them around.

Last year, we had a mix of USB 2.0 and USB 3.0 drives. This year, we skipped USB 2.0 drives altogether, as we feel that if you are still thinking of investing in a USB 2.0 external drive, you need to join the rest of us in October 2012. There was never a better time to upgrade to USB 3.0 external storage, as you will find out.

PORTABLE DRIVES

We divided the portable drives into two broad segments: Under 1 TB and Equal to or over 1 TB, as that gave us sufficient drives to compare against each other.

Drives under 1 TB

Portable drives in this category look quite stylish and there are a variety of colours to choose from. ADATA HD710 stands out thanks to its bright yellow rubber casing, which not only makes it waterproof but also adds an element of protection against drops. It also has notches to hold the USB 3.0 cable around its edges. Other drive which impresses in terms of design is the purple coloured Silicon Power Stream S20 which has a tapered edge in the front like a car. It offers an SP Widget which is a cool utility for backing up your data and encrypting data.

The Hitachi Touro Mobile Pro looks like a love-child of an iPhone and an external hard drive thanks to its uncanny resemblance to the design of the iPhone 4. It was the only portable drive to feature a 7200 RPM drive and offers 3 GB of free cloud storage. Toshiba Canvio has a sturdy plastic build and offers some patterns on its front face. Buffalo Mini-Station drive has a nice glossy finish on the front and glows blue when it is working.

Seagate Satellite is an interesting drive among these as it has an in-built wireless adapter, which allows the drive to be used as a NAS device. You can store content on the Satellite and that content can be streamed to your mobile devices such as tablets or cellphones over the Wi-Fi network. You can access that content using an app. It is comparatively bulkier than other drives as it houses not only the wireless adapter but also a battery section. In our testing we found that it ran for a good 4

Canvio Slim announced
Toshiba has announced a 500 GB Canvio Slim Portable Hard Drive, their slimmest portable drives yet, measuring just 9 mm in thickness

IBM debuts Power7+ servers
Hosting a smarter computing event IBM debuts its Power7+ servers to run your AIX, Linux on Power, and IBM i workloads

HOW WE TESTED

We divided the external drives into three categories in all. For Portable Drives we had a) Drives less than 1 TB and b) Drives greater than or equal to 1 TB. Drives that required an external power supply were clubbed together and there was no demarcation here based on the capacity as we got only 5 drives in total. Finally Flash drives were divided into a) Drives with capacity under 32, b) Drives with 32 GB capacity and c) Drives with a capacity over 32 GB.

The test bed had following components:

- **Processor:** Intel Core i7-3770K @ 3.5GHz
- **Memory:** 2 x 4GB Kingston HyperX DDR3 RAM @ 1333MHz and timing of 9-9-9-24
- **Motherboard:** ASRock Z77 Extreme 4
- **OS:** Windows 7 Ultimate (64-bit)
- **OS Drive:** Kingston Hyper X SH100S3 120GB SSD
- **Transfer Drive:** Kingston Hyper X SH100S3 120GB SSD
- **Graphics Card:** AMD Radeon HD 6850
- **Power Supply:** Corsair HX620W
- **Monitor:** BenQ EW2430

We installed a clean copy of Windows 7 Ultimate on the Kingston HyperX SH100S3 SSD and installed the synthetic benchmarks such as Crystal DiskMark 3.0.1 and SiSoftware Sandra 2012 on the SSD. Two partitions were created on the other Kingston SH100S3 SSD and we used it for real life data transfer tests.

We performed the SiSoft 2012 test on unformatted drives which gave us average read / write speeds and data access times. The Crystal DiskMark test was done with zero-fill data as well as with random data. Sequential and Random data read / write was recorded. After this we divided the drives under test into equal capacity partitions. No partitions were created on the Flash Drives and they were only subjected to real world testing.

For our Real World tests we used a 4 GB RAR File and a 4 GB Assorted file, to simulate a sequential and assorted file transfer scenario. These files were copied to and from the Kingston SH100S3 (non-OS SSD) to the external drives under test. We also performed file transfer tests within the two partitions of the external drives. Finally, we used Adobe Photoshop CS2 to test the amount of time taken to load a 1GB file. Both the image and the scratch disk were kept on the test drives on the same partition, effectively stimulating file access. The cost per GB was included in calculating the Best Buy and we looked at the market prices of the drives.

hours while streaming movies, before it needed recharging.

Performance

Thanks to the 7200RPM drive housed within the Hitachi Mobile Touro, it was able to successfully cross the 115 MB/s mark in sequential read and write tests. It was also blazing fast when used as a scratch disk. Buffalo MiniStation Thunderbolt was the only other drive to achieve that. Silicon Power Stream S20 gave the third best performance scores. Most of the other drives in this category gave scores which were closer. Only Toshiba Canvio drive gave comparatively lower scores.



Hitachi Touro Mobile Pro

1 TB and over drives

This category was flooded with ten 1 TB drives with a single 1.5 TB and 2 TB being the only other drives. Clearly 1 TB is just about the right capacity if you are looking for a long-term portable drive.

Freecom had three drives in this segment of 1 TB each. We were particularly impressed with the aesthetics of each drive. The Freecom ToughDrive 3.0 as the name implies, is housed in a rubber casing and is water resistant with the USB 3.0 cable built into the casing. We really hated the short USB 3.0 cable though. Desktop users can forget using this drive unless you have a USB 3.0 cable extender. We loved the design on the Mobile Drive Sq, which

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WD hybrid drive announced
Western Digital has taken the wraps of its first hybrid drive using the 2.5-inch 5mm design. it will sport MLC NAND memory



Samsung 840 Series SSD
Samsung has released a new series of SSD – the 840 Series. It's a notebook-ready performance-oriented SATA 6 Gbps drive

has rubber feet on its base and has a square shape. The Mobile Drive Mq looked like most of the other drives except for its slim form factor.

Transcend StoreJet 25M3 is similar in design to its previous



Western Digital My Passport 2 TB

iterations with a dark brown rubber casing protecting the drive within. It also has a one button backup option. ADATA had a nice jigsaw puzzle design on its front face with notches to hold the USB 3.0 cable along its edges.

Seagate had two Portable drives and BackUp Plus drive. The latter was recently introduced and it allows you not only to backup your system's data but also data from your social media. It has an option to post directly from the drive itself to Facebook, Flickr and YouTube and you can backup your data – photos and videos – on these sites as well. It also comes with the GoFlex-type adapter to change interfaces.

To imagine 2 TB in your back pocket, just a couple of years ago was unthinkable and WD has managed to put that on a portable drive. It also has some nice textured design on the front which makes the drive look much better than the drab glossy black finish on older My Passport drives. It includes the WD SmartWare utility.

Buffalo MiniStation HD-PATU3 Thunderbolt

Buffalo MiniStation HD-PATU3 Thunderbolt, as the name implies comes with a Thunderbolt port along with a USB 3.0 port. The silvery grey and white body is quite reminiscent of Apple's design colours. The drive is comparitively bulkier than other 500 GB drives in this category except for the Seagate Satellite drive. The Thunderbolt port is present beside the USB 3.0 port. Thankfully, Buffalo bundles in a Thunderbolt cable which itself costs around ₹2,500 on the Apple store.



Apart from testing the drive on our standard rig, we also connected the Thunderbolt interface to the iMac 2012 edition, which has a Thunderbolt port. The Thunderbolt interface is bottlenecked by the spinning drive and we noticed only a minor improvement in scores over the USB 3.0 drive. While running Crystal Disk Mark 3.0.1 with the Thunderbolt interface, we got Sequential Read / Write speeds of 113.5 and 112.6 respectively whereas with USB 3.0 interface on our rig, we had got 112.4 and 111.6 respectively. The Thunderbolt interface is severely limited by the spinning hard disk drive.

So what exactly is the purpose of the Thunderbolt interface? Well, for iMac users who do not have a USB 3.0 interface but have a Thunderbolt interface it makes sense to get this drive. Although, for Windows users this drive does not make much sense.

Performance

Most of the drives performed as expected. Barring the Toshiba Canvio Plus and Seagate Portable drives, most of the other drives comfortably crossed or were very close to the 100 MB/s mark on sequential write and read operations. Silicon Power Diamond D05 was quite impressive in both read and write speeds. Segate Backup Plus offered an overall best performance in this segment. Assorted write was a killer on most drives with drives such as Transcend and Seagate Portable giving scored under 40 MB/s which was quite low comparatively. Read operations gave decent speeds for all the drives. In the intra-drive tests, the Seagate Portable 1 TB drive ran painfully slow giving around 10 MB/s and forget about using it as a scratch disk.

Verdict

In the under 1 TB category, the **Hitachi Mobile Touro Pro** was awarded the **Best Buy** as it offered the best speeds at decent cost per GB. You do have drives with lower cost per GB but they also offer lower speeds. So if speed is not really your lookout, then we would suggest you are better off with Silicon Power Stream S20 for its affordable pricing compared to the Hitachi Mobile Touro Pro.

In the 1 TB and over category the **Best Buy** was awarded to **Seagate Backup Plus** for its very good price to performance proposition. Its social media backup feature is a definite plus.

The **Editor's Pick** was awarded to the **Western Digital My Passport 2 TB** as it offers a massive capacity at decent cost per GB and also gives good performance overall.



Seagate Backup Plus 1 TB

DESKTOP DRIVES

These drives are basically meant for home use. Due to their bulk, they're not really portable and need to be connected to a power supply to power on the 3.5-inch HDD they house within them. This time we got around five drives all over 1 TB in capacity. Considering portable drives have started sporting 2 TB models, it wouldn't make sense to have a powered 1 TB drive unless of course you are looking for speed.

One thing that demarcates powered drives from their portable counterparts is the size of drives and speeds. Most of the drives we got here had a 3.5-inch internal drive and rotational speeds from 5900 to 7200 RPM. There were two 2 TB drives (Transcend and



Transcend StoreJet 35T3

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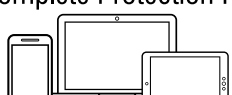
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Tinted windows and electricity
A German company has boorrowed the materials and manufacturing process of OLED displays to make a new kind of solar panel

Targus Notebook Backpack
Rashi Peripherals along with Targus launched a new series of backpacks for notebooks. This new series are available in variety of sizes and features

DESKTOP DRIVES					
Brand	**Transcend**	**Seagate**	**Seagate**	**Seagate**	**Western Digital**
Model Name	StoreJet 35T3	Backup Plus Desk	Desk	Desk	My Book Essential
Capacity (GB)	2000	3000	2000	3000	3000
Cost Per GB (₹)	4.29	3.52	3.58	3.25	3.90
Price (₹)	8000	9850	6675	9100	10900
Features (Out of 15)	8.25	10.5	8.25	8.25	8.25
Performance (Out of 85)	71.41	68.29	53.76	58.87	56.7
Grand Total (Out of 100)	79.66	78.79	62.01	67.12	64.95
Specifications					
HDD capacity (unformatted) (GB)	1863.02	2794.39	1863.02	2794.39	2794.49
Interface	USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0
Rotational Speed (RPM)	7200	7200	5900	7200	5400
Buffer Size (MB)	64	64	32	64	64
Features (Y/N)					
Backup Utility	Y	Y	Y	Y	Y
Encryption Utility	Y	Y	Y	Y	Y
Cloud Storage	N	N	N	N	N
Capacity for Cloud Storage	N	N	N	N	N
In-built Wi-Fi module	N	N	N	N	N
Social Media Backup	N	Y	N	N	N
Performance					
Crystal Disk Mark (3 Test Runs 0x00 Fill 100MB) (in MB/s)					
Sequential Read	174.8	172.6	119.9	134.9	122.9
512K Read	66.07	66.83	50.06	55.82	57.83
Sequential Write	162.9	170.6	117.7	133.3	112.5
512K Write	134.3	127.6	83.43	88.78	96.85
SiSoft Sandra 2012					
Drive Index, Read (MBps)	164	152.86	93	105	93.74
Access Time, read (ms)	13.29	17.78	12.83	14.43	14.17
Drive Index, Write (MBps)	160	154.92	90.23	104.34	92.22
Access time, write (ms)	12.13	6.55	14.74	15.45	5.63
Real World Tests in MB/s (higher is better)					
File Write 4 GB Single File	159.63	149.38	107.34	124.99	106.64
File Write Test Assorted 4 GB File	85.83	88.16	73.21	79.88	64.31
Read Test Single 4 GB File	144.94	152.15	109.64	125.57	110.85
Read Test Assorted 4 GB File	115.02	111.30	97.45	103.10	95.43
Intra Drive Test (Read/Write) Sequential	28.89	19.98	19.88	20.37	34.89
Intra Drive Test (Read/Write) Assorted	46.47	36.52	33.13	40.66	38.00
PhotoShop CS2 (in secs)	26.25	35.65	31.05	36.94	34.95

Seagate) and three 3TB drives (two from Seagate and one from Western Digital).

Seagate Backup Plus 3 TB drive was one interesting drive, as it had a visually different design from the other two Seagate drives. The Backup Plus moniker in the name implies that this drive has the option to backup your online media and allows you to share and backup your photographs and videos on social networking sites. Currently it supports Facebook, Flickr and YouTube. Its dashboard has three main menus: Protect – for backing up data and setting up backup schedules; Share – for directly sharing pictures and videos to social networking sites from the drive and Save – for backing up photos and videos from your social networks.

The other two Seagate drives were from the Desk series which are an update to the older GoFlex Desk series (which came with a USB 2.0 GoFlex adapter). The Seagate Desk drives come with a USB 3.0 adapter. Transcend StoreJet 35T3 comes in a black body. It has a one-button backup feature where-in you just press the button on its front edge and backup process will commence in the background. The blue LED glow around the backup button adds a touch of colour to the drive. It also comes with utilities to encrypt your data.



Seagate Backup Plus Desk 3 TB

Western Digital My Book Essential was one of the first 3 TB external drives to hit the market. It houses

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- 1* LPT Port + 1* COM Port
- 8 USB 2.0 ports



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Reverse Engineer the Brain
Paul Allen has committed $300 million to draw a circuit diagram of human consciousness. Read more: **http://dgit.in/Rc8EXW**

Logitech Solar Keyboard K760
Logitech launched its wireless Solar keyboard K760 at ₹6,599 compatible with Apple devices, the keyboard works for at least three months even in total darkness

BEST BUY digit OCTOBER 2012

PORTABLE DRIVES

	Drives under 1 TB							
Brand	**Toshiba**	**ADATA**	**Buffalo**	**Western Digital**	**Buffalo**	**Seagate**	**Hitachi**	**Silicon Power**
Model Name	Canvio 3.0	DashDrive Durable HD 710	Mini Station	Passport Essential	Mini Station Thunderbolt	Satellite	Touro Mobile Pro	Stream S20
Capacity (GB)	500	500	500	500	500	500	750	750
Cost Per GB (₹)	8.05	8.80	18.68	9.23	37.57	21.68	12.59	6.29
Price (₹)	3,750	4,100	8,700	4,300	17,500	10,100	8,800	4,399
Features (Out of 15)	8.25	2.25	0	8.25	0	9.75	5.25	9.75
Performance (Out of 85)	34.46	39.469	38.371	39.089	50.398	39.052	57.439	47.001
Grand Total (Out of 100)	42.71	41.719	38.371	47.339	50.398	48.802	62.689	56.751
Specifications								
HDD capacity (unformatted) (GB)	465.76	465.76	465.73	465.73	465.76	465.76	698.64	698.64
Interface	USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0, Thunderbolt	USB 3.0	USB 3.0	USB 3.0
Rotational Speed (RPM)	5400	5400	5400	5400	5400	5400	7200	5400
Buffer Size (MB)	8	8	8	8	8	6	16	8
Features (Y/N)								
Backup Utility	Y	N	N	Y	N	Y	Y	Y
Encryption Utility	Y	N	N	Y	N	Y	N	Y
Cloud Storage	N	N	N	N	N	N	Y	N
Capacity for Cloud Storage	N	N	N	N	N	N	3 GB	N
Cover	N	N	N	N	N	N	N	Y
In-built Wi-Fi module	N	N	N	N	N	Y	N	N
Social Media Backup	N	N	N	N	N	N	N	N
Rugged Drive	N	Y	N	N	N	N	N	N
Performance								
Crystal Disk Mark (3 Test Runs 0x00 Fill 100MB) (in MB/s)								
Sequential Read	71.5	82.71	79.68	80.81	112.4	80.61	125.3	106.2
512K Read	34.11	35.09	33.57	34.94	43.61	34.41	54.68	38.92
Sequential Write	70.74	81.56	79.01	71.92	111.6	78.23	123.2	101.2
512K Write	33.73	41.05	40.77	52.93	57.07	41.09	48.04	46.45
SiSoft Sandra 2012								
Drive Index, Read (MBps)	54.75	66.43	63.76	60.29	83.62	64.68	98.49	83.69
Access Time, read (ms)	14.64	16.2	16.36	16.23	16.89	16	14.75	15.14
Drive Index, Write (MBps)	52.63	65.58	63.4	59.73	80	63.26	95.92	80.93
Access time, write (ms)	20	7.27	8.24	18.55	9.62	9.58	15.44	15.51
Real World Tests in MB/s (higher is better)								
File Write 4 GB Single File	65.54	75.88	73.13	76.60	101.46	73.99	118.04	90.72
File Write Test Assorted 4 GB File	36.31	55.71	52.15	53.89	73.26	52.40	56.85	62.01
Read Test Single 4 GB File	67.24	77.20	74.59	72.46	104.22	75.46	117.36	93.20
Read Test Assorted 4 GB File	63.41	70.19	67.47	67.25	87.88	70.32	99.83	79.77
Intra Drive Test (Read/ Write) Sequential	21.47	19.73	19.07	25.42	31.75	20.73	42.16	27.73
Intra Drive Test (Read/ Write) Assorted	20.57	26.31	25.62	27.10	31.15	25.24	33.38	29.62
PhotoShop CS2 (in secs)	40.21	54.00	45.34	39.78	37.79	41.12	20.28	28.06

a 5,400RPM drive from the Caviar Green lineup. The design is a familiar one for those who have seem My Book drives in the past with rounded front edge with a slit for the LED indicator, top and rear ventilation vents and a power button on the rear side. It comes with the WD SmartWare utility which allows you to backup data as well as protect it.

Performance

As expected, all the drives in this segment performed better than their portable counterparts. Transcend 35T3 and Seagate Backup Plus were the only drives to cross the 140 MB/s barrier in both sequential read and write operations in the real world tests. They were also cruising at over 80 MB/s in assorted write and 100 MB/s on assorted reads. These are impressive figures. Western Digital My Book was comparatively slower in write operations but quite good with reads considering it employs an HDD with the lowest rotational speed in this category. While transferring within the drive's partitions, the WD 3 TB drive proved to be better than the rest giving consistent speeds for both sequential and assorted files. Considering all the drives



570 MP Dark Energy Camera

Scientists have announced that the world's most powerful 570-megapixel digital camera has captured first images of starlight from eight billion years ago

Iran blocks Google

Iran has blocked the nation wide access to Google's search engine as well as gmail and will unveil its own domestic network

BEST BUY digit OCTOBER 2012

EDITOR'S PICK digit OCTOBER 2012

1 TB and over											
Toshiba	**Freecom**	**Seagate**	**Freecom**	**Transcend**	**ADATA**	**Freecom**	**Verbatim**	**Seagate**	**Silicon Power**	**Seagate**	**Western Digital**
Canvio 3.0 Plus	Tough Drive 3.0	Backup Plus	Mobile Drive Sq	StoreJet 25M3	HV610	Mobile Drive Mg	StoreNGo USB 3.0	Portable Drive (1 TB)	Diamond D05	Portable Drive (1.5 TB)	My Passport
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1500	2000
5.95	6.97	5.71	5.90	6.44	6.22	8.05	6.44	5.39	6.22	8.94	5.90
5,550	6,500	5,325	5,500	6,000	5,800	7,500	6,000	5,025	5,799	12,500	11,000
8.25	6	10.5	3.75	10.5	0	8.25	3.75	8.25	9.75	8.25	8.25
38.528	49.346	50.788	49.835	45.803	47.842	47.986	47.349	30.221	49.281	40.316	49.988
46.778	55.346	61.288	53.585	56.303	47.842	56.236	51.099	38.471	59.031	48.566	58.238
931.51	931.46	931.51	931.51	931.51	931.51	931.51	931.51	931.51	931.51	1397.26	1862.98
USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0	USB 3.0
5400	5400	5400	5400	5400	5400	5400	5400	5000	5400	5400	5400
8	8	8	8	8	8	8	8	16	8	8	8
Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Y	N	Y	N	Y	N	Y	N	Y	Y	Y	Y
N	N	N	N	N	N	N	N	N	N	N	N
N	N	N	N	N	N	N	N	N	N	N	N
N	N	N	N	N	N	N	N	N	Y	N	N
N	N	N	N	N	N	N	N	N	N	N	N
N	N	Y	N	N	N	N	N	N	N	N	N
N	Y	N	N	Y	N	N	N	N	N	N	N
76.73	113.1	109.9	111.2	109.2	107.2	108.1	108.5	60.56	115.3	92.49	111.2
34.69	36.55	39.6	39.22	37.58	39.82	39.19	38.4	28.67	43.04	40.81	39.54
74.78	110.8	108.5	108.8	109.2	104.7	102.4	105.9	78.44	110.6	91.15	105.5
36.05	49.2	54.42	52.3	53.13	57	43.32	48.37	23.07	49.41	53.37	53.18
71.13	83.58	82.25	82.34	83.48	86.08	76.9	81.17	64	83.7	74.16	87.39
16	16.54	16	15.31	15.4	15.18	16.24	15	17.88	17.3	23.64	16.68
67.9	80.75	79.68	80.15	81.46	84.62	74.39	78.36	63.8	80.79	72.31	86.92
17.83	14	13.44	12.45	9.27	20.22	14.5	16	28.1	18.66	30.37	18.11
77.05	101.24	100.74	100.76	99.61	100.71	93.45	101.19	76.68	102.97	88.47	103.28
40.45	68.20	71.40	71.53	36.45	52.64	65.94	71.05	36.03	71.52	43.32	67.98
82.38	104.89	101.21	104.41	102.63	101.74	96.74	99.39	72.38	106.44	88.66	104.73
74.10	82.97	87.20	88.12	68.60	91.16	84.51	87.02	62.83	90.44	78.23	89.45
23.06	31.45	31.47	33.28	32.88	26.43	29.95	28.03	10.23	30.30	17.66	26.08
23.15	29.31	30.58	30.31	21.01	27.96	29.30	29.06	16.67	29.43	21.20	32.81
38.11	30.44	25.97	38.27	27.71	31.64	28.24	56.00	130.44	39.05	38.57	28.47

came above the 1 TB capacity, you will most likely have partitions for different types of media and that is where the intra-drive speeds will matter. As a scratch disk Transcend drive was faster than the others, which were still speedier than the portable drives, taking under 40 secs to open the 1 GB PSD file.

Verdict

Transcend StoreJet 35T3 was awarded the overall **Best Performer** for its fabulous transfer speeds across all tests. **Seagate Backup Plus 3 TB** bagged the **Best Buy** award for its great price to performance ratio. Also in the form of social media backup, it offers something unique which is an added advantage.

PEN DRIVES

We got around 13 drives in this category, and no two pen drives were alike in terms of design. Clearly, pen drives are perceived more as accessories now, and manufacturers are coming out with interesting designs, different materials and ever-increasing capacities.

We had drives starting from 8 GB and going all the way to 256 GB. Yes 256 GB! Kingston Data Traveler HyperX 3.0 has really upped the ante as far as capacities on pen drives go. Packing in 256 GB inside a com-

Worlds Fastest Supercomputer
The telecom ministry has come up with blueprint to build a supercomputer by 2017 which will be at least 61 times faster than any machine available



Sony Xperia SL
A successor of Xperia S Sony Xperia SL is now available at ₹30,999 shipped with Android 4.0 and 12MP rear camera

PEN DRIVES

	Under 32 GB					32 GB Drives	
Brand	**Corsair**	**ADATA**	**Strontium**	**Verbatim**	**Transcend**	**Kingmax**	**Transcend**
Model Name	Corsair Flash Voyager Slider	ADATA S107	Strontium USB JetFlash	Verbatim V3	Transcend JetFlash 780	Kingmax UD-09	Transcend JetFlash 760
Cost Per GB (₹)	114.24	108.7	43.919	81.081	197.183	40.828	136.054
Price (₹)	850	550	650	700	2,800	1,223	4,000
Features and Specs (Out of 10)	0.5	2	1	0.5	5	1	4.5
Real World Tests (Out of 90)	19.580	22.493	15.640	17.083	52.163	30.324	31.766
Grand Total (Out of 100)	20.080	24.493	16.640	17.583	57.163	31.324	36.266
Features and Specifications							
HDD capacity (unformatted) (GB)	7.44	7.35	14.8	14.8	14.2	30.2	29.4
Backup Utility (Y/N)	N	N	N	N	Y	N	Y
Slide-out type (Y/N)	Y	N	N	Y	N	N	Y
Cap cover (Y/N)	N	Y	Y	N	Y	Y	N
Rubber Body (Y/N)	N	Y	N	N	N	N	N
Real World Tests in MB/s (higher is better)							
File Write 4 GB Single File	15.15	11.35	17.13	17.5	37.92	22.26	38.45
File Write Test Assorted 4 GB File	7.78	8.03	8.85	13.21	20.53	15.17	20.08
Read Test Single 4 GB File	57.88	67.05	42.64	42.45	150.42	83.74	76.14
Read Test Assorted 4 GB File	45.09	48.75	39.02	39	111.36	75.96	67.14
Crystal Disk Mark (3 Test Runs 0x00 Fill 100MB) (in MB/s)							
Sequential Read	66.91	82.14	41.07	40.89	189.9	93.17	82.31
512K Read	57.94	76.49	38.65	43.51	163	85.98	76.17
Sequential Write	13.05	11.04	9.89	17.58	37.54	17.85	37.2
512K Write	1.63	2.64	0.97	2.66	6.61	3.83	9.69

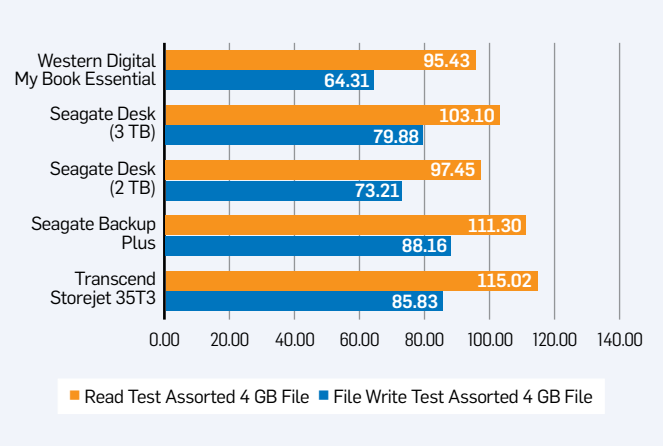
paratively bulky looking rubber and plastic body, the HyperX 3.0 can easily complement your laptop's native drive. Kingmax ED-07 and SanDisk Extreme drives were the 64 GB each. While the ED-07 has traditional cover-cap design, the SanDisk has a nick slide-out mechanism. Build quality of all these drives is top-notch.

The 32 GB capacity was the most common one and there were five drives including Kingmax UD-09, Transcend JetFlash 760, ADATA S102, Silicon Power Marvel M60 and PNY Attache. JetFlash 760 has quite an old design which is similar to the one on Marvel M60, but we liked the shiny surface in its front. ADATA S102 and Kingmax UD-09 tend to get very hot on using them for elongated periods and their metal bodies need to be approached with caution, after you have played your movie. PNY Attache had the best build quality of the bunch.

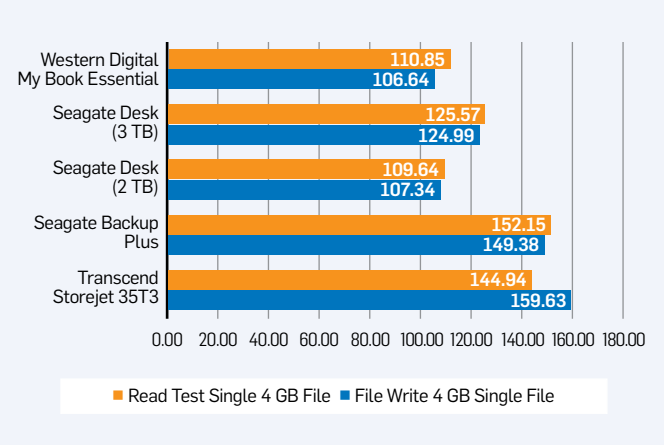
Under 32 GB category, two drives that stood out were the 8 GB ADATA S107 and Corsair Flash Voyager Slider. The S107 is completely covered by rubber and is waterproof – the only pen drive in this comparison to sport that particular feature. The Corsair one is light and has a different approach to the slide-out design from the others we saw in the table above.

Performance

We were super impressed with the SanDisk Extreme USB 3.0 which gave blazing speeds, with only the Kingston DataTraveler coming close. As far as write operations went, the SanDisk Extreme was like a Bugatti Veyron as compared to other



Powered Drives Assorted File Transfer Tests



Powered Drives Sequential File Transfer



Motorola Photon Q

Still fond of QWERTY Keyboard? Motorola Photon Q is one of the few best available smartphone in the market

			Above 32 GB		
Silicon Power	**ADATA**	**PNY**	**SanDisk**	**Kingmax**	**Kingston**
Silicon Power Marvel M60	ADATA S102	PNY Attache PFAT3032	SanDisk Extreme USB 3.0	Kingmax ED-07	Kingston DataTraveler Hyper X 3.0
105.408	67.993	234.899	87.064	69.983	75.630
2,799	1,500	7,000	5,189	4,234	18,000
7.5	1	0.5	7.5	1	2
43.866	34.566	45.035	77.506	29.893	70.325
51.366	35.566	45.535	85.006	30.893	72.325
29.4	29.4	29.8	59.6	60.5	238
Y	N	N	Y	N	N
Y	N	Y	Y	N	N
N	Y	N	N	Y	Y
N	N	N	N	N	Y
69.45	47.56	72.16	156.34	40.77	126.38
38.68	16.67	39.22	66.41	11.02	46.32
118.55	90.06	117.33	163.41	78.24	157.96
93	76.58	94.09	112.37	66.91	119
90.81	97.88	111.2	199	85.15	221
79.58	91.95	89.52	144.6	78.83	184.7
41.84	29.53	50.09	152.8	36.24	39.73
8.65	6.49	5.73	27.75	6.94	32.59

drives. In our real world testing it crossed the 150 MB/s mark while performing sequential write. The only test Kingston DataTraveler edged past SanDisk was in the Assorted read test. Transcend JetFlash 780 was the only respectable under-32GB drives that gave impressive scores. Majority of the drives gave under 20 MB/s while doing assorted write operation, which is a killer. Sequential read, is where most drives shined, giving a comfortable score of over 60 MB/s except the Strontium and Verbatim drives – which were the worst performers.

Verdict

Without a doubt, the **Best Performer** was awarded to **SanDisk Extreme USB 3.0** with Kingston DataTraveler coming a close second. Considering the price to performance ratio, we noted that in the above 32 GB category SanDisk gave the best price to performance ratio. In fact it gave an overall best price to performance ratio. Hence this test has only one **Best Buy** which is awarded to **SanDisk Extreme** again.

The other two categories did not have a single drive which could defeat the more expensive SanDisk Extreme in terms of price to performance parameter. Hence, we have not awarded any drive in these categories. But since not everyone can afford the over ₹5,000 SanDisk drive we have some recommendations.



SanDisk Extreme USB 3.0

In the under 32 GB category while Strontium gives the cheapest cost per GB its performance is lacking. You're better off with ADATA S107, but we would recommend Transcend JetFlash 780. In the 32 GB segment, Silicon Power Marvel M60 is the drive to go for, as not only does it offer the best performance in that segment but also a reasonable cost per GB.



Bazaar

QUICK INSIGHTS FROM INDEPTH TESTS

The Digit Test Centre receives hundreds of products every month. Each of these products is put through a series of tests, and is finally given a verdict. The final score is arrived at after considering a number of factors and evaluating them in terms of features, performance, value for money, build quality, and, in the case of software, even ease of use.

For better understanding of our ratings, here's a quick guide to our overall score

1.0 - 3.0 - Extremely poor product. Keep away!
3.5 - 5.0 - Strictly OK. Not recommended
5.5 - 6.5 - Decent product. Go for it, but there may be better products out there.
7.0 - 8.5 - Very good product. Highly recommended.
9.0-10.0 - Ground-breaking product. We've never seen anything like it before. A definite must buy!





Pg. 78
HP ENVY 4-1002TX ULTRABOOK
The best ultrabook money can buy under ₹60,000

Pg. 80
NIKON D600
Full frame shooter for the budget photographer





Pg. 82
TOSHIBA SATELLITE U840 ULTRABOOK
Doesn't have the premium feel expected from ultrabooks

Pg. 86
SAMSUNG GALAXY NOTE 800
A beastly performing Android tablet





Pg. 86
SAMSUNG GALAXY BEAM
A smartphone with a Projector

Pg. 89
LENOVO THINKCENTRE M72E
Tiny, space-saving, versatile PC that ain't cheap





Pg. 90
CM STORM SONUZ
Gaming audio and a little more



Samsung LPDDR3 Chip
Samsung announced 2GB mobile memory chip with 30nm class technology claiming to transmit data at 1600Mbps per pin



UbiSlate 7 Series
Datawind launches four Ubislate series android 4.0 devices UbiSlate 7Ri, UbiSlate 7R+, UbiSlate 7Ci and UbiSlate 7C+ from ₹2,999 to ₹4,499

Google Nexus 7

The best Android tablet at the moment

Now while the Apple iPad is the undisputed king as far as higher end tablets go, we have yet to see a budget Android tablet that is worth that title. Google has come out with the Nexus 7 made by ASUS as its maiden Jelly Bean (Android 4.1) sporting 7-inch tablet. As of now it is the only official Android 4.1 tablet on the market. So does the crown for the 7-inch tablets finally have a taker?

The Nexus 7 is powered by the NVIDIA Tegra 3 system-on-chip which has a quad-core processor running at 1.3 GHz. It only comes in a Wi-Fi model, no 3G.

Coming in the 7-inch form-factor, the Google Nexus 7, fits quite well in the palm of your hand. The textured rubber/leather covering on the rear side, does give you that much needed grip that is lacking in many brush-metal finished tablets. At 10.4 mm thickness, the Nexus 7 is one millimeter thicker than the New Apple iPad, but the edges around the Nexus 7 are nicely beveled out.

The Nexus 7 has a backlit IPS panel and has a resolution of 1280 x 800 pixels. Not quite the retina display, but the Nexus 7 packs in a respectable 216 pixels per inch. It sports a 1.2 MP front-facing camera and lacks a rear camera. Thanks to the IPS panel, the viewing angles on the Nexus 7 are fabulous, but the screen is quite reflective. Jelly Bean features Project Butter, which was meant to improve the responsiveness of the tablet. It basically makes the CPU and GPU run in parallel which gives a shot in the arm to the responsiveness of the tablet. Transitions are happening at a spiffy 60 frames per second. Jelly Bean allows you to resize your widgets. Also when you place your widget on the homescreen which already has some apps, those apps will automatically rearrange themselves to fit in the widget.

Google Now is a nifty addition to Google search. It offers contextual search based on your location. It throws up cards having the relevant information based on your location. There are various category of cards for weather, public transport, traffic, sports and so on. Getting completely used to Google Now will take a learning curve. It progressively gets better the more you use Google Search.

Notifications has undergone a sea-change. Not only do you get much more details in your notifications, but you can directly go to the app where the next action regarding the notification needs to be taken, by tapping on that particular notification. Offline Maps was one feature that has finally come on Google devices, but you have a limitation as to the area you can download – around 83 MB worth of maps can be downloaded at a time. It also supports Near-Field Communication (NFC) but due to obvious reasons it's really not that useful at the moment. But from a future-proofing perspective it is a nice addition.

With respect to performance, it is certainly less powerful than the new iPad, but that is expected. It performed at par with the ASUS Transformer Prime among the Android tablets, whereas beat most of the budget Android tablets that have been flooding the Indian market off-late.



It excels at multi-tasking. We did not notice any slowing down of the device despite opening around 10 apps, downloading stuff in the background, buffering video on YouTube and so on. NVIDIA Tegra 3 also ensures that you have a wonderful experience with graphics. Playing *Dead Trigger* was a lot of fun. The game ran smoothly without any sort of lag. With audio, at higher volumes we noticed a distortion in the sound output. We were able to overcome this issue by adjusting the equalizer settings.

The 4325 mAh battery can easily withstand 7-8 hours of regular usage.

If you want to get the best Android experience on a tablet, look no further than the Nexus 7, at the moment. Taking into consideration its US pricing, the Indian pricing is almost over ₹5,000 premium, which is a lot of money. So we would advise prospective buyers to give it time till Diwali before taking the plunge to buy the Nexus 7. Two reasons: prices will normalize and you will most likely have more tablets to compare the Nexus 7 with.

Nimish Sawant

Specifications

System-on-Chip: NVIDIA Tegra 3; **Processor:** 1.3GHz quad-core; **Screen size:** 7-inches; **Resolution:** 1280x800 pixel; **Panel:** LED Backlit IPS; **Front Camera:** 1.2MP; **Battery capacity:** 4325 mAh

Contact

Pure Nexus
Phone: +91 22 2371 3552
Webpage: facebook.com/purenexus
Price: USD 300 (include USD 50 for RMA) (approx. ₹16,300)

8.0/10

Features	7.0
Performance	8.0
Build Quality	8.0
Value for Money	8.0

myBCteam
New social network site has been launched for the women who have faced breast cancer and to conect with others who are going through the same. **http://www.mybcteam.com/**



Sony Xperia Miro
Sony launched its new flagship in India at ₹15,249 featuring 800MHz processor with 512MB of RAM

HP Envy 4-1002TX ultrabook

The best ultrabook money can buy under ₹60,000



With a lot of premium aluminum used on its chassis, the HP Envy looks and feels more expensive than it actually is. Brushed metal finish on its screen lid is carried forward to the area surrounding the keypad as well. While the finish is matte, it has a surprising habit of accumulating smudges. The soft finish on the bottom in the crimson red colour does make the ultrabook stand out in. Generous cooling vents along its side help keep the heat at bay, in case you are using this placed on the lap for extended durations.

The Series 5's display is slightly brighter than the Envy's, but the latter is very comfortable to use for longer periods. Colour reproduction is on the softer side, making the HP ultrabook's screen less harsh on the eyes, particularly with the bright colours. We compared this to the Samsung Series 5 and the Toshiba Satellite U840 side-by-side, and the HP's display was better and easier on the eyes. However, the reflective nature does spoil the experience somewhat, and you would have to push the brightness up a notch to compensate in a typical office or outdoor environment.

The island keyboard is extremely comfortable to get used to, with a well-spaced layout and adequate travel. The left and right click keys are integrated on the touchpad, but actual key area is a little too close to the bottom left and bottom right edge. The Envy has the Beats Audio speaker hardware and software, and the requisite branding. However, just like with the phones, there isn't much of a difference to the audio quality as against the Altec Lansing that HP uses on the Pavilion G-series. We would not recommend that the Beats Audio thing be your sole criteria while deciding on buying this ultrabook.

Speaking of pre-installed stuff, HP has streamlined its own utilities, features of which can now be accessed via the larger Support Assistant software. There's fewer trial/demo software pre-loaded – something that helps the Envy cut down on mindless bloatware.

On the spec sheet, the Samsung Series 5 has a faster Core i5 – 3210M clocking at 2.5 GHz, and 6 GB of RAM. However, in our benchmark tests, the HP Envy is consistently ahead of the Samsung ultrabook, making it the fastest ultrabook under ₹60,000. The PC Mark Vantage score of 9966 on the Envy is higher than the 7,465 the Series 5 scored. In PC Mark 7, the Envy scored 3150, while the Series 5 had to make do with 2371. The HP Envy's AMD Radeon HD 7670M (2 GB) graphics do well when compared to the NVIDIA GeForce GT620M graphics on the Series 5. The 3D Mark 11 (all three levels) and Unigine Heaven benchmark scores were consistently higher than all the rivals we pitted against it.

Most surprisingly, the battery life offered by the Envy 4-1002tx is very good. In our battery benchmark tests, this one lasted 223 minutes from full charge to full discharge. As a result, the battery life is superb in a real-life usage scenario. With no music playing in the background, we put this through our daily grind – web browsing, mails, typing articles, working on Excel and a bit of You Tube sessions - the Envy lasted 7.5 hours from full charge to full discharge. Among the software and utilities preloaded by HP, CoolSense technology deserves the most mention. It's a configurable feature which allows you to keep the machine cool by clocking down the processor cores individually, depending on load, and this does make a considerable difference in the heat it generates.

Among all the other contenders, should you buy the HP Envy 4 ultrabook? If you have a budget of ₹60,000, the HP Envy has the best package – good performance and build. The Samsung Series 5 is a fairly consistent performer and offers an optical drive as well, but the HP steals the march with much better looks and a slightly slimmer form factor. And the HP Envy has a clear advantage in gaming, with the Radeon HD 7670M consistently scoring more than the Series 5's. This is a very good product.

Vishal Mathur

Specifications

Processor: Intel Core i5 - 3317U @ 1.7GHz; **RAM:** 4GB; **Display:** 14-inch (1366 x 768 pixels); **Graphics:** AMD Radeon HD 7670M / Intel HD 4000; **Storage:** 500GB with 32GB flash; **Ports:** Two USB 3.0, One USB 2.0, HDMI out; **OS:** Windows 7 Home Basic

Contact

HP India
Phone: (City Code) 30304499
Email: N.A.
Price: ₹58,325

7.5/10

Features	7.0
Performance	8.0
Build Quality	7.0
Value for Money	7.5



- Digi Power Design
- Dual-Stack MOSFET
- Premium Alloy Choke
- Multiple Filter Cap
- Twin-Power Cooling Heatsink
- 8 Layer PCB, 4 X 2oz Copper



Z77 OC Formula

Designed by World Overclocking Champion, Nick Shih

Nick Shih

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Ahmedabad: 079-40031905; Bangalore: 080-41472052;
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Goa: 0832-2424291; Gurgaon: 011-41608136; Kolkatta: 033-22368197;
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ASRock India
QR Code for ASRock Z77 OC Formula

ASRock

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www.asrock.com

Samsung eMMC NAND Storage
Samsung has now started producing 128GB storage cards for tablets and smartphones announced at Samsung Mobile Solutions Forum 2012

Twitter Header Photo
Twitter rolls out a new option similar to Facebook which allows user to set a new header photo just like Facebook's Cover photo

Nikon D600

Full frame shooter for the budget photographer



Full frame cameras have been the fine line that divided amateurs/hobbyists from serious professionals for the longest time. Mostly, it was due to the fact that an amateur would have a hard time justifying the usually skyscraper-high price tag of a full frame. The professional, however, could easily shell out that kind of money, because the quality (and the work requirement) justified it.

However, there is a new movement underway, changing the landscape of photography and its requisite tools. A movement to put the prowess of a pro-grade camera into the hands of serious hobbyists (or professionals who are tight on funds). The new trend is marked by the Nikon D600, a "budget full-frame" DSLR from Nikon that was announced on September 13th.

Probably the worst kept secret in the history of photography product launches, the D600 packs in a sweet 24 megapixel full frame sensor. If you're a number junky, that's 2 whole megapixels more than Canon's 5D MarkIII and 3 more than the 5D MarkII, which can be had for about the same price as the D600, but it is an old camera in comparison.

The D600 seems to be some sort of mutant hybrid born out of D800 and D7000 interaction. The body follows a more D7000-like layout, but incorporates the ergonomic finesse of the D800. It has the same contoured curve for the thumb on the back along with the joystick/lock dial and the switch for video or photo mode in liveview. The D7000 DNA is evident when observing the button layout and the eye cup. Even the mode dial on the D600 is almost identical to the one on the D7000.

A key feature of the D600 full-frame DSLR is the focusing capabilities it packs inside. First off, it has a built in focus motor to maximize compatibility with the Nikon lens ecosystem. That is complimented by a Multi-CAM 4800 autofocus sensor module with 39-focus points, of which, 9 are cross type. The D800 has 51-focus points of which 15 are cross type. The camera has no problem acquiring focus in good light, high contrast light or even low light. Of course, the small number of cross type AF points limit the framing capabilities in low light, but that is made up by the fact that 7 of these AF points are sensitive up to f/8 when using with compatible NIKKOR lenses and teleconverters. Nature and wildlife photographers are bound to love this, as far as prospective consumers of the camera are concerned.

The image quality of the D600 is typical full frame and signature Nikon. What we mean by that is that the sensor is able to capture a good amount of dynamic range along with rendering well saturated colors and a good contrast curve. The same can be said for the video, which is on par with the D800. One move on Nikon's part that we really appreciate is retaining the ability to stream uncompressed footage from the camera's HDMI port and into an external recorder. This is especially helpful for color grading footage and making adjustments.

All is not peachy in the Nikon camp though. We found that the D600 only takes SD cards, for which it has two slots. The lack of a CF card slot is a little bothersome especially if you're upgrading from a camera that only uses CF cards. We're also not so sure how we feel about the ₹1,35,950 price tag. While the rumours were running amok, word was that the price would be around $1,800, or ₹90,000. With the D800 being priced only ₹35,000 more, we find it hard to not go for the 36 megapixel behemoth instead.

Regardless, the D600 is quite a significant move from Nikon, one that would definitely find many adopters due to its somewhat cheaper price tag, without compromising on any kind of performance one would expect from a camera of this league.

Swapnil Mathur

Specifications

Sensor: 24 megapixel full frame; **AF Points:** 39 with 9 cross type; **Burst Mode:** 5.5 frames per second; **Video:** 1920x1080 at 30, 25 and 24 fps

Contact

Nikon India Private Limited
Phone: 0124-4688500
Email: nindsales@nikonoa.net
Price: ₹1,35,950

8.0/10

Features	8.0
Performance	8.0
Build Quality	8.5
Value for Money	7.5

Nuzzel: New Social StartUp
Friendster's founder started a new social site which allows you to share the new stories from Facebook and Twitter with your friends



Casio Paper Writer
The watch and calculator giant is set to release its new tablet for business travelers with 5MP camera and 1.5GHz dual core processor

Sony Xperia Ion

One Android phone with a seriously faulty price tag

In terms of the design and the materials used, the Xperia Ion is completely different from its elder sibling, the Xperia S. The majority rubberized finish on the Xperia S gives way to a lot more aluminum on the Xperia Ion. It has an LED LCD 4.55-inch display. It's quite bright and crisp, but does fall behind in terms of colour vividness and richness, when compared to the fancier Super AMOLED on the Galaxy SIII and Super IPS LCD2 on the HTC One X.

In reality, the performance figures do complete justice to the power package, when looked at in isolation. It is one of the quickest dual core phones in the market at the moment, with the One S being slightly faster. The Xperia Ion multitasks pretty well and doesn't feel sluggish. However, the same can be said of the Xperia S, which fares very close in terms of performance to the Xperia Ion, but is cheaper than the Ion by a whopping ₹9,000. That's just shocking, the price difference.



In good lighting conditions, the pictures and videos from the 12MP clicker are good – crispness, clear and have depth. However, in low lighting, noise creeps into shots, and videos suffer from slow focus.

For the build, performance and the battery life, the Xperia Ion cannot be faulted. The only real fault is with the price tag that Sony has slapped on it. The box price of ₹36,999 is putting it against quad-core powered rivals – the Galaxy SIII and the HTC One X. And that's just too much!

Vishal Mathur

Specifications

Platform: Android 4.0.4; **Processor:** Qualcomm MSM8260 (S3 series) 1.5GHz dual core processor, 1GB RAM, Adreno 220 graphics; **Display:** 4.55-inch LED backlit, 1280 x 720 pixels; **Storage:** 13.2GB internal, micro SD slot; **Battery:** 1900mAh

Contact

Sony Mobile India
Phone: 180030002800
Email: N.A.
Price: ₹36,999

5.5/10

Features	6.5
Performance	6.0
Build Quality	7.5
Value for Money	2.0





Acer Iconia Tab A110
Acer is set to release its Iconia Tab A110 this fall with Android Jelly Bean and faster 1.5GHz TI processor



HCL Ultrasmart ME Series 3074
HCL introduced its first ultrabook at ₹51,990. Does HCL stand chance with HP, Samsung, Acer already in the ultrabook market? We'll find out soon

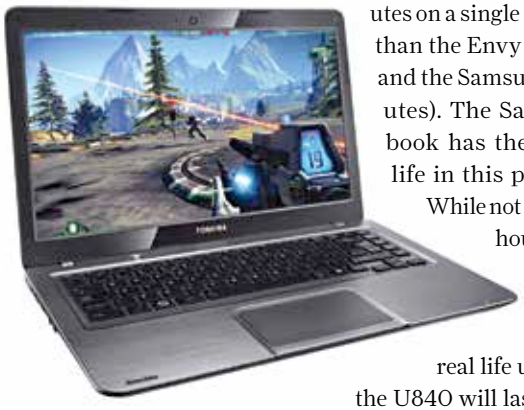
Toshiba Satellite U840 ultrabook

Doesn't have the premium feel expected from ultrabooks

The build of the Satellite U840 is nothing to be excited about. It has a metal chassis, and while it looks good, it doesn't feel premium. The display/lid has some flex, but no flex or rough edges on the rest of the chassis, as far as its build is concerned.

The 14-inch display is a tad brighter and crisper than the Envy, but colours feel washed out if you push the brightness up too high. The U840's keyboard is very flat, and it does take a lot of time to get used to the lesser key travel. Its touchpad is responsive and consistent overall.

Benchmark scores are within range of the Series 5 and the Envy 4. It's slightly behind the other two in the PC Mark Vantage test, but scores the best in the PC Mark 7 test – 4220 to HP's 3150 and Samsung's 2371. Its lack of a dedicated GPU is surprising, though.



In our battery test, the ultrabook's battery lasted 185 minutes on a single charge – lesser than the Envy (223 minutes) and the Samsung's (229 minutes). The Samsung ultrabook has the best battery life in this price category. While not as good as the 7 hours that the HP and the Samsung offer in a typical real life usage scenario, the U840 will last 5 hours on a single charge.

Clearly, the HP Envy and the Samsung Series 5 make for better options. We would recommend the Envy, because it offers the best system performance in this price bracket, and premium build quality as well.

Vishal Mathur

Specifications

Processor: Intel Core i5-3317U processor @ 1.7GHz; **RAM:** 4GB; **Display:** 14-inch, 1366 x 768 pixels; **Graphics:** Intel HD 4000; **Storage:** 500GB HDD with 32GB flash; **Connectivity:** 1 USB 3.0, 2 USB 2.0, HDMI out

Contact

Toshiba India
Phone: 1800-200-8674
Email: notebooksales@toshiba-india.com
Price: ₹53,500

5.5/10

Features	6.5
Performance	6.0
Build Quality	5.0
Value for Money	5.0

Sony Vaio T11

An 11-inch ultrabook for those who want extra portability

Specifications

Processor: Intel Core i5 - 3317U @ 1.7GHz; **Display:** 11.6-inch (1366 x 768); **Graphics:** Intel HD 4000; **RAM:** 6GB; **Storage:** 500GB HDD with 32GB flash; **Ports:** 1 USB 3.0 and 1 USB 2.0, HDMI out

Contact

Phone: 18001037799
Email: https://www.sony.co.in/section/contactus
Price: ₹49,990

6.5/10

Features	6.5
Performance	6.5
Build Quality	7.5
Value for Money	5.0

The metallic silver exterior of the Vaio T11 looks sophisticated. Very well put together, and no flex on the lid and the rest of the chassis has a premium feel. When in use, it sits with the rear higher than the front, this aids while typing. At 1.4 kg, it isn't as light as it should have been, surprisingly. Compare this to the Acer Aspire S3 that weighs just 1.35 kg despite a bigger 13.3-inch display.



While the display isn't complete matte, it isn't as reflective as the likes of the HP Envy and the Samsung Series 5. Good colour handling, but sharpness isn't up to the mark, with edge noise visible around text. The keypad, despite being well spaced out, is a disappointment – very less key travel and a spongy feel.

The Vaio T11 has the same processor as the one in the Samsung Series 5, and the benchmark scores are at par. The T11 scores a 6,532 in the PC Mark Vantage test and 3,649 in the PC Mark 7 test. No dedicated graphics on offer with the T11, disappointingly. The Sony Vaio T's battery lasted 160 minutes from full charge to full discharge in our battery benchmark test. In real life, this will last close to 5.5 hours.

The Vaio T11 is meant for a very limited demographic, and is a good option for anyone who wants the extra portability. Else, for ₹5,000 more, the HP Envy 4 makes a lot more sense.

Vishal Mathur

HP Pavilion dm4-3010tx

Not the latest, but still packs quite a punch

The Pavilion dm4 has a lot going for it in the looks and ergonomics department. While the lid and the palmrest have a metal finish, its bezel is made of glossy cheap plastic. Even though this is pretty much a full sized laptop, its weight is quite low – just 1.97 kg. Not bad at all.



The HP Pavilion dm4 houses a Sandy bridge processor, a generation older than the latest Ivy. In the PC Mark Vantage test, the Pavilion dm4 scored 6991 while the Sony Vaio E-series (Sandy Bridge) scored a slightly higher 7,039. The dm4 fights back in PC Mark 7 with a score of 24,66, while the Sony clocked 2219. The is that despite sporting an older processor, the dm4 is by no means sluggish, giving latest laptops in its price range.

The dm4's AMD Radeon 7470M graphics with a 3D Mark 06 score of 5,643 clearly points to mid-range performance. This was verified by the 3D Mark 11 Entry mode test itself – HP scored 1135 while the Vaio scored 1881. Good, not great.

In our stressful battery benchmark test, this HP laptop's battery lasted 190 minutes on single charge. In standard real world usage, this should be able to last around 4.5 hours without any issues at all.

Despite being on Sandy Bridge, the overall performance of the laptop is actually quite good. But the real cherry on the cake is its very good battery life, considering it isn't an ultrabook. The lightweight build is a bonus. Consider this if you aren't craving only the latest hardware.

Vishal Mathur

Specifications

Processor: Intel Core i5-2450M @ 2.5GHz; **RAM:** 6GB; **Display:** 14-inch, 1366 x 768 pixels; **Graphics:** Intel HD 3000 and AMD Radeon HD7470M (1GB); **Storage:** 750GB; **Connectivity:** 3 USB ports, Card Reader, HDMI out, Wi-Fi and Ethernet

Contact

HP India
Phone: (City Code) 30304499
Email: N.A.
Price: ₹50,690

7.0/10

Features	6.0
Performance	7.5
Build Quality	6.5
Value for Money	7.5

ASUS Maximus V Extreme

Pro-overclockers rejoice!

Specifications

Chipset: Intel Z77; **Memory slot:** 4 DIMM slots; **SATA 2 ports:** 3; **SATA 3 ports:** 6; **PCIe x16 slots:** 5; **Multi-GPU:** 4-way SLI/CrossFire;

Contact

ASUS Technology Pvt. Ltd.
Phone: 1800 2090 365
Email: reachus@asus.com
Website: www.asus.in
Price: ₹29,800

8.5/10

Features	9.0
Overclocking	9.0
Build Quality	8.5
Value for Money	7.5

ASUS ROG series is targeted at overclockers and high-end gamers. The Maximus V Extreme is no different. Sporting the traditional black and maroon colours and it has carried on the exclusive features that we saw on the X79 Rampage IV Extreme such as: Sub-Zero sense – which employs a K-type thermocouple to give LN2 enthusiasts temperatures on their CPU or GPU; the OC Key – which is a separate accessory that connects to your video card on one end and another connection goes into your motherboard to give an overlay on your standard display showing options like CPU or power settings which can be manipulated on the fly and so on. One interesting addition is the presence of a Thunderbolt port making it future-proof. Build quality is top notch and it has dedicated buttons for power and reset. There are power switches corresponding to PCIe slots to troubleshoot faulty graphics cards.



Overclocking is a joy on this board and we could take the Intel Core i7-3770K from 3.5 GHz to 4.4GHz on air giving us a 25 per cent rise in CineBench readings. There are a variety of ways to overclock: from the AI Suite II; from the OC Key; from the BIOS; via ROG Connect and so on. Benchmark readings weren't far from what we got on the micro-ATX Maximus V Gene, but it cannot match the Extreme in terms of other features.

This board is meant only for the extreme high-end users who will indulge in a lot pro-overclocking, so it is priced accordingly at ₹29,800.

Nimish Sawant



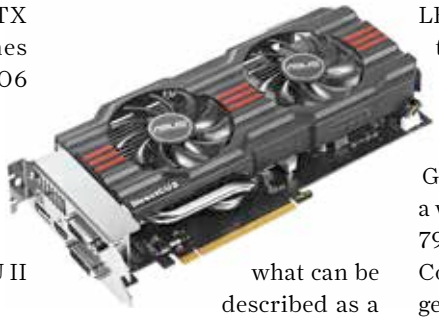
Quantum Bit in Silicon
Researchers have built quantum computer on a single atom of silicon which would leave even supercomputers behind

India's 100th Space Mission
ISRO achieved a major milestone with the launch of PSLV-C21/SPOT-6/PROITERES mission. PSLV is the first operational launch vehicle of ISRO

ASUS GTX 660-DC2T-2GD5

Mid-range segment ahoy!

With the GTX 660 comes the GK106 chipset which will also be soon featured in the GTX 650 Ti. This ASUS card like the name says is a Top Edition card featuring the Direct CU II heat sink.



The GTX 660 opens up NVIDIA's mid-range segment in the 600 series, along with it launched GTX 650 and all that is left is the GTX 650 Ti.

As with all other DirectCU II cards, this too has a matte black PCB. The heatsink consists of 3 heat pipes which are embedded in an aluminium die. It sits firmly atop the GPU core and spans out across what can be described as a humungous array of fins. Only the portion that is in touch with the core is copper while the rest of the heat pipe is metal plated to avoid corrosion. There are two evenly spaced 70mm (FirstD FD7010H) brushless motor fans which handle all the airflow. The card is powered by a 6-pin connector and like most of the ASUS cards we've seen has 2 LEDs to indicate if proper contact has been achieved once the connectors are inserted.

Performance wise, the card is slightly behind the GTX 660 Ti and proves to be a worthy competitor to the HD 7950 from the AMD camp. Compared to the previous generation, the GTX 560 to be precise, the GTX 660 DC2T manages to give a performance increment of approximately 47 per cent in synthetic and about 44 per cent in gaming benchmarks. Similarly the GTX 660 is ahead by a whopping 62 per cent compared to the GTX 460. Priced at ₹18,850, the ASUS GTX 660-DC2T-2GD5 is what gamers have been waiting for.

Mithun Mohandas

Specifications

Chipset: GK106; **Bus standard:** PCI Express 3.0; **Base clock:** 1072 MHz; **Boost clock:** 1137 MHz; **Memory clock:** 6008 MHz; **Memory:** 2 GB MB GDDR5; **SLI:** 2 way SLI support; **CUDA cores:** 960; **Dimensions (LxWxD):** 270x128 x38mm; **Warranty:** 3 years.

Contact

ASUS Technology Pvt. Ltd
Phone: 18002090365
Email: reachus@asus.com
Website: www.asus.in
Price: ₹18,850

7.0/10

Features	6.0
Performance	8.0
Build Quality	5.0
Value for Money	8.0

CoolerMaster HAF XM

More bang for the buck!

Specifications

Type: Mid-Tower; **(W / H / D);** 252 x 530.5 x 579 mm; **M/B :m**-ATX, ATX, E-ATX ; **Front I/O Panel:** USB 3.0, USB 2.0, Audio I/O, LED switch; **VGA max length (With/ W/O HDD cage):** 354.0/463.0 mm; **Warranty:** 1 year.

Contact

Cooler Master Co. Ltd.
Phone: 982020 7871
Email: sanket_naik@coolermaster.com.tw
Website: www.coolermaster.in
Price: ₹10,900/-

6.5/10

Features	7.0
Performance	7.0
Build Quality	6.0
Value for Money	6.0

Comes in two variants, with and without a side panel. The HAF XM is a mid-tower cabinet that supports E-ATX boards. Come to think of it, it's a mid-tower that comes with features that are normally present on high-end towers. Given the price at which this comes in at, it would be a shame if it didn't have all the bells and whistles.

As for the build quality the chassis is mostly metal, with removable plastic covers on the top and front. Has two 200mm fans on the top and front and has mounts for two more. The fan mounts also support 140 mm and 120 mm fans. The top and the front removable portions do come with wire meshes that are fine enough to block big debris and can easily be replaced with a mesh suited for your needs. The PSU is to be mounted on the bottom and has rubber feet to cancel out any vibrations. The loudest thing we could hear was the fan on the stock CPU cooler's radiator which we installed. The CPU cooler cutout is massive and quite frankly doesn't need to be that huge. Also, the right panel features fan mounts that can support either one 200mm fan or two 140mm fans and a handle which holds the entire thing in place akin to a car door but opens up towards the ground.



This cabinet also features the X-Dock which is basically a removable bay that supports both 3.5-inch and 2.5-inch drives and has a connector on the back so you can easily hot-swap drives.

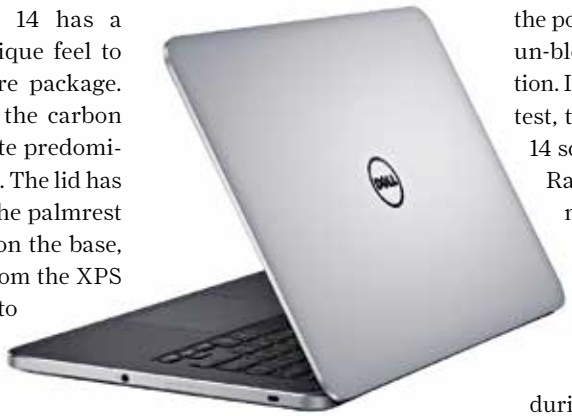
The HAF XM is priced at a premium but given the features that it has, folks wouldn't regret fronting the moolah.

Mithun Mohandas

Dell XPS 14

A very premium product, and the price tag reflects that

The XPS 14 has a very unique feel to the entire package. Gone is the carbon fibre that was quite predominant on the XPS 13. The lid has grey aluminum, the palmrest magnesium, and on the base, the carbon fibre from the XPS 13 has given way to silicon on the XPS 14. This acts as a shield, and isolates the heat from your skin.



The 14-inch screen has a resolution of 1600 x 900 pixels, which is higher than 1366 x 768 that is common with most ultrabooks. The screen produces good colours for both text and multimedia. The edge-to-edge Gorilla Glass adds to the premium factor.

The XPS 14 performs very well. It scored 8471 in PC Mark Vantage and 3159 in the PC Mark 7 tests. In terms of real life usability multitasking is real smooth, thanks largely to the powerful specs and also an un-bloated Windows installation. In the Unigine benchmark test, the GT630M in the XPS 14 scores 17.8 FPS. The AMD Radeon HD7670M on the more economical HP Envy 4 scores the best among all ultrabooks.

The XPS 14's battery lasted 210 minutes on a single charge, during testing. In a traditional real life usage scenario, the backup is very similar to the HP Envy 4 – around 7 hours.

The performance of the XPS 14 is very similar to the HP Envy 4, which costs a lot less. But the XPS 14 is undoubtedly a more premium product.

Vishal Mathur

Specifications

Processor: Intel Core i5-3317U processor @ 1.7GHz; **RAM:** 4GB; **Display:** 14-inch, 1600 x 900 pixels; **Graphics:** Nvidia GeForce GT630M with Intel HD 4000; **Storage:** 500GB HDD with 32GB flash; **Connectivity:** 2 USB 3.0, HDMI out, mini Display Port

Contact

Dell India
Phone: +91 80 2506 8026
Email: N.A.
Price: ₹85,229

7.5/10

Features	7.5
Performance	8.0
Build Quality	8.0
Value for Money	6.0

BenQ LW61ST

Lacks 1080p but priced similar to ones that do

Specifications

Projection: DLP; **Native resolution:** 1270 x 800 pixels; **Aspect Ratio:** 16:10, 16:9, 4:3; **Brightness:** 2000 ANSI lumens; **Connectivity:** HDMI, composite, s-video, two USB, LAN

Contact

BenQ India
Phone: 18004199979
Email: Sales.InquiryIn@BenQ.com
Price: ₹1,50,000

6.0/10

Features	5.5
Performance	6.0
Build Quality	6.0
Value for Money	5.0

The enamel white finish on the LW61ST gels well with the blue band running front to back on the projector, and the combination looks rather classy. Its physical controls are on the top of the device. Connectivity ports like HDMI, other AV, LAN and USB are on the back. A bunch of vents help with the cooling, and this isn't as noisy as the LG AF115.

The projector features BlueCore Light, which does a little bit of everything. It optimises display and keeps the power consumption in check. So much so, the brightness is reduced to 10 per cent when a source is disconnected but the projector has been left powered on. This is a short throw projector, and from 1.5 m from the wall, the projected screen size was around 70-inches. Being a short-throw projector, it can throw bigger projected screen size, from a distance which is much lesser than a conventional projector.



We tested with a lot of 720p, up-scaled SD content and unaltered SD content. The HD image quality is pretty good with good colour reproduction. SD content, inevitably feels a tad blurry. The auto keystone settings actually make a positive difference. For the wall as the projecting scree, the ability to define the wall colour does make a difference by the necessary tweaks to the colour tone done automatically.

The BenQ LW61ST is a very good projector in its own right. But, you have the LG AF115 in the same price band, with the 1080p native resolution, to the LW61ST's 1280 x 800 pixels. Also, the Benq projector is on the expensive side.

Vishal Mathur

No Roaming charges from 2013
The communications ministry will do away with roaming charges paid by mobile users when travelling within India from 2013

Transcend SDXC Class 10
Transcend has introduced a 128 GB Class 10 SDXC card which will be the perfect choice for your DSLR

Samsung Galaxy Note 800

A beastly performing Android tablet



The Galaxy Note 800 has a white body with a sliver border surrounding it. The build of the device is very plasticky.

It has powerful innards thanks to the 1.4 GHz quad-core processor and its raw performance beats the Transformer Prime!

If you are one who has used the Galaxy Note, then you will be on familiar territory with the S-Pen. To get the negatives out of the way, there are a limited number of apps that exploit the utility of the S-Pen.

One app that really makes use of the Pen is the Photoshop app. You can do a multitude of things such as layering, paint, effects and adding people to an image and much more.

The display of the Note 800 is surprisingly good. The resolution is 1280x800, same as the Transformer Prime but lesser compared to the iPad.

The multi-screen feature allows you to run multiple apps side-by-side. It is available only on a few apps as of now but support for more apps is expected in the future. This feature is very reminiscent of what we have seen on Windows 8 powered tablets. The only downside is that at times while switching between the apps we faced a bit of lag. On continuous video playback, the device lasted for six hours. Overall, one of the best Android tablets out there.

Sameer Mitha

Specifications

Platform: Android 4.0 ICS; **Processor:** 1.4Ghz quad-core processor; **RAM:** 2GB; **Display:** 10.1-inch display, 1280 x 800; **Storage:** 16 GB Internal, micro SD card up to 64GB; **Camera:** 5MP rear, 720p video, and 1.9MP front; **Battery:** 7000 mAh

Contact

Samsung India
Phone: 180030008282
E-mail: http://www.samsung.com/in/support/erms1
Price: ₹40,000

8.0/10

Features	8.0
Performance	9.0
Build Quality	6.0
Value for Money	7.0

Samsung Galaxy Beam

A smartphone with a Projector

Measuring 12.5mm in thickness, the Galaxy Beam is by no means slim. But it does not feel heavy.



All the standard Android controls are present here with the addition of one new physical button for projector control, which is located on the top of the phone.

The screen is 4-inch wide and has a resolution of 480x800. There are only two places where the performance of the screen suffers. First is in the auto brightness, which made the screen dimmer than we'd like. Secondly, the display isn't the best to view under direct sunlight.

Skinning the Android OS is the Samsung TouchWiz UI. If you have used any Android powered Samsung device in the past, you will feel right at home. You can swipe at any part of the lock screen to unlock the device.

The projector on the phone is 15 Lumen at 1W, nHD with a resolution of 640x360. The brightness of the projector is questionable depending on the lighting condition but in a completely dark room, the brightness is quite good. There were a few places where the image represented on screen felt washed out.

You can also use the projector as a visual presenter or OHP. Simply put the projector will display on screen whatever the rear camera sees.

The device didn't play MOV and MP4 files straight out of the box. Its audio lacks bass and if you are watching a movie, but the speaker is loud. You can expect about 3 hours of projector playback from its battery. This is a unique smartphone with a good projector.

Sameer Mitha

Specifications

Platform: Android 2.33; **Processor:** Dual-core 1GHz Cortex-A9; **RAM:** 768MB; **Display:** 4.0-inch TFT-Capacitive Touchscreen Display, 480x800 pixels; **Storage:** 8 GB storage, with microSD slot up to 32GB; **Camera:** 5MP with 720p HD videos; **Battery:** 2000mah

Contact

Samsung India
Phone: 180030008282
E-mail: http://www.samsung.com/in/support/erms1
Price: ₹28,400

7.0/10

Features	8.0
Performance	6.0
Build Quality	6.0
Value for Money	6.0

Huawei Ascend G300 (U8815)

A budget Android smartphone with a very good display

On first impressions, the device is very well built. It is a little heavier than other smartphones in the same price bracket which makes it more sturdy.



On the face, the Huawei Ascend has a 4-inch display with a resolution of 480x800, which is standard for the budget smartphones. The best part of the display is that it is an IPS panel capacitive touchscreen display making it really sharp.

We tried to run a bunch of MOV and MKV files on it but they didn't run. Simple AVI files however ran very smoothly without any hiccups. The viewing angles are good and the video looks crisp. The audio from the device too is good. It screeches a bit at full volume but is loud nonetheless.

The OS comes with a Huawei Launcher, which isn't the best when compared to the likes of Samsung TouchWiz or HTC Sense and is quite bland making the device very laggy.

The rear 5MP camera clicks average quality images, the same that you would find on the original HTC Desire.

The keyboard has three different layouts: first is the standard QWERTY; second is the three letters per key that we find on candybar phones and the final layout is a QWERTY two letters per key layout. These layouts are available in both portrait as well as landscape mode.

The battery life of the device is good. While using Wi-Fi, making calls and running a few apps, the device lasted for two days. Do check this device out.

Sameer Mitha

Specifications

Platform: Android 2.3 Gingerbread upgradable to Android 4.0 ICS; **Processor:** 1 GHz Cortex-A5; **RAM:** 512MB; **Display:** 4.0-inch HD- IPS LCD, 480 x 800 pixels; **Storage:** 4GB storage (2.5GB user available), with microSD slot up to 32GB; **Camera:** 5MP; **Battery:** 1500mAh

Contact

Phone: +91 124 4825700
e-mail: huawe.in@gmail.com
Price: ₹13,500

5.0/10

Features	5.0
Performance	6.0
Build Quality	8.0
Value for Money	5.0

HCL Me Tab Y2

Good display but lacks access to the Google Play store

Specifications

Platform: Android 4.0.3, **Processor:** 1Ghz, **RAM:** 1GB, **Display:** 7-inch IPS (1024 x 600 pixels), **Storage:** 8 GB internal expandable up to 32GB via a micro SD card, **Camera:** 2MP rear & 0.3 video call, **Battery:** 4000 mAh

Contact

Phone: +91-120-2520917/ 937
Price: ₹14,999

5.0/10

Features	5.0
Performance	5.0
Build Quality	7.0
Value for Money	5.0

The HCL Me Tab Y2 has a premium finish to it and the screen has a wider aspect ratio making it ideal for watching videos. It is a little heavy weighing 368 gm.



The HCL Me Tab Y2 runs on Google Android 4.0.3 ICS. The device isn't skinned but it does have a HCL feel to it. It comes preloaded with a bunch of apps and games. The device compromises on the Google Play store and in turn adds its own HCL Me app store on the device. The Google Play Store is dearly missed. The display on the device is really good and probably one of the best we have seen on a budget tablet. It is a 7-inch IPS display with a resolution of 1024 x 600. We do wish that the resolution was a bit better but we are just nit picking. The display is very vibrant and the colours look sharp. It has fantastic viewing angles as well, even under direct sunlight. Audio is soft, flat and gives a very lacklustre performance.

You can insert your SIM card and use the device as a phone but that's not practical really.

The inbuilt Android browser isn't the best as web pages take time to load and navigation can get very laggy at times. Scrolling and zooming was cumbersome and quite frustrating.

The HCL Me Tab lasted for four hours in the continuous video playback test which is good.

Sameer Mitha

Leap 3D Gesture Based control
Leap 3D offers control gestures like pinch-to-zoom, and promises new applications that make the Kinect and its kin look like yesterday's news

Downloadable Tweets
Dick Costolo, CEO twitter announced that the users will be able to download there tweets till the end of 2012

Micromax Funbook Pro

A budget 10-inch tablet

At first glance, the Funbook Pro looks like a larger version of the original 7-inch Funbook thanks to its 10.1-inch display. Considering the size of the device, it is relatively light and comfortable to hold for prolonged use, be it watching videos, browsing the web or reading books. The display though vibrant has a lower resolution than we'd like at 600 x 1024.



The Funbook Pro runs on Android 4.0 ICS and it is lightly skinned. The face of the device is quite glossy making it a fingerprint magnet and the device is well loaded with connectivity options including an HDMI out which is nice. To maintain the slim form factor, the device compromises on a full size USB port. The device also doesn't have a SIM card slot, which is a bit of a let down. Did we mention there's no Bluetooth as well? Micromax is offering a Tata Photon dongle with the Funbook Pro for ₹500. With this you will get 2 GB of free data in first two months – 1 GB per month ensuring that you have access to the Internet on the go.

The device is quite snappy and ran all the apps from the Google Play store.

On the downside, battery life isn't stellar. In our continuous video playback test it barely crossed the four-hour mark.

Go for Funbook Pro if you want a large display, else, there are better performing 7-inch tablets available in the market that give you support for a SIM card and Bluetooth.

Sameer Mitha

Specifications

Platform: Android 4.0; **Processor:** 1.2GHz Cortex A8, **RAM:** 1GB; **Display:** 10.1-inch (1024x600 pixels); **Storage:** 8GB Internal expandable up to 32GB via a microSD card; **Camera:** VGA front; **Battery:** 5600 mAh

Contact

Micromax India
Phone: 0124-4811000
E-mail: http://micromaxinfo.com/contactus.php
Price: ₹10,000

6.0/10

Features	5.5
Performance	6.0
Build Quality	6.5
Value for Money	6.5

LG Optimus 4X HD

A quad-core behemoth smartphone

The first thing that you will notice is that the device is huge. It has a large 4.7-inch 1280x720 IPS LCD display, which feels a little more rectangular in shape when compared to the HTC One X or the Samsung Galaxy S3.

The display is truly gorgeous whether you are reading text, watching videos or playing games and running apps. The device runs on Android OS 4.0.3 ICS and is skinned with LG's custom UI. The UI is simple and doesn't do anything to hamper the user experience and it isn't as flashy as the competition.

Typing on the device is smooth. Its keyboard is quite responsive and shortcuts to punctuations are as good as the ones found on the HTC One X.



Irrespective of the lighting conditions, the 8 MP camera is capable of taking some really good images. The absence of a dedicated camera button is sorely missed, though.

One of the best features of the device is that on a full charge and average use, it lasted for two full days. The device is cheaper than the One X, has all the bells and whistles a premium phone offers and comes with expandable storage, which the One X lacks. For ₹32,999 the device can be considered as your go to smartphone. The price is a premium, but you get what you pay for. We do wish that the build quality was a bit better and the LG Skin was more interesting, but the device has the ability to stand tall in the crowd.

Sameer Mitha

Specifications

Platform: Android 4.0.3; **Processor:** Nvidia Tegra 3 Quad-core 1.5 GHz Cortex-A9; **RAM:** 1GB; **Display:** 4.7-inch HD-IPS LCD, 1280x 720 pixels; **Storage:** 16 GB storage (12 GB user available), with microSD slot up to 32GB; **Camera:** 8MP with 1080p HD videos; **Battery:** 2150mah

Contact

Phone: 1800 180 9999
Website: https://www.lg.com/in
Price: ₹32,999

8.0/10

Features	8.0
Performance	8.0
Build Quality	6.0
Value for Money	7.0

MSI Big Bang Z77 Mpower

A high-end board at a mid-range price-point

MSI Big Bang Z77 Mpower board is the flagship board in MSI's lineup. Just like the other MSI boards it comes with a Military Class III certification but it sports a much better build quality as compared to the other boards. For starters, the heat sinks over the VRMs joined by thick heat pipes and the ones on the chipset are of extremely high quality and do not heat up very much while you stress the system.

The board layout is quite good with enough space around the CPU region to fit in a large cooler. It also has V-check points on board to check voltages, dedicated power, reset and OC Genie



buttons and has an on-board WiFi connector.

The UEFI BIOS is a treat to use, with dedicated sections for various operations. It comes with a range of utilities such as audio genie, video genie, network genie among others. The MSI Control Centre is the utility from where you can monitor your settings and even tweak them or even overclock your processor.

The benchmark scores were not very different from other Z77 boards that we have tested in the past. We could overclock the Intel Core i7-3770K from stock 3.5 GHs to 4.5 GHz taking the readings from 7.85 to 8.95. At ₹17,900 it is priced quite decently considering its features and performance chops. It's ideal only for overclockers, as for regular users most of the features are overkill and you will be better off with the more mid-range MSI GD 65 and lower.

Nimish Sawant

Specifications

Chipset: Intel Z77; **Memory slots:** 4; **PCIe x16 slots:** 3; **USB 3.0 ports:** 6; **SATA 3 ports:** 2; **Display ports:** HDMI, DisplayPort

Contact

MSI Computer India Pvt. Ltd.
Phone: +91 11 4270 1424
Email: marketingindia@msi.com
Website: www.in.msi.com
Price: ₹17,900

8.0/10

Features	8.0
Overclocking	7.5
Build Quality	8.5
Value for Money	8.0

Lenovo ThinkCentre M72e

Tiny, space-saving, versatile PC that ain't cheap

Specifications

Dimensions: 7 x 1.35 x 7.1 inch; **CPU:** Intel Core i5-3470T 2.9 GHz; **RAM:** 4 GB DDR3; **HDD:** 500 GB, 5400 RPM; **GPU:** Intel HD Graphics 2500; **OS:** Windows 7 Professional 64-bit; **Weight:** 1.5 kg; **Warranty:** 3 year on-site

Contact

Lenovo India
URL: www.lenovo.com/in
Contact: 1800 300 9990
Price: ₹43,500

6.5/10

Features	7.5
Performance	6.5
Build Quality	7.5
Value for Money	5.5

The Lenovo ThinkCentre M72e is a really tiny form factor PC primarily meant for business use. Its dimensions are almost similar to the Mac mini, with an overall volume of just 1 litre. Of course, it isn't as pleasing on the eye as the Mac mini, but the ThinkCentre M72e is built quite well and feels rugged. It comes with VESA mount support, which lets you conveniently fix it on the back panel or stand of any compatible monitor.

The ThinkCentre M72e packs an assortment of connectivity ports on its tiny frame: five USB ports, Ethernet, and audio ports. There's built-in Wi-Fi and a detachable DVD



drive which latches on to the chassis' frame, adding two more USB ports. The M72e lacks an HDMI port, but comes with VGA and DisplayPort. Very good set of features, overall.

The M72e's performance isn't great, we peg it at slightly above average. Everyday multitasking with several apps is a breeze, so is watching HD movies, no problem. The ThinkCentre also consumes lesser power than traditional desktops. The PC comes pre-installed with Lenovo ThinkVantage suite, which simplifies managing the PC in an office setup.

Even though it's sold as a business machine, there's nothing stopping you from buying one of these and installing at your home. Yes, you can assemble a rig at a lower price, but it probably won't be as tiny as the M72e.

Jayesh Shinde



Microsoft Sculpt Keyboard
New typing apparatus designed with Windows 8 in mind which feature a split backspace-spacebar key

Microsoft Appfest sets WR
Recently Microsoft organized the Windows 8 appfest with 2,567 developers coding non-stop for 18 hours setting Guinness world record

CM Storm Sonuz

Gaming audio and a little more

After the Sirus, which was packed to the brim with drivers, this next audio product to come to us from CoolerMaster was eagerly put through its paces. The headset is undoubtedly massive which in the world of gamers may not be such a bad thing – the more mean and intimidating your gear, the better. It's got matte grey finish all over and smooth futuristic curves. Yeah, wearing it would definitely give you some cyborg swag. Performance-wise the headset sounds better than the Corsair Vengeance 2000 and most other non-surround gaming headsets. But there are some flaws.



The bass lacks body, but there's enough of it so your in-game explosions and other effects sound decent. But for music you'll find it boomy. Being open cans, there is almost no isolation. Now you have no choice but to endure every whoop and yay at your next LAN party. The microphone however is the exact opposite. It will only pick up your voice, cutting off ambient noise very efficiently. The microphone can be detached and hooked up to either side left or right which is a nice touch. Although the headset is circum-aural it doesn't go fully around the ear making it a little uncomfortable until you learn to place it correctly. The pressure is not much so you can easily wear it for a couple of hours. The build quality seems like it could take a bit of gamer triumph celebrations. Overall a decent headset, but had it been about one grand cheaper, it would've been a steal.

Siddharth Parwatay

Specifications

Driver diameter: 53mm, **Frequency range:** 10 – 20,000 Hz, **Impedance:** 45 ohm, Sensitivities(@1kHz): 98 dB ffl 3 dB, **Connector:** 3.5 mm gold-plated headphone jack, **Cable Length:** 2 metres

Contact

Cooler Master Co. Ltd.
Website: www.coolermaster.in
Email: sanket_naik@coolermaster.com.tw
Price: ₹4,950

6.5/10

Features	7.0
Performance	6.5
Build Quality	6.5
Value for Money	6.0

Belkin ScreenCast AV4

An expensive way to hide the wire clutter

Specifications

Device type: Media streamer for AV; **Resolution:** up to 1080p HD and 3D; **Ports:** 4 HDMI inputs on Transmitter; 1 HDMI out on receiver; **Claimed operating range:** 30m

Contact

Belkin India
Phone: 1800-419-5546
Email: N.A.
Price: ₹18,999

5.5/10

Features	7.5
Performance	6.5
Build Quality	6.0
Value for Money	4.0

The idea behind this product is very simple – it allows you to stream HD content from various sources to the TV, hiding the cable clutter as a result in the process.

The first element is the transmitter with four HDMI inputs. The receiver has a very similar look to the transmitter, and has one HDMI out to connect to the TV. Pairing is a one-time process. The remote is very basic, and very simple – up/down arrow keys and the OK key.

This setup works on the 5 GHz frequency. We tested with Tata Sky HD, a Blu-Ray player and a WD Live, and there were no issues setting it up. Streaming HD files from the WD Live was a seamless experience. We did not see any stutter in the HD broadcasts on Tata Sky HD and Blu-Ray movies. The same smoothness was witnessed with 3D content, with no loss of depth or clarity – looked exactly as it would with the Blu-Ray player connected directly to the TV. However, there are a couple of issues. First is, if you pause HD content for five minutes or more, you will see momentary (one second and a bit) stutter upon resume. Second, the audio completely dropping out when you fast-forward an HD movie off a Blu-ray player. The only real solution is to pause it for 5-6 seconds and then resume.



The ScreenCast AV4 experience is rather seamless. The idea of letting you hide most devices and the wires is appreciated, but there is no getting away from the fact that it is an expensive solution to buy.

Vishal Mathur



Leica M
Unveiled at Photokina 2012 Leica M is a stunning 24 mega-pixel camera to be released in early 2013

Windows 8 Tab by Sony
Sony launches its first windows 8 table top pc Sony VAIO Tab 20 at IFA 2012 with i3, i5, i7 Intel Processor

MP3 PLAYER



Cowon X9
Price: ₹13,000

SPECIFICATIONS

Screen	4.3-inch, 480x272
Output	29mWx2 (16ohm)
microSD support	32GB
Battery life	110hrs (audio)

TEST CENTRE RATINGS (All scores out of 10)

Features 4.0
Plays FLAC, supports microSD cards. Video support and screen resolution is terrible.

Performace 5.0
Audio levels are very disappointing, though the actual quality is quite good.

Build Quality 8.0
The device is well-built and feels very sturdy.

Value for money 1.0
The only reason you will want to buy this device is if you desperately want that 110hr battery life.

WE SAY

4.5

There is absolutely no reason we could think of as to why anyone would want to buy it, other than the 110hr battery life. Cowon's own O2 for example is identical to the X9 in size and specs and while it lacks the stellar battery life, supports almost all essential video formats, including mkv, which the X9 doesn't. The screen is awful, resistive touch is a pain and the device is too unwieldy for an audio player, the screen and format support too low for a good video player. Maybe 5 years ago this would have been an excellent device, but not now.

MOTHERBOARD



ASRock Z77 E-ITX
Price: ₹12,500

SPECIFICATIONS

Chipset	Intel Z77
SATA 3 Ports	2
Form Factor	Mini ITX
USB 3.0 ports	4

TEST CENTRE RATINGS (All scores out of 10)

Features 7.5
It has three display ports, a single PCIe gen 3.0 slot, and the Lucid Virtu functionality.

Overclocking 7.0
It overclocks wonderfully. We could take it from 3.5GHz to 4.6GHz using the Turbo settings in the BIOS.

Build Quality 6.5
A very dense board, has all solid-state caps. SATA ports pointing upwards is the only issue.

Value for money 7.0
Pricing is decent, recommended if you find it under 10k.

WE SAY

7.0

This is board which you can use to build an HTPC as well as an enthusiast gaming PC provided you are only using a single graphics card. On-board Wi-Fi module is a great addition.On the otherside of the board you have an mSATA port to connect any mSATA SSD. It overclocks quite well from the BIOS as well as from the utility provided. Keeping the amount of features offered, the pricing is right, but would be a wonderful deal if it was under the 10k mark.

SPEAKER



F&D F680 2.1 Speaker System
Price: ₹4,990

SPECIFICATIONS

Frequency response	65Hz - 20 Khz
S/N Ratio	>= 65 dB
Output power	70 W
Sub-woofer driver	6.5 inch

TEST CENTRE RATINGS (All scores out of 10)

Features 6.0
The woofer unit has bass and volume controls, but thankfully comes with a wired volume dial.

Performance 7.0
This speaker set performed better than our expectations. It's loud, punchy, and surprisingly clear.

Build Quality 6.0
Satellites are small (with a 2-inch driver) but with a metal stand, they seem well built.

Value for money 7.0
For 5k the speakers offer decent value. It becomes great value if you find an even cheaper deal.

WE SAY

7.0

Every now and then a product arrives in the test center which makes us sit up and take note. The F&D F680 speaker set is one such device. It's loud, punchy and the sound quality is closer to speakers from a higher price bracket. The sound is fairly neutral and the satellites being angled at an upward 11 degree angle help in creating a good sound cone for the listener. The soundstaging and stereo separation is also much better than what one would expect from speakers in this price range. The bass is tight and powerful.

GRAPHICS CARD



Galaxy - GTX 660 Ti GC 2GB
Price: ₹24,000

SPECIFICATIONS

Core Clock	1002 MHz
Boost Clock	1084 MHz
Memory	2 GB GDDR5
CUDA Cores	1344

TEST CENTRE RATINGS (All scores out of 10)

Features 7.0
87 MHz factory overclocked over stock. Dual BIOS. Supports 4 displays.

Performance 8.0
Performs slightly lower than factory overclocked SKUs from competitors.

Build Quality 5.0
2x 85mm fans over a huge aluminium heatsink. Peak temperature doesn't cross 71ºC and at idle stays around 30ºC.

Value for money 7.0
Slightly cheaper than similarly overclocked competitors.

WE SAY

7.0

Well built primarily with a metal and plastic composite body. The VRM circuitry has a separate heatsink attached to it too. Features a custom PCB and has dual bios though we couldn't seem to find any BIOS switch on it. Requires a 6-pin and a 8-pin power connector and comes with a dual-molex to 8-pin adapter. The improved heatsink sure goes a long way into keeping the temperatures low while handling heavy loads. Performance wise it's still quite behind the GTX 670 but more than makes up on the value for money aspect.



Motorola RAZR i

Motorola Mobility announces its first Intel powered smartphone with 2GHz of single-core Intel processor and Android 4.0

Delight Circles

DelightCircle is an app for iOS and Android platform which help you pick out the best deals in the shops around you

LAPTOPS



Gateway NE56R021

Price: ₹20,599

SPECIFICATIONS

Screen ...15.6-inch glossy, 1366x768 res
CPU .....Intel Pentium B950 2.10 GHz
RAM.....2GB DDR3
HDD.....320GB

TEST CENTRE RATINGS (All scores out of 10)

Features.....5.5
It has all necessary ports – HDMI, Wi-Fi, LAN, USB, etc. – but not the greatest hardware.

Performance 6.0
It offers basic performance, supporting multitasking with 2-3 apps. But battery life's very good.

Build quality 6.0
Its bulky frame doesn't sag or flex excessively. Hinges are tight, palmrest is nice and solid.

Value for money..... 7.0
Recommended for someone interested in a basic 15-inch computer around 20k.

WE SAY

6.0

The Gateway NE56 laptop has an all-black exterior with a glossy screen lid. It comes with a Pentium dual-core processor which can handle everyday work, but nothing extra. The laptop's keyboard is tightly packed with a dedicated number pad good to work on. Its performance is mixed, with PC Mark Vantage score of 3154 bordering on barely acceptable, but battery performance better than mainstream laptops. Its price bumps up to Rs. 23k with a Windows 7 pre-installed. Overall, a decent laptop on a tight budget.



HP Pavilion G6-2009tx

Price: ₹38,997

SPECIFICATIONS

CPU .....Intel Core i3-2350M @ 2.3GHz
RAM.....4GB
Display .....15.6-inch, 1366 x 768 pixels
Storage 500GB

TEST CENTRE RATINGS (All scores out of 10)

Features.....6.0
It has a 15.6-inch display, along with the entire gamut of ports – HDMI, USBs, card slots and even the optical drive.

Performance 6.5
Good overall performance. Decent battery life, too.

Build Quality.....6.5
The chassis is mostly plastic, but the enamel finish does look very good. Put together well.

Value for money.....8.0
Given its performance for its price, it really is a no-brainer that this should be on your shortlist.

WE SAY

6.5

The HP Pavilion G6 feels much more expensive than it is. It is powered by a Core i3 processor, but is by no means a slouch. The performance and benchmark scores is very close to the much more expensive Toshiba Satellite L850. For a price of under Rs 40000, the HP Pavilion G6 is one of the better machines that you can consider, considering it has dual GPUs (onboard and AMD HD7670M). Yes, it is still on the older Sandy Bridge hardware, but for this price and the performance on offer, we can't hold that against the G6.

GAMING MOUSE



Logitech G400

Price: ₹2,095

SPECIFICATIONS

Tracking Resolution ..... 400–3600 dpi
Image processing .....5.8 MP/sec
Max. acceleration.....25G
USB report rate 1000/second

TEST CENTRE RATINGS (All scores out of 10)

Features..... 7.0
It lacks programmable buttons, but has dpi switching on the fly, polytetrafluoroethylene feet and a 3600 dpi optical engine.

Performance 7.0
The mouse is responsive on most surfaces and works better for the palm than claw grip styles.

Build Quality.....6.5
Like all Logitech gaming grade mice, the build is great, but a bit bulky.

Value for money..... 7.0
For 2k the mouse is a better buy than some lower end Razer mice.

WE SAY

7.0

There's really nothing wrong with the mouse per se. For an entry level gamer it provides the perfect entry point to the realm of serious gaming. The only shortcomings we could come up with were when we compared the mouse to more higher end products or when personal preferences come into the picture. For instance the mouse is bulky so if that's not your thing don't go for it. Apart from that the polling is superb, there's no noticeable lag, and the inertial resistance is one of the lowest we've experienced. Go for it.

POCKET ROUTER



Edimax 3G-6200nl

Price: ₹2399

SPECIFICATIONS

Type.....150Mbps Wireless 3G Router
Throughput 150N
Antennae.....1 (external)
Output power..... 2dBi

TEST CENTRE RATINGS (All scores out of 10)

Features..... 7.0
Exactly what you expect from a 3G compact router, 1xLAN port + 1xUSB port for a 3G dongle. Standard settings and features

Performace..... 7.5
Just shy of the TP-link MR3020 in terms of performance, with a transfer rate of 4.5MB/s. Signal strength is good upto zone 2.

Design.....6.5
Very basic but functional design.

Value for money.....5.5
Not very good value for money as competition manages to provide a better router at 75% of this price.

WE SAY

7.0

A very basic, compact router, this is an unassuming device that just does what it is supposed to do. Unfortunately, there is no reason we could think of as to why you would want to buy this device over something like the TL MR3020. available for at least ₹600 less and which performs equally well, if not better. One redeeming feature of this device is the range, which is quite good for a device of this class, giving a decent signal even in Zone 3 (refer previous Wi-Fi router tests), but it might not be enough to justify the price.



Bose VideoWave II

Bose recently introduced its all in one entertainment system in India starting from Rs.4,19,513 which features 7.1 channel home theatre along with an HDTV

Google+ birthday reminders

Is Google following Facebook? Google has also implemented birthday reminders on its social networking Google+

PROJECTOR



Ricoh PJ WX4130
Price: ₹95,000

SPECIFICATIONS

Resolution.....1280 x 800 res
Brightness.....2500 lumens
Contrast ratio.....2500:1
Weight.....3.0 kg

TEST CENTRE RATINGS (All scores out of 10)

Features.....6.0
This projector comes with most features expected at the price it sells – connectivity ports, wireless remote, etc.

Performance.....5.5
Throws bright images and HD videos play well, but with hint of ghosting. Moire and rainbows are also noticed, occasionally.

Build quality.....7.0
Built quite well sporting a nice and compact, vertical design.

Value for money.....5.0
If not for its ultra-short throw distance, this is just too expensive.

WE SAY

6.0

This Ricoh ultra-short throw projector claims to have the shortest throw distance among commercial projectors, only 11.7 cm away from the screen. We did test it from about a feet away and it projected 5-feet wide image that was bright and sharp. Its lens has a permanent cover on its surface to prevent dust from entering. Everything is good about this projector except its average performance and expensive price. We recommend it only for its short throw distance, otherwise better options exist at similar price points.

CABINET



Zebronics Bijli 2
Price: ₹4,200

SPECIFICATIONS

Dimensions.....190x 430x 450mm
Case type.....ATX/micro ATX
Front slots.....4 nos
3.5 HHD bays.....4 nos

TEST CENTRE RATINGS (All scores out of 10)

Features.....6.0
The case has screwless design, front USB 3.0 and LEDs on three of its four fans.

Performance.....6.0
The four fans provide adequate airflow, but cable management suffers.

Build Quality.....5.5
The case looks good but its front buttons are tacky. Its tin-like HDD slots aren't great either.

Value for money.....5.0
Expensive considering that chasis prices have been cut down by most manufacturers.

WE SAY

5.5

The Bijli was a popular case and this follow up is not bad at all in terms of build and performance. The case looks good too with three LED (blue) fans and a window on the side panel. The open mesh design is good but we would've appreciated it more if it had dust filters. Installation is easy thanks to the screwless design. The pricing is where it loses out. The MRP is a little too much for the feature set. If you can find it for cheaper than its listed price, then it's a good case to house your entry level rig in.

EARPHONE



Sennheiser IE80
Price: ₹24,990

SPECIFICATIONS

Type.....In-ear earphones, wired
Connector.....3.5mm
Frequency.....10-20000 Hz
Impedance.....16 ohms

TEST CENTRE RATINGS (All scores out of 10)

Features.....8.0
Tweak the bass level for each ear, change the cable if it's damaged.

Performance.....7.5
IE80 does build on the excellent bass of the IE8. The overall sound is quite wholesome.

Build Quality.....7.5
Premium build, earphones offer comfortable in-ear experience, even for long durations.

Value for money.....4.5
Earphones are primarily given with a very meager budget, we aren't sure how many people will actually consider this.

WE SAY

7.0

What you get with the Sennheiser IE80 is taut bass, deep details, extreme clarity and the ability to manage how much bass thump you would like. This builds on the bass of the predecessor, IE8, and adds the vocal clarity. However, the IE80 does not have any leanings out of the box – neither is it bass heavy, or is it treble centric. What it does, and does well, is follow the neutral path with great effect. Purely for the sound bit, this is a worthy successor

HEADPHONE



Techcom SSD-WH-223TF
Price: ₹875

SPECIFICATIONS

Battery.....180 mAh (rated 4hrs)
Weight.....130g
Output power.....0.5W each channel
Frequency response.....20 Hz - 20 KHz

TEST CENTRE RATINGS (All scores out of 10)

Features.....6.5
It's got an FM receiver, can read mp3 files via a microSD card.

Performance.....5.0
Sound quality isn't worth writing, but we've heard worse. The FM receiver frequently loses signal.

Build Quality.....4.0
One word - tacky. The headband slider jams, the buttons feel like they'll fall off.

Value for money.....6.0
The feature set bumped up the value score. Understand you're paying for an FM player and MP3 player not a wireless headphone.

WE SAY

5.5

Being a supra-aural headset the earcups sit on top of the ear. Such headphones need to have a slight swivel to allow adjustment in one axis but these don't, making them a little uncomfortable for prolonged usage. The sound quality is sub-optimal. Most audio sounds muffled. It's not a wireless headphone as it claims but a wireless MP3 player with FM. To listen to a different audio source you'd have to use a regular 3.5mm to 3.5mm cable. If the device fits the profile of what you're looking for, you could consider it.

97 **Killer Rigs**
Thinking of building a new rig for yourself or have a friend bugging you for rig suggesstions? Read on

98 **Price watch**
Check out the latest prices of Cellphones, Monitors and Point and shoot Cameras this time around

Cost-effective tablets



Selecting the best budget tablet under ₹10,000



Agent 001
agent001@thinkdigit.com

At the beginning, circa 2010, budget tablets were, for the lack of a better word, horrible. Why? Well for starters they ran smartphone OSes and the utility you derived from them was zilch. And they were lightyears away from the Apple iPad, the device that ushered in the tablet era.

Fast forward two years and we have a different scenario. The phase of bad first generation tablets has passed; we have tablets that are not only affordable but boast of decent power under the hood. The best part is that these devices run on Google's Android 4.0 ICS, a fully featured tablet-ready OS. The market today is flooded with so many tablets that the average consumer will get confused as to which tablet can do what and is the device a bang for your buck? When you decide to go in for a tablet that costs ₹10,000 or less, there are only two reasons why you will do so. Either you can't afford one or you are testing the waters, if a tablet really makes sense for you. Since you are going for a budget tablet, please understand that there are quite a few features that it won't have. On the other hand, there are essential features that should absolutely be there so that the device doesn't end up becoming your next expensive paperweight. Heed these wise words before picking up a sub 10K tablet.

Build Quality

Straight out of the box, don't expect the build quality of the device to be stellar. On the other hand don't expect it to be bad either. The build of most of these tablets revolves around 7-inches except for the Micromax Funbook Pro which has a 10.1-inch display. The material used for these devices is plastic. Most of them have a matte finish which makes the device easier to grip.



iberry auxus ax02

Capacitive display that works

If the display isn't capacitive, don't bother. A resistive display requires a stylus, which will take you back to the stone ages, and some of the lower priced tablets have capacitive displays that are more gimmicky than functional. The likes of the Micromax Funbook, iberry Auxus AX02 and the Zync Z990 Plus have capacitive touchscreens that get the job done quite well. With the exception of a few, all the tablets support a 7-inch display with a resolution of 480x800 and this has become an acceptable standard. Some



Motorola Droid RAZR M

Motorola launched its new 4.3-inch Android 4.0 smartphone with 8MP camera, 1.5 GHz dual-core and 1GB of RAM

tablets like the Micromax Funbook Pro has a 10-inch display (1024x600) and the BSNL Penta tablet has an 8-inch display.



Micromax Funbook Pro

Power under the hood

Even if the tablet is a budget machine, it still needs to be able to run all the apps available on the Google Play store. First of all, the device needs to support the Google Play store. HCL is one company that has eliminated the Play store from its tablets and this is a big downer. Most of the tablets have a single-core 1.2 GHz



Zync Z990 plus

Cortex A8 processor, which is good, but it's the RAM that makes or breaks the smoothness of the device. Tablets such as the Micromax Funbook Pro, Zync Z990 Plus and the BSNL Penta tab have 1 GB of RAM making them a bit snappier than the ones running on 512 MB of RAM. The devices that sport 1 GB of RAM are higher up on the price spectrum as well.

Battery

If the device dies before you finish a movie, it isn't really worth it. The battery on the tablet should be at least 3000 mAh so it can sustain continual playback of a movie. This is however applicable for a device with a 7-inch display. If the display is larger than 7-inches, the battery capacity should be higher too.



Milagrow

Connectivity

This is where picking the device of your choice become a little tricky. In terms of connectivity, the one thing that matters the most is connecting to the Internet. All the budget tablets support connectivity to the Internet via your 3G USB dongle. Either the tablet has a full sized USB port or comes with a micro-USB to USB adapter. In terms of other connectivity options, some of the tablets such as the Micromax Funbook Pro, Zync Z990 Plus, Milagrow MGPTO7 and the iberry Auxus AX02 support HDMI straight out of the box. Another place where budget tablets compromise is with Bluetooth. If you are one who would like to connect Bluetooth accessories to your tablet, the sub 10k price point of not for you.

Recommendations

With the number of budget tablets available in the market it's hard to just recommend one. But we have narrowed down to two on the basis of their overall performance and form factor. If you want a device with a big display and don't mind compromising on a SIM card slot, Bluetooth and GPS then go in for the Miceomax Funbook Pro. It has a 10.1-inch display and is an overall well built device. If you want a 7-inch tablet then the iberry Auxus AX02 is the one for you. It is priced at Rs. 7,990 and it too compromising on a SIM card slot, Bluetooth and GPS but runs all the apps from the Google Play store and HD videos quite smoothly.



BSNL-Penta



C12.0

- 1.3M pixels (Interpolated 12M pixels still image & 2M pixels video resolution)
- High quality 5G wide angle lens
- 6 LEDs for night vision, with brightness controller
- Built-in high sensitive USB microphone
- Snapshot button for still image capture
- 4X Digital zoom and Auto Face Tracking Function

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Huawei Ascend W
Huawei showcased its first series of Windows 8 Phone with Ascend W1 and Ascend W2

Intel's WiDi 3.5
Intel launched its new version of Wireless display technology with support for Windows 8 and Touch Interface with 60ms latency on Ivy Bridge systems

Smartphone dilemma

I am a subscriber of Digit magazine. I need some help in buying a smartphone for my wife and me.

I am looking for something in the range of ₹10,000 to ₹15,000 for both of us. We both are new to smartphones, so I am expecting medium usage. If the range extends a bit by 1-2K, it shouldn't be a problem. I don't have any specific requirements about the OS, screen size, manufacturer, etc. We have zeroed in SE Ray ST18i, Sony Xperia U, Sony Xperia Pro, Sony Xperia Miro, Sony Xperia Tipo, Samsung Galaxy Ace Duos s6802, Samsung Galaxy Y s5360, Samsung Galaxy Y Duos Lite S5302, Micromax A87, Micromax Ninja A4, Micromax X650, Nokia Lumia 710. Please note that I don't prefer Blackberry and hence, my list doesn't include the same.

Rasesh B

A The shortlist that you have made is rather comprehensive! From that list, we would recommend the Sony Xperia U. The new NXT range of smartphones, which the Xperia U is a part of, is rather impressive. The Android ICS update has been rolled out, the build quality is much better than what you would expect in a phone in that price bracket and offers pretty stable performance as long as it is not loaded with a lot of apps. You have specified that yours will be a medium usage load on the phone, in which case the battery should last you a day and a bit more on a single charge.



Sony Xperia U

Most of the other phones you have shortlisted are considerably less expensive than the Xperia U, but when you have the budget for this phone, anything in a slightly lower league will not be ideal.

Which graphics card to get?

I want to buy a graphics card. Please give some suggestions in the budget of ₹13,000 - ₹15,000. I think that my PSU might not be sufficient for high end cards. Also please suggest a good monitor, preferably 24 inch, good response time and around 15K. System Configration:

- **Processor:** Intel Core i5-2500K
- **Motherboard:** ASUS P8Z68 V Pro
- **RAM:** 8 GB G-Skill Ripjaws
- **PSU:** Cooler Master GX 550 W (Bronze)
- **Cabinet:** Cooler Master 431 plus
- **CPU Cooler:** Cooler Master Evo 212

Please give some suggestions. Thanks

Ishan Katoch

A You can opt for NVIDIA GTX 560 Ti (for ₹12,000) which is a good value for money. You PSU will easily support the GTX 560 Ti. As for the monitor we would suggest you go for BenQ GL2450H for around ₹12,000. That saves you ₹3,000 which you can invest in your graphics card budget to get the latest stock NVIDIA GTX 660 (for ₹17,000) which is a much better performer. (Just check out offerings from different vendors and opt for whichever gives a lower price)

Deskotp or Laptop?

I have a desktop PC at home and I'm going to celebrate its 10th anniversary this month. It runs just about fine with Intel Pentium P4 single core 2.4 GHz processor, a 512 MB DDR RAM with 80 GB of hard disk running Windows XP.

I am pursuing Computer Engineering, I need to buy another PC to satisfy my needs. But I'm not sure about buying a laptop/ ultrabook or upgrade my existing PC. I'm not an overclocker but want to play some games like NFS Hot Pursuit 2010, Mirror's Edge, etc., so I want a good GPU.

I need these features:

1. Nice CPU preferably 3rd gen Core i5 or i7 with at least 2.3 GHz
2. 4GB or more RAM
3. Optical drive is welcome though I have an exernal drive



ZOTAC GTX 560Ti

4. Good display preferably 15 inch with good resolution (no not Retina Display)
5. A good GPU
6. 320 GB to 750 GB HDD
7. Good connectivity options such as Bluetooth, Wi Fi and USB 3.0

My Budget is around ₹80,000 to ₹85,000. I also want to mention that what I want to buy is a desktop replacement, so I don't want to compromise on performance and it should be future proof, too.

Rutul Parikh

A Considering you are a student, it will be best if you invest in a desktop right now as you are looking at something which will last a long time. Ultrabooks are the lighter and more powerful counterparts of laptops. Right now ultrabook prices are quite high. Also they are best suited for professionals who have to access their system on the move. At the moment, for a student like you a desktop the best investment.

Here are the things you should invest your money in:

- **Processor:** Intel Core i5-2400 (₹11,200)
- **Motherboard:** MSI H67 MA-E35 (₹4,850)
- **RAM:** Gskill F3-12800CL9D-8GBXL (₹3,350)
- **GPU:** ZOTAC GTX 550Ti (₹7,450)
- **HDD:** Seagate Barracuda 2 TB (₹6,350)
- **PSU:** Corsair GS600 (₹4,000)
- **Monitor:** Samsung P2350 (₹10,800)
- **Optical Drive:** LG 22x DVD Writer (₹950)
- **Wireless Router:** TP-Link WR740N (₹1,100)
- **Total:** ₹50,050

On a side-note, if you are still not convinced of our desktop PC suggestion, you can check out Sony VAIO SVE15116EN (for around ₹44,000) and Toshiba Satellite CC850-X5212 (₹42,500). They fulfill all your requirements.

digit KILLER RIGS

Everything you'll ever need to build your own PC. Whatever your budget.

Basic rig = ₹21,765 | HTPC = ₹22,700 | Entry-level gaming = ₹34,365 | Mid-range gaming = ₹56,410 | Ultra high-end = ₹1,53,424

BASIC RIG

Processor	Intel Pentium G840	4,000
Motherboard	ASRock H61M-PS2	2,750
RAM	Corsair 2GB DDR3 1333MHz	650
HDD	Seagate 500GB 7200.12	3,650
Monitor	BenQ G610HDAL	3,900
Graphics Card	None	0
Cabinet	Cooler Master Elite 310	1,600
PSU	Seasonic SS-400ES	2,700
Speaker (2.1)	Altec Classic Audio BXR1221	1,100
Mouse	Zebronics Judwaa 5 (Bundle)	0
Optical Drive	Samsung 22x SATA DVD Writer	950
Keyboard	Zebronics Judwaa 5 (Bundle)	465
Sound Card	None	0
Total		**21,765**

HTPC

Processor	AMD A6-3650	5,900
Motherboard	ASRock A75M	4,300
RAM	Corsair 2GB DDR3 1333MHz	650
HDD	Seagate Barracuda 2 TB	6,150
Monitor	None (your TV)	0
Graphics Card	None (HD6530D onboard)	0
Cabinet	Zebronics Tambi	2,000
PSU	Bundled (150W)	0
Speaker	None	0
Mouse	MS Wireless laser Combo XVA-00020	2,750
Keyboard	Bundled	0
Optical Drive	Samsung 22x SATA DVD Writer	950
Sound Card	None	0
Total		**22,700**

ENTRY-LEVEL GAMING

Processor	AMD Phenom II x4 840	5,500
Motherboard	GIGABYTE GA-MA78LMT-S2	2,600
RAM	G-skill F3-10600CL9S-4GBNT	1,050
HDD	Seagate 500GB 7200.12	3,650
Monitor	BenQ G2222HD	7,000
Graphics Card	Zotac 550Ti	7,400
Cabinet	Cooler Master Elite 310	1,600
PSU	Corsair CX430	2,300
Speaker	Altec Lansing V2621	1,850
Mouse	Zebronics Judwaa 5 (Bundle)	0
Optical Drive	Samsung 22x SATA DVD Writer	950
Keyboard	Zebronics Judwaa 5 (Bundle)	465
Sound Card	None	0
Total		**34,365**

MID-RANGE GAMING

Processor	Intel Core i5-3450	11,500
Motherboard	Intel DB75EN	5,600
RAM	G-skill F3-10600CL9S-4GBNT	1,200
HDD	Seagate 500GB 7200.12	3,650
Monitor	Samsung P2350	10,800
Graphics Card	NVIDIA GTX 560 Ti	12,560
Cabinet	Cooler Master Elite 310	1,600
PSU	Corsair GS 600	4,000
Speaker	Altec Lansing V2621	1,850
Mouse	Razer Abyssus (bundled)	0
Optical Drive	Samsung 22x SATA DVD Writer	950
Keyboard	Razer Cyclosa (Bundled)	2,700
Sound Card	None	0
Total		**56,410**

ULTRA HIGH-END GAMING

Processor	Intel Core i7-3770K	20,975
Motherboard	Gigabyte Z77X-UD5H/WB	20,700
RAM	Gskill F3-12800CL9D-8GBXL	3,150
HDD	Seagate 2 TB + Crucial m4 128 GB	14,299
Monitor	BenQ XL2420T	21,000
Graphics Card	MSI N680GTX-PM2D2GD5	32,600
Cabinet	Cooler Master HAF922	7,200
PSU	Seasonic X850 (80+ Gold)	10,000
Speaker	F&D F680	3,500
Mouse	Tt eSPORTS Theron	3,500
Optical Drive	LG Blu-ray WH14NS40 RW	7,000
Keyboard	Logitech G510	4,800
Sound Card	ASUS Xonar DX 7.1	4,700
Total		**1,53,424**

OPTIONAL ACCESSORIES

Speakers (5.1)	Logitech Z5500	17,500
Controller	Xbox360 Controller (wired)	1,350
UPS	APC 700VA (BE 700Y-IN)	3,550
UPS	APC 1500VA (SUA1500I)	10,700
Webcam	Microsoft LifeCam Cinema	4,300
Headphones	Klipsch Image S4i	3,850
Mousepad	Razer Vespula	1,700
External DVD-Writer	Asus/Toshiba/Buffalo	1,900
Sound Card	ASUS Xonar Essence STX	7,300
USB Hub	Belkin 7 port USB HUB	1,000
Wireless router	TP-Link WR740N	1,100
CPU Cooler	Corsair H100	7,400
Thermal Paste	Arctic Cooling MX2	400



Smarter Socks
Yes! an app to sort your socks from Blacksocks developers for your iPhone

First 3-D Printing Store
MakerBot opens 3-D printing shop in New York City. A new breed of machines prints out designs from the web

SPEND SMART

Updated prices of Processors, Monitors, Tablets and Cameras



PROCESSORS

Brand	Model	Clock Speed (MHz)	Turbo Clock (MHz)	Cores/ Threads	L3 Cache	Multiplier Lock	IGP	TDP	Price (in ₹)
Intel	Core i7 3770K	3500 MHz	3900 MHz	4/8	8 MB	No	HD 4000	77 W	20,300
Intel	Core i7 3770	3400 MHz	3900 MHz	4/8	8 MB	Yes	HD 4000	77 W	18,200
Intel	Core i7 2700K	3500 MHz	3900 MHz	4/8	8 MB	No	HD 3000	95 W	19,800
Intel	Core i7 2600	3400 MHz	3800 MHz	4/8	8 MB	Yes	HD 3000	95 W	17,900
Intel	Core i5 3570K	3400 MHz	3800 MHz	4/4	6 MB	No	HD 4000	77 W	14,550
Intel	Core i5 3550	3300 MHz	3700 MHz	4/4	6 MB	Yes	HD 4000	77 W	12,550
Intel	Core i5 2500	3300 MHz	3700 MHz	4/4	6 MB	Yes	HD 2000	95 W	12,200
Intel	Core i3 2120	3300 MHz	-	2/4	3 MB	Yes	HD 2000	65 W	6,975
Intel	Pentium G30	2700 MHz	-	2/2	3 MB	Yes	HD	65 W	3,400
AMD	FX-8150	3600 MHz	4200 MHz	8/8	8 MB	No	-	125 W	11,900
AMD	FX-8120	3100 MHz	4000 MHz	8/8	8 MB	No	-	95 W	9,575
AMD	FX-6100	3300 MHz	3900 MHz	6/6	8 MB	No	-	95 W	7,475
AMD	FX-4100	3600 MHz	3800 MHz	4/4	8 MB	No	-	95 W	6,450
AMD	A8-3870K	3000 MHz	-	4/4	4 MB	No	HD 6550D	100 W	7,800
AMD	A8-3850	2900 MHz	-	4/4	4 MB	Yes	HD 6550D	100 W	7,400
AMD	A6-3670K	2700 MHz	-	4/4	4 MB	No	HD 6530D	100 W	6,450
AMD	A6-3650	2600 MHz	-	4/4	4 MB	Yes	HD 6530D	100 W	5,900
AMD	A4-3400	2700 MHz	-	2/2	1 MB	Yes	HD 6410D	65 W	3,550



MONITORS

Brand	Model	Size (inches)	Panel	Max Resolution	I/P (VGA/DVI/HDMI/ DP/Audio/USB)	Speakers	VESA Mount	Price (in ₹)
Dell	S2740L	27"	IPS	1920 x 1080	Y/Y/Y/N/N/Y	No	(100 mmx100 mm)	26,300
Dell	U2312HM	23"	IPS	1920 x 1080	Y/Y/N/Y/N/Y	No	(100 mmx100 mm)	16,800
ViewSonic	VX2753HM	27"	-	1920 x 1080	Y/N/Y/N/Y/N	Yes x2	NA	21,060
ViewSonic	VX2250WM	21.5"	-	1920 x 1080	Y/Y/N/N/N/N	Yes x2	(100 mmx100 mm)	9,180
BenQ	RL2450H	24"	TN	1920 x 1080	Y/Y/Y/N/Y/N	No	(100 mmx100 mm)	13,750
BenQ	G2420HD	24"	TN	1920 x 1080	Y/Y/Y/N/Y/N	No	(100 mmx100 mm)	9,940
LG	E2042C	20"	TN	1600 x 900	Y/N/N/N/N/N	No	(75 mmx75 mm)	6,480
LG	E2360V	23"	TN	1920 x 1080	Y/Y/Y/N/Y/N	No	NA	10,044
Samung	S27B750V	27"	-	1920 x 1080	Y/N/Y/N/Y/N	Yes x2	NA	22,890
Samung	B2030	20"	TN	1600 x 900	Y/Y/N/N/N/N	No	(75 mmx75 mm)	6,300
Philips	273P3LPHEB	27"	TN	1920 x 1080	Y/Y/Y/N/Y/Y	Yes x2	(100 mmx100 mm)	18,000
Philips	227E3QPHSU-94	21.5"	IPS	1920 x 1080	Y/Y/Y/N/N/N	No	NA	8,750
AOC	i2251Fwe	21.5"	IPS	1920 x 1080	Y/Y/N/N/N/N	No	NA	8,300
AOC	E2352PHZ	23"	-	1920 x 1080	Y/Y/Y/N/Y/N	Yes x2	(75 mmx75 mm)	14,973
ASUS	ML248H	24"	TN	1920 x 1080	Y/Y/Y/N/Y/N	No	NA	17,280
ASUS	PA246Q	24.1"	IPS	1920 x 1200	Y/Y/Y/Y/Y/Y	No	(100 mmx100 mm)	36,000
Lenovo	D186	18.5"	TN	1366 x 768	Y/N/N/N/N/N	No	(100 mmx100 mm)	6,048
Lenovo	L2062	20"	TN	1600 x 900	Y/Y/N/N/N/N	No	(100 mmx100 mm)	7,560
Acer	S230HL	23"	TN	1920 x 1080	Y/N/Y/N/N/N	No	NA	8,975
Acer	S200HL	20"	TN	1600 x 900	Y/Y/N/N/N/N	No	NA	5,900



TABLETS

Brand	Model	Screen Size (inches)	CPU	GPU	OS	Battery	Storage	Price (in ₹)
Apple	iPad 3	9.7 "	1 GHz Dual Core A9	SGX543MP4	iOS 6	11666 mAh	16 GB	30,500
Apple	iPad 2	9.7 "	1 GHz Dual Core A9	SGX543MP2	iOS 6	6930 mAh	16 GB	24,500
Samsung	Galaxy Tab 2 P3100	7 "	1 GHz Dual Core	SGX540	Android 4.0	4000 mAh	16 GB	19,300
Samsung	Galaxy Note 800	10.1 "	1.4 GHz Quad Core	Mali-400MP	Android 4.0	7000 mAh	16 GB	37,500
Samsung	Galaxy Tab 2 P5100	10.1 "	1 GHz Dual Core A9	SGX540	Android 4.0	7000 mAh	16 GB	31,990
Milagrow	MGPT01-16	8 "	1.2 GHz A8	OpenGL ES 2.0	Android 2.3.1	5000 mAh	16 GB	13,990
Micromax	Funbook Pro	7 "	1.2 GHz Cortex-A8	Mali-400	Android 4.0.3	5600 mAh	8 GB	9,999
Micromax	Funbook P300	7 "	1.2 GHz Cortex-A8	Mali-400MP	Android 4.0.3	2800 mAh	4 GB	6,499
HCL	MyEdu Tab (X1)	7 "	1 GHz Cortex-A8	-	Android 2.3.3	3500 mAh	4 GB	11,999
HCL	ME Tablet U1	7 "	1 GHz Cortex-A8	-	Android 4.0.3	3600 mAh	4 GB	7,999
Karbonn	Smart Tab 1	7 "	1.2 GHz	-	Android 4.1	3700 mAh	1 GB	6,999
Karbonn	Smart Tab 2	7 "	1.2 GHz	-	Android 4.1	3700 mAh	1 GB	6,699
Viewsonic	ViewPad 10e	9.7 "	1 GHz Cortex-A8	-	Android 2.3.1	5400 mAh	4 GB	17,325
Viewsonic	ViewPad 7e	7 "	1 GHz Cortex-A8	-	Android 2.3	3300 mAh	4 GB	11,550
Notion Ink	NI3421-A01P	10.1 "	1 GHz A9	ULP GeForce	Eden 1.5	24 Whr	8 GB	24,999
BSNL	Penta WS802C	8 "	1 GHz Cortex-A8	-	Android 4.0	4000 mAh	4 GB	14,699
BSNL	Penta IS703C	7 "	1 GHz Cortex-A8	-	Android 4.0	4000 mAh	8 GB	6,999
Blackberry	Playbook	7 "	1 GHz Dual Core A9	SGX540	BlackBerry Tablet OS	5300 mAh	64 GB	17,500
iBall	Slide 3G-7307	7 "	1 GHz Cortex-A8	-	Android 2.3	4400 mAh	8 GB	15,300
Zync	Z999 Plus	7 "	1.5 GHz	-	Android 4.0	4200 mAh	8 GB	9,990



CAMERAS

DSLR / ILC	Brand	Model	Resolution (in MP)	Sensor Type	Microphone	MMC Slots	Battery Life (Shots)	Price (in ₹)
	Nikon	D800E	36	fx	Mono	2	900	1,94,950
	Nikon	D7000	16	dx	Mono	2	1050	64,450
	Nikon	D5100	16	dx	Mono	1	540	34,450
	Nikon	D3200	24	dx	Mono	1	540	32,250
	Canon	5D Mark III	22	ff	Mono	2	950	2,06,095
	Canon	650D	18	APS-C	Stereo	1	440	55,995
	Canon	EOS 7D	18	APS-C	-	1	NA	85,355
	Sony	SLT-77	24	1.5	Stereo	1	470	69,990
	Sony	SLT-57	16	1.5	Stereo	1	550	45,990
	Olympus	E-PL1	12.3	Four Thirds	-	1	NA	18,999

PnS	Brand	Model	Resolution	Sensor Type	Optical Zoom	Max ISO	Battery Life (Shots)	Price (in ₹)
	Canon	220HS	12.1	CMOS	14x	3200	210	10665
	Canon	S100	12.1	CMOS	5x	6400	350	12560
	Canon	IXUS 310HS	12.1	CMOS	4.4x	3200	180	10665
	Canon	G1X	14.3	CMOS	4x	12800	210	46555
	Sony	RX100	20.2	CMOS	3.6x	12800	330	34500
	Sony	HX100V	16.2	CMOS	26x	3200	410	21750
	Fuji	HS20EXR	16	BSI CMOS	30x	3200	NA	21500
	Fuji	X100	12.3	CMOS	1x	12800	300	72999





As the festival season approaches, we give you all the latest dos and don'ts when buying, so you're not taken in by all the hype

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Last month, we tried to wake you up with a cover story that told you, in no uncertain terms how you could be duped if you weren't careful. This month, well, it's not really that different... while last month was more about theories, and insights into why things are they way they are, this month we acknowledge the fact that neither you nor us is going to stop buying products; we can't. Instead, what we can do is ensure that we Buy Smart. Why? The most obvious answer is that it helps you get better products for cheaper, and prevents you from being duped. However, there's much more to it than that. some of you will remember the animalitarian cause against furs: "If the buying stops, the killing will too". Similarly, if everyone was to Buy Smart, there's be no profits to be made out of making sub-standard products, or trying to dupe consumers. If the money stops coming in, the quality of products will have nowhere to go but up.

This is why our cover story is a month before Diwali. Don't just read this and forget about this, carry it to your local vendor or mall, and when the sales representative tries to feed you rubbish, show him the relevant pages of this magazine, scold him for not brushing up on his skills, or worse, trying to cheat people. Even if you're not planning to refresh your home electronics collection this year, you probably have a friend or relative who is going to do just that. Share this magazine with them, and they will thank you for not only saving them a lot of money, but also helping them get more informed, and thus enabling them to Buy Smart!

Mall Buying Mantra

Your next purchase shouldn't a matter of eeny, meeny, miney, mo. Here are some things to check before you buy on the spot

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When you're in a mall trying to decide on your next big television purchase, it's an important moment that you just have to get right. You don't want to be the peson who comes away having bought a lemon, do you? Here are some tips that will help you make a smart buying decision this Diwali and ensure that you get the best value for your money.



Research

1. Reality check: Do you really need an HDTV? It's an important question to ask yourself. Are you ready to invest in an HDTV without having enough HD content to view on it? The government's cable digitization act will come into effect at the end of the month, but only in the four metros. If you are going to watch only SD content or DVD movies, then there is no point getting an HDTV.
2. Visit HDTV manufacturer's web sites, and also review sites to learn about the latest HDTVs they're selling in the market, how much they cost, etc. Arrive at a rough shortlist of HDTVs you will pick as your ultimate buy (within your budget, of course) before proceeding to the nearest mall to see them live in action.
3. Ascertain the distance at which the TV will be kept from the general viewing area (couch, sofa, bed, etc.). Try to view the content displayed by the TV in the mall from that same distance, don't let the sales attendant influence you in any way in this regard. Go to this link to get minimum viewing distance for HDTVs of several screen sizes *http://dgit.in/PrztGn*.
4. Take a video benchmark disc with you to the electronics store to test your TV's display quality in greater detail. HQV offers a Blu-ray benchmark disc to comprehensively test HDTV screens and their output, read more here: *http://dgit.in/S8CHRm*

Observe

1. Mall environments are way brighter than the typical living room's ambient light. If you can arrange for the demo TV to be moved to a darker room (ideally the home entertainment room), great. If you can't, ensure that the light falling on the TVs is evenly distributed – check for empty bulb sockets overhead. This is an attempt to keep ambient light falling evenly on the television sets.
2. Turn off the TV you're interested in buying and observe its screen when it



Visualize your home theatre setup before you start browsing. It will be a great help later on

goes completely dark. Look for traces of residual light along the panel's edges (backlight bleed), and if you find any cross that TV off your shortlist.

3. If you notice a visible difference of brightness between two competing TV models, and if the sales guy's giving you "gyaan" about why one TV is brighter than another, investigate the situation further. Ask for the TV's remote and play around with its brightness and contrast levels.
4. Don't just observe the TV's picture from directly in front, move sideways to the right and left to check for the panel's viewing angles. Ideally, you shouldn't notice colour shifts at all or a bare minimum at best from different vantage points.

Ask

1. Always check the services and support network of the brand of TV you're purchasing, in case the TV develops faults post-purchase. Is the nearest service centre in your suburb or a city several hundred kilometres away? The answer can greatly influence your ultimate decision.
2. Warranty periods for most TV sets are for 1 year. But ask the guy if the brand you're interested in offers extended warranty. If it's a fraction of the TV's sales price, go for extended cover.

Choosing Point-n-Shoot Cameras

Sorting through cameras and choosing the right one can be an arduous task, especially if you don't know what you're looking for. The plethora of cameras to choose from and their myriad features – some not even related to photography – can be daunting for the novice. We'll try to sort out the mess for you and point you in the right direction.

Research

1. Research is very important, not necessarily on what camera is good, but more importantly to check out what features are available and what you need. GPS and geo-tagging might be fluff for some, or must have features for others. Try to understand your needs first and then start looking.
2. Megapixels (MP) don't matter. Don't get taken in by marketing mumbo-jumbo touting more megapixels as a bonus. Even 6 MP cameras, but with large sensors, will beat a small sensor 12 MP camera any day. If you've shortlisted some cameras, check their sensor sizes (in mm) if you're picky about image quality. If you have the time, it might be a good idea to take a print-out or to try and remember various sensor size specifications as many manufacturers use different naming conventions.
3. Things like startup times and digital zoom don't really matter. Look for more important things such as stereo microphones (for video), multiple scene modes (if you don't want the hassle of manual setup), battery life, etc.

Observe

1. A digital camera is primarily for taking images and videos and that is what you must do with the camera. Take as many pictures as you can, portraits, macro, with flash and without. If you're not comfortable with the myriad of settings available, just put the camera in auto mode and try it out. When reviewing the images, make sure you review them at a 100 per cent zoom factor rather than looking at the overall image on the LCD. You will notice details (or lack thereof) at such a zoom level and will be able to take a better decision regarding image quality. Some cameras for example, use very aggressive noise-cancellation algorithms, resulting in images that look fine zoomed-out, but look like blotches of colour once you zoom in to 100 per cent.
2. Ideally, use your own memory card or transfer the images from the store's memory card to a laptop or tablet/phone that you have with you. Stores won't allow you to do that, but it doesn't hurt to try.
3. While shooting video, try to zoom in and out (if the camera supports it) and



Are the buttons well placed?

listen for motor noise while doing so (in the video you shot). Check to see if the camera is hunting for focus (if it allows you to focus in video mode) and also look for noise and see if it is acceptable to you. Remember that most point-n-shoots will be noisy indoors so don't expect miracles.
4. Try out all the functions on the camera, see if you're comfortable with them and whether the camera is comfortable to hold. If you want a pocket camera, don't get tempted by massive zooms and actually check if the camera is pocket-friendly.
5. Inspect the quality of the flaps and hinges, press the buttons, twiddle with the dials; make sure they are seated properly and are not squeaking, also ensure that there is no play in dials and levers and that the settings/scene mode dials lock precisely into place.

Ask

Ask about bundled accessories and freebies. Many stores will give you goodies like a mini tripod or camera bag and/or scratch guard. These can easily be worth up to ₹1,000 or more depending on the quality. You can do the opposite as well; sacrifice the freebies for a discount if you don't need them. Stores such as Reliance Digital and Croma will allow you to do that if you're persuasive enough.



Unless you're an audio enthusiast or audiophile most of your audio purchases will happen as impulse buys. Whether it's an iPod dock that catches your eye at an electronics store or a bundled home theater system that you get as a freebie with your HDTV purchase, the story is the same. When faced with such a situation how do you decide if what you're getting is the best possible product? Well, read on as we brush up on some of the basics and show you how to test that particular piece of audio equipment on the spot.

Research

1. Knowing a few things before hand is always good. For a long time (until consumers smartened up) the trend was to display power rating of speakers in PMPO. In fact for bundled home theaters it still is. Don't go by this figure as it's highly exaggerated. Instead go by the RMS rating. A speaker system with an RMS value of 80 watts or more should be loud enough for a mid-sized room.
2. At most electronics shops, the audio that they play for you may not present an accurate picture your preferences. Take sample tracks with you. But which tracks? Take your favourite music along (if it happens to be Death-metal though, you may have a problem). Ensure that the tracks are high bit rate – at least 320 kbps. This will give you an idea of whether the speakers sound good for your genre of choice. However this is still not good-enough to know whether the speakers play back all frequency ranges properly. For this download sweeps and different frequency tones. One such source is NuForce (http://dgit.in/P8P2Sa) and of course there are others (http://dgit.in/RJdCOy). Carry these in a pen drive fully uncompressed or in different file formats, or better yet, burn a .CDA album.
3. If you're buying a home theater you should download 5.1 / 7.1 trailers of movies such as *Transformers* or *Battleship*. These will have extremely low frequency sounds that give you the whole shake and rumble experience.



A shrine for your iPod

Observe

1. First and foremost when you start demoing any audio equipment go into the settings and disable any DSP effects and other sound enhancements. When comparing two music systems often you will find that effects are turned on for one system and off for the other. Very conveniently, they'll be turned off for the system which makes lesser margins for the dealer.
2. If you're in the market for an iPod dock, be sure to check out all the connectivity options. A standard 3.5 mm line in is a must. If you're planning to connect an iPad check its compatibility. Often the docking pin is compatible but the iPad doesn't fit because the pin is in a depressed slot which is only long enough to fit an iPod.



Wouldn't you want to blow the roof off with these?

3. If you're picking up headphones, whether in-ears, over the ear supra-aural or surrounding the ear circumaurals, some of the things to check include fit, comfort, and isolation. If they don't block out ambient noise in a mall, they're not going to block the noise on your daily train commute.
4. Most audio equipment is littered with certifications. In fact, we won't be too surprised to find Dolby Digital on a vacuum cleaner too in the near future. Of these only some are relevant. THX for instance will give you a better performance for movie audio.

Ask

1. There's not really much you can ask when buying audio gear. One of the things however is warranty like all other categories.
2. Do ask the sales person to co-operate with your antics. For instance when you

turn up the volume all the way to the 80 per cent mark to check for distortion or when you put on a pair of headphones and jump up and down to check for the grip and fit.



Tablets are all the rage right now, and there's no stopping their invasion. With so many tablets launching from so many different brands, how do you go about buying the right tablet? Crucially, how do you differentiate between tablets that are really good and those that aren't so good?



How comfortable are you with the tablet? Check viewing angles, speaker volume, etc.

Research

1. Before you venture out, read online performance benchmarks of your prospective tablet purchase. Observe battery life figures, as that's one thing you won't be able to test in a mall.
2. Visit technology forums and find if there are any manufacturing defects with the tablet you're purchasing. For instance, the Google Nexus 7 everyone raved about had in-built speaker issues and screen lift-off, a common nuisance reported by several early adopters of the eagerly anticipated Google tablet.

Observe

1. Responsiveness: One great way of testing any touchscreen's UI (and also the underlying processor speed) is by rapidly flipping back and forth through the tablet's home screens. If there's any lag, you'll notice it here more than anywhere else.
2. Keypad test: If you're going to use a tablet for reading and responding to emails, make sure you thoroughly test out its keyboard. Typing with both hands while holding a 10-inch tablet, for example, can get a little dodgy at times. So yeah, convince yourself that you're comfortable with the keypad.
3. Screen under sunlight: This may not work indoors, but try convincing the mall attendant to accompany you outside so you could test the tablet's under ambient sunlight, and not just controlled artificial lights. In some malls you might be able to go near a window and test this out, in others, you may not be able to. Also, play a movie trailer on YouTube, specially one that has a lot of dark portions in it and then see how reflective the screen is. Make sure you check for reflections indoors without having any light source in the background.
4. Graphics: Test graphics by running GLBenchmark 2.1.5 through Google Play Store. Play a game such as Horn (http://dgit.in/SNpl9a). Of course, you'll need to have access to the Internet to do all this, so ask for it.
5. Is it the right screen size: If you're buying a tablet for reading ebooks, then ensure you hold it in one hand only and see if it fits well and doesn't feel too heavy. In our experience, 7-inch tablets are better for reading ebooks than 10-inch ones, purely because of the more manageable weight. An iPad is too heavy to hold in one hand for hours while you read a book.

Ask

Don't hesitate to ask if the tablet you're interested in purchasing comes with any freebies. A micro-SD card would be the most basic freebie that stores regularly offer, apart from screen covers and carry cases.



- Digi Power Design
- Dual-Stack MOSFET
- Premium Alloy Choke
- Multiple Filter Cap
- Twin-Power Cooling Heatsink
- 8 Layer PCB, 4 × 2oz Copper



Z77 OC Formula
Designed by World Overclocking Champion, Nick Shih
Nick Shih
ASRock



Seal that Deal

Deal sites are dime-a-dozen these days but what really goes on behind-the-scenes? Read on to find out

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We have all come across them at some point online. Popular dailies have them advertised everyday. Yes, we are talking about daily deals and group buying web sites which offer you discounts that will make your jaws drop. Of course there are e-commerce sites featuring deals of the day, but we are concerned only with deal sites. The discounts may at times seem unreal. So ever wondered how these web sites manage to get them in the first place and what goes on behind the scenes? We did too and will try to answer that very question in this article.

Humble beginnings

Group buying has its origins in the late 90s when Microsoft co-founder Paul Allen had created this site called Mercata.com. The web site, now dead, created a platform for buyers who wanted to shop for the same item. Provided there were enough buyers for that particular item, a discount would be negotiated with the site selling the item. But unfortunately for Mercata, it had to shut down by 2001. Halfway across the world, in China, a variation of this concept was in the works. This phenomenon called *Tuangou* (Chinese for team-buying or group-buying) was quite popular in China by the early 2000s. In chat rooms, like-minded consumers would decide to meet up at a physical retail store on a fixed date, at a fixed time, to buy an item at a discount. It was like an in-store flash-mob, where the consumers would mob the store to get discounts on the same item that everyone wanted to buy. Majority of the time, the consumers got what they wanted, as the seller was selling high volumes, although at slightly lesser margins. It was a win-win for both. Back in the early 2000s, there weren't many social networking tools at our disposal. But in this day and age, with the prevalence of Twitter, Facebook, Google+ and other sites, it is not hard to spread the word and deal-a-day sites which are mushrooming these days, have that advantage over a Mercata, back in the day.

What has changed?

Not much actually. Group-buying websites feature an offer – say 80 per cent off on a 3 days 4 nights travel package – but that offer will "tip" only when there are a minimum number of consumers (say 30) who want that discount. Tip in this scenario means that the deal will be activated only if there are over 30 people clicking "Buy" on that offer. Another variation of this is Deal-a-day sites, which have heavy discounts on various offerings, and which can be bought by individual consumers without having to wait for others to sign up.

That's the front end. What goes on behind the scenes is interesting.

Dealing out deals

"To source deals and offers we have a dedicated team which directly contacts the service provider. The whole process is similar to that of customer acquisition in any business. Initially the cost of acquiring a customer is high, however, if the business can retain the same customer it becomes a highly profitable customer over its lifetime," says Anurag Aggarwal, CEO of Khojguru.com.

Faisal Farooqui of Dealface.in, a daily deals site which only offers deals on services concurs. "Seventy per cent of the merchants that are listed on our site are those that we have approached, whereas the other 30 per cent have contacted us."

According to others, such as Groupon's Indian arm Crazeal's CEO, Ankur Warikoo, it is just another marketing platform for merchants, who would anyways spend that money on other media. "All our

merchants are used to traditional forms of marketing such as radio, print, outdoor, direct marketing. In all such cases, a cost is borne not knowing how much of it is going to come back. On our web site, merchants get access to millions of customers in a single day, at no cost. The cost is only borne per transaction – by which time the merchant has a guaranteed customer."

Selecting the right deals

Selecting the right kinds of deals is critical to keep the consumers happy. There is no point featuring a deal that will have no connect with the consumers. It is also very important to get the credentials of the merchant verified before putting up a deal on your site. "We have a strict evaluation process. We have a team of about seven people who evaluate every little detail of the offer and the service. We verify the merchant and verify that he is offering genuine services. There have been times, when our team has walked away due to inferior quality in services from certain merchants. Ultimately these are our customers, and we do not want them to have any bad experience," says Farooqui. Majority of the other players use a similar strategy, with over 50 per cent deals being decided after the site has personally approached the merchant.

The discount percentages on offer are decided upon after there has been a mutual back and forth between the deal site and the merchant. Crazeal makes use of Groupon's massive intellectual property on how deals should be structured. According to Warikoo there are three key things to consider: it should help solve a business problem for the merchant; pricing has to be attractive for the end consumer and capacity planning should be considered, so that the site does not end overselling an offer. "We do a stringent quality check where we experience the deal ourselves before offering the same to our consumers. As a matter of fact we often do ghost shopping just to evaluate the entire experience with the merchant," he says.

Farooqui has a team of specialists who know the industry benchmark costs of particular services. "Let's say you want to get a hair straightening done at an upmarket salon and it is priced at ₹2,000. Now we know that the actual cost to the merchant is ₹800, thanks to the experts in our company who have the knowledge of that particular market. So we negotiate for an offer of say ₹1,000. So the final pricing is arrived after a mutual consultation.

"Also deal web sites have data to backup their discount suggestions, so merchants have to take that into consideration as well."



"We try and do some analytics as to how many customers saw this deal, how many customers abandoned this card, how many went ahead with the transaction. And we have an algorithm which takes all this into account and then we decide which deals go on the front page"

– Faisal Farooqui
CEO, Dealface.in

Payments

Where deal sites are concerned, you are looking at two kinds of payments: Payments by the end consumer to the service provider and payments from the merchants to the deal site. Most of the sites do not charge customers to register.

"As far as Khojguru is concerned, the consumer does not have to pay anything upfront. The whole payment is made by the consumer to the service provider. We then collect our part from the service provider," says Aggarwal.

With other sites such as Dealface, it is the other way round. "As soon as you enter your card or banking details, you will immediately get a payment transaction confirmation. You will be charged. You will also get an SMS – an alphanumeric coupon. You show that to the merchant who will verify it, only then will there be a successful transaction," says Farooqui. So you do not have to pay the merchant.

Crazeal employs a similar pay-first model. It also assigns Partner Service Managers (PSM) to each merchant

Other options to find deals

Forum deals
Another interesting way to sell off products is via forums. Our very own Thinkdigit forum has a section called Bazaar where users can buy or sell products at discounted prices. While most of the time it is the users of the forums who put up sales, many a times, you will find product companies or distributors offering discounted sales provided a certain number of users show interest in buying the product.

Deal-site aggregator
Just like news aggregators, which basically drive traffic to the original source, there are deal-site aggregators as well. The funda of these sites is very simple: they will aggregate the best deals of that day and put them up on their site's front page. Some sites such as Desidime.com have a completely user-drive approach to such sites. "As it's a community based bargain hunting site, users post the best of deals in our forums. Other users vote and comment on such deals. The very best are suggested by the users as Front Page Deals by sending us an alert which is very transparent and visible to the entire community. Our team then reviews such deal alerts and cherry picks them and they get featured on our home page," says Jimish Jobanputra of Desidime.com. None of the payments happen on the site aggregator, instead users are directed to the actual deal site. The business model of such sites is based on performance marketing and they also help in negotiating exclusive deals for their entire community.



"We help businesses market their services/ products to a large audience, through a deal that runs for a short period of time, and only pay for the customer when he/she has bought the service or product. Not a penny before"

– Ankur Warikoo
CEO, Crazeal (India unit of Groupon)

who runs a deal with them. "Also each merchant gets a unique login to track the performance of the deal. At all times, the PSM works closely with the merchant to solve issues, help with payments, with customer queries, etc. The payments start from the day the deal goes live, based on customer redemptions," says Warikoo.

The pay-first model eliminates the issue of defaulters. On the contrary, if the deal is not honoured, most of the popular deals sites will offer a 100 per cent refund.

Location, location, location!

Group-buying and deal-a-day sites are quite hyper-local in nature. When you visit such sites, the first thing you will be asked for is an email address and the next will be your location. Once you enter the location, the emails you will get daily will pertain to discounts being offered for services and products in and around your region. Majority of these sites are currently operable in metro cities such as Mumbai, Delhi, Kolkata, Chennai, Hyderabad, Bangalore, Ahmedabad and so on. For services it is a straightforward reason – the vendors or service providers are in your locality. You cannot offer a discount in a Mumbai salon to a user in Nashik. Some of the web sites even break up these cities into regions. For instance we found some web sites which ask for location preference after the *Enter City* query. Say you want deals only from vendors or service providers based in South Mumbai, then that facility is also available. In the end it's all about location. So have deal-sites thought of entering the interiors of the country?

"I personally feel that there is very little volume outside the top 10 cities as far as local business listings is concerned. However, for an e-commerce vendor, there is a huge demand from Tier-II and III cities.

If you are looking at pure daily deal sites which provides services, you are restricted to top 10 cities. There are some players who are trying all the cities, but I really don't know what's their ROI on that," says Farooqui justifying Dealface's policy to concentrate only on city-based deals.



"We have already seen a lot of churn in the pure play group buying players. A lot of smaller companies have shut shop (the biggest casualty being Taggle). Many other popular group buying players are shifting their focus on products and e-retail, as they see a bigger opportunity there"

– Anurag Aggarwal
CEO, Khojguru Infotech Pvt. Ltd.

Read fine print carefully

A lot of the deals may come with certain terms and conditions, so you need to be aware of them before you buy the deal. For instance, we recently saw a deal online which said "Get a ₹600 discount voucher from Woodland for ₹99 which can be redeemed on their web site." So far so good. But when we read the terms and conditions, it clearly stated that the offer is valid ONLY on purchases above ₹2,500. So you will have to spend a minimum of ₹2,000 to get effectively ₹500 off.

It is very important to be aware of such fine prints before being impressed with the number of people buying that deal or the heavy-duty discount.

The future

This segment is red-hot at present and daily-deal sites comprise India's fastest growing web-vertical. According to comScore, the coupon business is 16.5 per cent of the total e-commerce business! There are many players in the market beating each other down when it comes to costs. But will such a model survive? What is the future for such sites?

Many established players foresee a lot of consolidation in the space. "In the last few months, various internet deal sites have either shut shops or have been acquired or altered their business model as they found their original deal model unsustainable. The number of serious deal sites in India has now come down to four or five, from around 40 in 2010," says Warikoo.

Farooqui, on the other hand feels that there will be a clear demarcation between deal-sites and product-based e-commerce sites. "With FDI coming in, it will be difficult for product-based e-commerce sites to deal with the likes of Amazon. But when it comes to stuff like a local salon or a local restaurant who want to promote their services, it is very well suited for us. Right now it is all hotch-potch. Having a get-rich-quick strategy in this field will not help anyone, those kind of players will likely get absorbed," says Farooqui.

Specialisation of deal-sites based on verticals – such as having dedicated site for travel packages or gadgets or spa visits and so on also looks bleak. Most of the sites we spoke did not foresee their site going extremely niche with verticals when offering deals.

Geek Gift Gallery

It's the season of festivities and gifts are a part of what makes it special. So here are some Digit favourites that you can gift her or him. Go ahead make someone's day!

Perzen Darukhanawalla
Anirudh Regidi
readersletters@thinkdigit.com



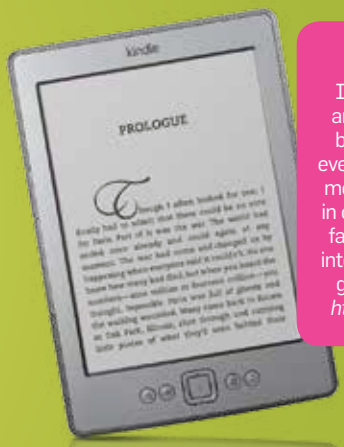
Valve: The complete collection
Valve has seen slavish fanboyism since the release of the original Half-Life back in 1998, and with good reason. Get HIM this complete pack of Valve games. He deserves it.
http://dgit.in/QcEqo9

₹ 5,400



Everpurse
Her smartphone is perpetually low on battery or on the verge of dying just when you want to borrow it for a game? Then, gift her this *KickStarter* hit - a purse that charges her phone while it's in her bag.
http://dgit.in/PV48vv

₹ 6,500



Kindle E-Reader
Is she a book-worm and must she carry a book in her handbag even when you go to the movies, you know, 'just in case'? Then, do her a favour by bringing her into the 21st century by getting her a Kindle.
http://dgit.in/ORNNLr

₹ 6,999



Paintball Gun
Boys like toys and a gun is possibly the best toy that you can gift him. A gun that is not lethal, but just about painful enough to be a whole lot of morbid fun. You can get the perfect paintball gun at the link below.
http://dgit.in/Spj092

₹ 4,000



iCubot
A really expensive speaker set for the audio quality on offer. But a psy-chedelic, dancing speaker set is just what he needs when he wants to listen to some music. Pricey? Sure. But it's not every day that you get to see a dancing robot speaker set!
http://dgit.in/UqFkLU

₹ 14,999



Babushka Doll Earphones
Give her a choice of girly head-phones to choose from such as ones that come with a cupcake, ladybird or a babushka doll on it. Not only will she get a second-glance with these but they can become the perfect accessories for when a bit of cheer is called for
http://dgit.in/P0uwSv

₹ 900

Chumbak Auto Laptop
Made from 100 per cent canvas and big enough to fit a 15-inch Macbook Pro, this bag has enough space for the laptop as well as other essentials. Get it from
http://dgit.in/PV5Wob

₹ 995





Segway i2
You can get a Hyundai Santro for that price but is it as cool? No! The Segway i2 is an uber-cool, must-have gadget that has been the stuff of geek dreamland for ages. Buy it now!
http://dgit.in/ROd4a3

₹ 4 Lacs



Nintendo Wii Console
She likes games and fitness and so do you? Well, perhaps you like the games a bit more. And here's a gift that can be hers but also yours too!
http://dgit.in/Q5CY3J

₹ 14,590



Charm Laptop Skin
Does your geek goddess carry around a laptop everywhere she goes? Now, help her jazz up her beloved device with a girly laptop skin. The Skin Mantra has a whole section of skins
http://dgit.in/PDd7Sj

₹ 400



iPanda Dock
Love music? How about an iPod docking station? This panda docking station is seriously cute and she will love to have it by her bedside. The speakers are supposedly positioned for maximum sound distribution.
http://dgit.in/NOFChp

₹ 9,100

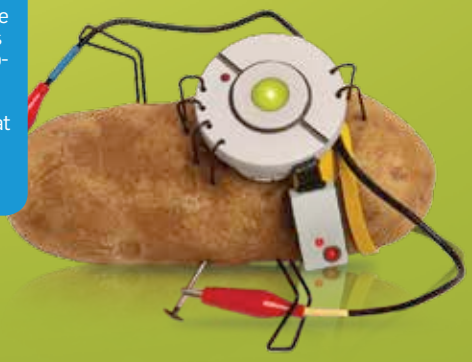


Razer Starcraft Bag
A perfect gift for the Starcraft fan. This weather-proof, heavy duty bag is just what he needs to store his precious gaming goodies. With a tear-resistant, ballistic nylon shell, this is one tough bag.
http://dgit.in/Qtd90J

₹ 4,400

PotatOS
This is one for the Portal fanboys out there. Your very own, life-size version of GLaDOS and she even talks and berates you via her tinny potato-powered speaker. The most perfect geeky replacement for Siri that can exist!
http://dgit.in/QtCAz5

₹ 1,000 + shipping



iPhone Bunny Rabbit Case
If the iPhone has become a part of her wardrobe and she buys covers for it at the same speed as she does handbags, then check out this Bunny Rabbit iPhone Cover.
http://dgit.in/UPKeoI

₹ 200





Don't swoon over the hundreds of deals, discounts, and offers this festive season. We reveal smart tips for buying products in eight of the most popular categories including our picks of what would be a smart buy

With the approach of the festival season, you will undoubtedly be flooded with advertisements that offer you deals that are almost too good to be true, and perhaps allow you to finally indulge yourself like never before. Now this is all well and good, why shouldn't you be able to buy yourself an HDTV even if you only have under ₹20K to spend? However, do you just buy based on the first decent looking deal you come across? We would urge you to be more discerning, because, well, it is your hard earned money that you're putting in, don't you think you deserve the best bang for your buck? The aim of the pages that follow is to help you Buy Smart, as our cover headline suggests. Whether it's false advertising, hypes that are not to be believed, to just good old fashioned technology gyaan, it's all here, and it's all designed to save you thousands of Rupees, and not to forget, will let you sleep peacefully at night!



The market today is flooded with a plethora of tablets and the price of these devices range from ₹5,000 for the budget devices all the way to ₹50,000 for the high-end ASUS Transformer Prime and the third generation iPad. So how do you decide which of these devices is the smartest buy for you? Well we break it down for you by giving details about the specs that matter and the specs that don't – things to consider before making your buying decision.

What matters?

The first question that you need to answer is whether you really need that tablet or not? Even in its third generation of devices, the tablet is still more of a novelty device than utility. If it's productivity you want, you will be able to get a lot more done using a laptop. Of course you can't really compare laptops to a tablet's portability and quick start up time and the ease with which you can connect to the net. However, if you're like every other Indian out there who needs to be able to do work on almost all his gadgets, the tablet's not there just yet.

If you have the cash to blow and want to do nothing more than email, social networking, games, multimedia and just the tiniest bit of productivity – say, viewing office files, or PDFs and such, then a tablet will do nicely indeed.

Display size

The display size of a tablet can be classified into large and small screens. The large screen tablets usually have a display close to 10-inches in size, for example ASUS' Transformer Prime, Samsung's Galaxy Note 800, the Apple's iPad, Micromax's Funbook Pro, etc. The small screen tablets usually have screens that are closer to the 7-inch mark. These include a wider range of products such as the Google Nexus 7, Samsung Galaxy Tab 2, Zync Z999 Plus, iberry Auxus AX02 and many more. Now the larger screens (10-inch) are ideal for video content. So that includes movies, games, even YouTube, or anything visual. However, this also means that your device is larger, and heavier, and carrying it about can be more painful. Also, no matter what the size of your hands, you will need both of them free to use it properly.

The smaller 7-inch form factor tablets are more suited for portability. of course, you could do that with your smartphone as well, but those usually come with much smaller screens.

Devices such as the Nexus 7, Kindle Fire, Samsung Galaxy Tab 2, and more, double up as really good e-book readers. also, after using these devices, we'd be lying if we said that the regular use of such gadgets is more about social networking and multimedia, and they beat smartphones hollow at that.

Storage space

Once you've decided on a screen size, the next thing to look at is how much you will need to carry around with you. given that a lot of tablets that people are drooling over do not offer memory card slots or any way of extending storage space, you're going to have to choose what's best for you. Starting at as little as 4GB (ridiculously low these days), and going up to 64GB and more, there are a wide range of choices made available to you. Now those with money to burn can just buy the maximum storage capacity available, but for the rest of us mere mortals, it comes down to what we can afford. If the tablet you've got your eye on offers expandable memory, you have nothing to worry about, except making sure the expandable memory type is something popular, easily available and cheap enough to afford.



Just as with monitors or TVs, for tablets as well, display sizes are measured diagonally, and these are the two most popular sizes

If you're buying a tablet to just surf, social network, install a few dozen apps, and watch a few SD videos, etc, then a tablet with 8GB of storage might suffice. We cannot in good conscience recommend any of the 4GB budget tabs unless they offer expandable memory, because just about any Digit reader is sure to fill up more than 4GB.

However, if you truly believe there's an app for everything, and are making it your life's goal to prove that fact – in other words, if you're app crazy, and want to try everything you come across – you're going to need more than 8GB of storage. This will keep on increasing depending on other habits, such as if you're buying a tablet to entertain you with movies that you, err, acquired legally, whilst travelling. If you're a gamer to boot, heck you're going to need to find a tablet with large internal memory, and perhaps one that offers external storage as well.

Devices such as the Galaxy Note 800 offer expandable memory up to 64GB via a microSD card, while most other tablets offer up to 32 GB. This is ideal.

Operating system

There are just two dominating OSes in the market today – iOS and Android. Windows 8 powered devices are expected to launch soon and BlackBerry devices are all but dead in the tablet space. iOS edges out Android in terms of apps available, but Android is more liberal, owing to the fact that it's open source.

Of course, this also means that although two people can buy similar specced tablets from different manufacturers, both running the same version of Android, but with very different user interfaces. This is something to be wary of when buying an Android device. You may have seen videos and read reviews of popular Android devices such as the Nexus 7, but when you go out and buy, say, a Samsung, you will find the interface is completely different. That's because Samsung devices are skinned with TouchWiz, and other tablets have different custom UIs. There are also a plethora of skins available to users via the Google Play store, so you can

change what you don't like. The OS also ties into the Apps eco system. If you are one who has an Android smartphone, then an Android tablet will do you good. If you are a Mac or iPhone user, then syncing your iPad with them will be easy.

Specifications

Single-core, dual-core or quad-core, doesn't really matter much unless you're running CPU intensive apps. What does matter, however, is the amount of RAM available. Ensure that you choose a tablet with at least 1GB of RAM to ensure a smooth experience.

Connectivity

If you don't plan on buying a SIM to depend on India's iffy 3G implementation, or don't want to pay the extra data costs, *and* if everywhere you go you get Wi-Fi access, don't pay extra for a 3G slot, the Wi-Fi only model will do.

However, if you just absolutely need to be online everywhere you go, you have no choice really. Some tablets such as the Samsung Galaxy Tab 2 also double up as a phone, and although not recommended, you could theoretically choose to use it as your primary cell phone as well.

Input and output

Devices such as the iPad and the Samsung Galaxy Note 800 come with their own proprietary dock connector. So if you want to use accessories, you will have to stick to a closed ecosystem. Some other tablets such as the Funbook Pro, Mercury MTab Neo 2, etc. support micro USB inputs and offer a native HDMI-out reducing the restriction to accessories and connectivity options.

Battery life

Go to www.thinkdigit.com and look at the tested battery life for the tablets you're considering. As for specs, make sure the battery is at least 4,000mAh for a 7-inch device.

Things that don't matter

Rear camera

If you're going to use a smartphone in conjunction with your tablet, just keep using that to shoot your pictures.

Preloaded apps

Chances are you're going to delete them all anyway. If they're good paid apps, you can maybe consider them, otherwise ignore.

Stylus

This is outdated. If you wanted to use a stylus instead of your fingers, you'd still be using PDAs.

Speaker

A tablet is a personal device and if you are consuming multimedia content on the go, you will undoubtedly be using headphones.

Recommendations

Well, if want the best in the market pick up the third generation iPad (64GB 4G+Wi-Fi at ₹50,900). It has very impressive specifications under the hood, has a fantastic display and battery life and an app ecosystem to keep you occupied for months on end. Simply put, it's the best tablet money can buy. If you are looking for something cheaper, the Nexus 7 (coming soon) or the Samsung Galaxy Tab 2 are the devices for you.

Both have 7-inch displays, great specifications under the hood and the Tab 2 also doubles up as a phone. If it's a budget tablet you want, a smart buy would be the Zync Z999 Plus. It has an average display and only 512MB of RAM, but still has the ability to run almost all the apps from the Play store. It also plays back 1080p video smoothly and has a SIM card slot.

DECISION TIME TABLETS

Windows 8 powered tablets are just around the corner and so far the word is that they are pretty impressive. If you are one who wants to weigh your options before you pick one up then wait for the Windows 8 devices to launch before making your final buying decision. If your last tablet purchase was up to 8 months ago, then you don't need to upgrade for the next 6 months at least. If however, you are one who has the first generation iPad, Samsung Galaxy Tab or the first gen budget tablets, then its time for you to pick up a new tablet.



Buying a smartphone isn't the simplest decision you will ever make. You need to be smart, considering the range, variety and the plethora of specs on offer.

7 things that should matter

Not everything that comes within the package should impact your buying decision. And this is particularly true when choosing between two phones that are very similar on the spec sheet as well as the price tag.

Display size and type

This is what defines how small/big or portable the phone will be, and also the comfort of using the on-screen keypad is pretty dependent on screen real estate. If you text or IM a lot, you will need at least a 4-inch display.

As far as the display type is concerned, you don't want to spend above ₹30,000 and still be stuck with a plain LCD/LED display, while the rivals are toting the S-LCD2's and the AMOLED family of displays. If you use your phone to watch movies, the colour depth and crispness should be of utmost priority.

Keypad

On-screen keypads are a bit like snowflakes – no phone manufacturers seem to have the same on-screen keypad on their devices. Hence, identifying the most comfortable one for you is all about checking out the devices in person. What also matters is how well the keyboard UI is designed.

Battery

With the processors becoming more and more powerful and adding on more and more cores, and the ever increasing display sizes, battery life does take a pounding. Which is why, batteries rated at 1750mAh, 1900mAh and even 2100mAh are becoming standard with smartphones. You will also need to figure out what you'll do with your phone, and



These days, buying a smartphone is not just about what features the phone offers, but also about what OS it's running

how stressful your usage pattern will be. These days, any Android phone that gives a battery backup of a day and a half is considered very good, and a day on a single charge is pretty much standard.

Storage

With the ever increasing app sizes and everyone clicking pictures and shooting videos, storage has a way of filling up fast. There are two distinct categories of phones out there, some have loads of internal storage space, but no expansion slot, and those that offer expansion. You need to find the balance, and think about how much space you'll need. By rule of thumb, sit down and calculate space based on your usage, and then double the storage (minimum) you think you need.

Operating system

The market is flooded with phones with a variety of OSes – Android Gingerbread, Android Ice Cream Sandwich, Android Jelly Bean, Apple's iOS6, Windows Phone, Blackberry OS and Symbian Belle. These OSes are available on phones spread across a variety of price points. However, variety is all well and good, but you need to make a serious decision about which one suits you best depending on the comfort level, and the features you may need. Each OS has its unique interface and user experience aspects, and it's very critical that it's exactly what you need. Also, if apps matter to you, do some homework and see whether your favourite apps are available on the platform/OS you are considering. Variety on the app stores does sway a lot of decisions, and you should consider the importance of the same. We suggest you don't fall for the glitter of a particular smartphone, before considering the software you will be interfacing with.

Service and support

This is a non-quantifiable aspect of buying a smartphone. We have no comparison tests to prove that the service of brand X is better than brand Y. It all depends on the type of problem with the device, and factors like the service centre location, attitude of the staff and even the availability of spares if needed. However, if you have been hearing bad feedback about a particular brand from friends and acquaintances, and the same results are mirrored online, it's better to stay away from such a brand. After all, a lot of people couldn't be wrong all the time.

Camera

This comes so far down this list because we believe it's relevant only to someone who needs the phone's camera quite often. Don't go by just the specs and megapixels, take test shots in good lighting conditions and also in not very brightly lit room. This will give you a fair idea of what the performance will be like. We have seen 8MP cameras on phones perform much better than 12MP cameras on other phones.

This should not matter...

Equally, we have a bunch of seemingly very critical things that should ideally not matter as much.

Quad-core processors

On paper, more cores may mean more fun bragging about your new phone at the next party. However, in terms of real life usage, we believe that the experience is what matters more. If you have a dual core phone equally capable of giving you a smooth and stable performance, why the need for more cores? Furthermore, there still aren't too many apps that will utilise the full capabilities of a quad-core processor.

DECISION TIME SMARTPHONE

There never really is a perfect time to buy any gadget, let alone a smartphone. Buy a flagship device today, and the successor will hit the stores within the next 6 to 8 months. And most likely with a slightly higher price tag. Unless you want to be a part of that vicious circle, you will be better off not thinking about what's new, and being smart and considering what suits you best. Also, keep some hardware headroom in terms of future proofing. Usually, no matter what price you may have in mind, you will get a considerable upgrade (hardware or software, either one) within another ₹2,500 to ₹3,500. But do buy smart, because it is the experience that matters when using the phone day in and day out, and not what it said on the spec sheet before you purchase it.

ASUS Optical Drive
A Green Environment for now and the Future
E-Green
E-Green Engine Technology automatically optimizes drives' power consumption.
E-Green displays detailed information on power saved and CO_2 reduced by using the ASUS drive.
SDRW-08D2S-U LITE
External Slim DVD Drive
DRW-24B5ST
Internal DVD Drive
ASUS
Inspiring Innovation • Persistent Perfection
* Conditions Apply | All Specifications are subject to change without notice. Product availability may vary by region.
ASUS - No.1 in Quality and Services - The Wall Street Journal Asia
www.asus.in | Toll Free No. 1800-2090-365 | For Feedback Email reachus@asus.com or Log on to www.asusservice.com

Popularity

It makes no sense to buy a phone just because 2 million people have pre-ordered it in a few hours. If most of your friends are on Blackberry Messenger, you might as well consider a BlackBerry, if the idea is to be in touch with friends 24x7. The same holds true for iMessage or FaceTime for the iPhone. These are just examples of how you need to understand which phone/platform will suit you best.

Recommendations

Apple iPhone 4S

At the time of writing this, the iPhone 5 has not been announced in India, which is why the 4S is still the top of the line iPhone retailing in the country. Still pretty much the second-in-command benchmark, and has competed successfully with even the most powerful Android phones.

Samsung Galaxy SIII

Arguably the most powerful Android phone money can buy. Need we say more? Well, all the rubbish about pentile displays doesn't bother us – this one is vivid, crisp, bright and not very reflective. Quite well-built too, and the battery life of a day-and-a-half to two days is excellent.

Sony Xperia S

This is retailing for around ₹28,000, and has been updated to Android ICS. The build quality is excellent, and various design elements do well to make this stand out in a crowd. We've seen very good performance from this dual-core phone, and the battery life has been improved with the new OS.



The buying season is upon us and the market is being flooded with deals. Now would be a good time to consider upgrading your trusted camera, whether it's a point and shoot or your DSLR. If it's something you're already considering, let us help you pick the right piece of equipment that justifies the money you spend on it.

Stuff that matters

Focal length and zoom

There are a few features that make your camera a good investment. The first is the focal length, or simply put, how wide and far the camera lens can see. However, advertising focuses on zoom ratings more, and this is rated as a number followed by an X, such as 4X or 10X or 40X, etc. A higher "X" number doesn't make the lens better, as this number is attained by dividing the farthest your lens can go by the widest it can see. So a 25-250mm lens rates at 10x and so does a lens that goes from 20-200mm. When looking at a camera, consider a lens that has a lower starting number. 24mm is ideal, but the lower the better.

Aperture

Another aspect of the lens that generally goes completely ignored is the aperture. A smaller aperture number means that the lens can gather more light. The smaller this number, the better the camera will do in low light. Now there are quite a few point and shoots out there that have aperture number of f/2.8 or lower, but that number changes as you zoom farther through the focal range. So the best lens would be one which maintains a small aperture number even when zoomed in all the way. So, when you see f/1.8-5.6 against f/1.8-2.5, know that the former won't do so well in low light when you're zoomed in, but the latter will. So the smart thing would be to get a camera with a fast minimum aperture on one end, but it would be ways smarter to get one with low aperture on both ends of the focal length.

Sensor

The third important thing to look into is the sensor. Now traditionally, we'd say that anything above 12-14 megapixels isn't adding any value to your image quality, but things have changed greatly in the last few years. Now we have something known as Back-Side Illuminated (BSI) sensors, which, by virtue of their design, are better at keeping noise at bay, therefore allowing better low light performance and the ability to pack in more megapixels without compromising quality. So if your camera has a BSI sensor, you should be set.

Format

Since this is all about image quality, cameras that record photographs in their RAW formats (instead of just JPG) would definitely be on the top of our to buy list.

Battery

The last, but equally important thing about camera specifications you should keep an eye out for is the battery capacity. There is nothing worse than being at an important event, trying to capture the moment and watching your camera battery die. Well, running out of room on your memory card could be worse, but the battery thing is pretty infuriating too. While the battery life shouldn't be the deciding factor in your final choice of camera (the images matter more), the smart thing would be to pick up a pair of extra batteries and keep them charged at all times.

The not-so-important stuff

Pixels

If a sales person says "Sir! This camera has more pixels, so it's better", start backing away slowly, and make no sudden movements, this breed is known to attack! Even with BSI sensors, a higher pixel count stops to matter. If you're a pixel-peeper, then you're probably looking at a full frame DSLR, but if point-and-shoots are your realm, then anything between 12-18 megapixels is just fine. Even big prints can be made from this pixel count. So buy smart and don't shell out extra money for a high megapixel camera, or worse, shell choose a camera that lacks the important stuff, but has a larger pixel count.

DECISION TIME CAMERAS

The urge to splurge on new gadgets is understandable, but often not justified. So if you're caught in the conundrum of whether you should shell out that hard earned cash on a new camera, we'll make it easy for you. If you bought your camera in the last one year, and it was the newest model at the time, then you don't need to upgrade. If you bought your equipment two years ago (new at the time), then upgrading at this moment is more a matter of whether you can afford the luxury or not. If your camera is three years or older, then this Diwali might be a good time to upgrade.



Remember to use a camera first to see if you like the controls, how it sits in your hands, and also see if you're comfortable with the weight

GPS

Speaking of things of no importance, cameras nowadays are coming with built-in GPS capabilities. To clarify, no, these will not get you from point A to point B. There are not navigation capable in any way.

What these built-in GPS chips do is tag the photo you've just shot with the location information. Sounds great but we see two problems with that; 1) *You* are *at* the location, right? do you really need a camera to tell you where you are?, and 2) Privacy concerns.

A photo taken inside your home will also get tagged with the location information, and if you post it online without removing these, people now know exactly where you live.

We say save the money and get the non-GPS version of the camera you might be eyeing.

Smile detection

We're also wary of those "smile-and-face-detect" focusing systems as we've seen that they tend to grab the wrong subject almost as often as they lock focus on the right one. The focusing on cameras nowadays is good enough to be able to lock onto the subject quite intelligently so anything more than that is just unnecessary fluff.

Scene modes

Last but not least, cameras with a million and a half scene modes add nothing really essential to the image. Earlier, cameras shipped with just a handful of these scene modes, which were quite useful such as low light, portrait and landscape scenes. However, now we have so many modes which are just a spinoff on the original few. Instead of going for so many scene modes, we say the smart thing to do would be to pick up a camera that allows shooting in manual mode.

Recommendations

There's so many cameras out there (and so many more to come) that we find it a little difficult to make recommendations. Regardless, here are the three cameras we think are most bang for your buck.

Canon SX240 HS (₹17,995)

The winner of our travel zoom shootout, the SX240 HS is an excellent performer with a modest focal length. The battery on it lasts quite a while too.

Sony HX20V (₹19,500)

This camera has given solid competition to the Canon SX240 HS and is about the same price and delivers the same performance. The camera is also built quite well, so there won't be any need to handle the camera like a delicate doll.

Sony RX100 (₹34,990)

The big game changer from Sony, the RX100 features not only a bigger sensor (a 1-inch sensor), but also bigger individual pixels on the sensor itself. All that spells out is better image quality and much better low light performance. Then there is also the fast aperture f/1.8 lens. Definitely more expensive than the rest, but the features on this little camera justify it completely.

Do not think we've forgotten about the enthusiasts looking to go pro. We also have some DSLR recommendations from our extensive testing.

Entry Level: Nikon 3200 (₹48,950)

Nikon's entry-level contender, the D3200 has a 12 megapixel sensor that is very capable when it comes to capturing dynamic range and contrast. It's compact, lightweight and doesn't compromise on features or quality.



Semi-Professional: Canon 7D (₹87,995)

Making its foray into the market as far back as 2009, the Canon 7D is a camera that shares its DNA with the professional 1D series. It's blazingly fast, capable of shooting 8 fps and boasts a 19 point AF system that is capable of keeping up with almost anything. It's also weather sealed.

Professional: Canon 5D MarkIII (₹2,06,995)

The winner of our DSLR shootout, the Canon 5D MarkIII comes with an exorbitant price tag which is easily justified by how much power is packed into this elegant magnesium alloy shell. 22 megapixels on a full frame sensor and a 61 point AF system right out of the 1Dx make this camera excellent not just for the studio, but also for outdoor and sports work.



If you have been following laptops closely in the past six months, the word 'Ultrabook' isn't new. It's just a buzzword for thin, light, long lasting batteries, and not compromising on performance – or basically what laptops should have been all along. Our guess is that a lot of you are going to go out looking to get one pretty soon, and thus the need for this guide. We must say that we're quite impressed by the overall capability of most Ultrabooks we tested, running on Intel's Core i5 or Core i7 processor, they could easily match and, in some cases, surpass the performance offered by a 15-inch entertainment laptop.

Specs that matter

CPUs

Almost all Ultrabooks we've seen so far either sport Intel Core i5 or i7 processors. Needless to say, these processors are quite powerful and are able to handle every-day apps and multi-tasking quite easily. They also provide very good HD 1080p video decoding for smooth movie playback. Even if you come across low-powered Core i3 processor-based Ultrabooks up for grabs, whether you're a student, professional or home user, it ought to be powerful enough to take on anything you throw at it (apart from gaming). It will function just like a regular laptop, and it will probably perform better and the battery will last longer!



Ultrabooks are ultra-light, ultra-sleek, and offer great battery life

Storage

Higher-capacity hard drives (750GB and above) are rare on mainstream laptops because they're expensive – but we've seen the Samsung Series 5 Ultrabook come equipped with a whopping 1TB internal hard drive. However, most Ultrabooks offer between 320GB to 500GB of storage, if they come with an internal mechanical hard drive. For Ultrabooks that sport a faster SSD, current norms dictate disk capacity between 128GB to 256GB. If you're contemplating an Ultrabook purchase, understand one thing. To gain higher performance, an SSD completes the 'holy triumvirate of performance' when paired with a high-speed processor and fast RAM. If these three things are high-performing, your machine will be high-performing. For users who don't want their Ultrabooks to break performance records, you're much better off opting for an internal hard drive as a storage option. And guess what? That decision will help you save a few thousand rupees easily.

GPU

Should you buy an Ultrabook with on-board graphics or should you shell out a bit extra for that other Ultrabook which has the cool new GPU that everyone's raving about? It's an important buying decision, considering which direction you choose, for it has long-term implications on your Ultrabook's usefulness. NVIDIA and AMD recently released their GeForce 600M and 7000M mobility GPUs, respectively, for use in modern Ultrabooks and laptops. Both manufacturers are extremely competent and both have their pros and cons. But one thing's for sure. If you have intentions of gaming with the latest games on your brand new Ultrabook, definitely opt for one that has either NVIDIA or AMD graphics. If you aren't so enthusiastic about gaming, rest assured that the on-board Intel graphics is more than sufficient for your use.

Screen

It's commendable that screen sizes are getting bigger with Ultrabooks; but disappointing that display resolutions aren't. Everyone seems to have accepted that 1366x768 pixel resolution is good enough, except a few manufacturers that pack higher pixels-per-inch (1600x900) compared to any other Ultrabook with a similar form factor (13-inch). At least for 14 and 15-inch Ultrabooks, the industry should consider introducing higher-resolution displays. We highly recommend getting a first-hand experience of your future Ultrabook's screen quality – pay attention

to viewing angles, brightness, contrast, and richness of colours being displayed. Almost all Ultrabook displays are glossy in nature, but if you manage to find one that has an anti-glare coating, there's nothing like it.

Build quality and design

Most Ultrabooks we've reviewed and tested are of good build quality – the best ones among them are Ultrabooks offered by Lenovo and Dell. An important difference between Ultrabooks and regular laptops is the Ultrabook's sealed battery compartment, which helps reduce weight and removable parts, therefore strengthening the product's core. Again we advice going to a retailer and trying out the Ultrabook's build quality – keyboard design, touchpad, hinge placement, screen flex, palmrest comfiness, etc – before investing your money.

Connectivity options

Remember that Ultrabooks are slimmer, trimmer and lighter versions of regular laptops, in terms of form factor. When you walk that path of cutting down excess, many compromises have to be made regarding components and what goes inside the basic building blocks of a successful Ultrabook. But, worry not, for most Ultrabooks that we've seen don't cut down on the type of connectivity option but on their number. For example, a 15-inch mainstream laptop may come with four USB 3.0 ports, but a space-starved Ultrabook may have only one or two of those ports.

Stuff that doesn't matter

RAM

Among all the Ultrabooks launched thus far, we've seen a minimum of 4GB DDR3 RAM (clocked at 1333 MHz) as a standard. This is a good starting point to make the Ultrabook capable of handling almost all everyday tasks without a hitch. Therefore, if you like an Ultrabook's specs but think the bundled RAM is too low, still buy the same Ultrabook model and update its RAM yourself later.

Operating System

Currently, all the Ultrabooks sold in the market come with a flavour of Windows 7 installed on it. Should you delay your Ultrabook buying decision just because Windows 8 hasn't arrived? Definitely not, since all Ultrabooks launched after June 1 are entitled to an upgrade from their existing Windows 7 operating system to the upcoming Windows 8 operating system for a nominal fee of just ₹699, according to Microsoft India. This program will be available till the end of January, 2013. So yes, buy a Windows 7-enabled Ultrabook now and rest assured with the knowledge that your purchase won't be "outdated" any time soon, as far as Windows is concerned.

Onboard sound

Thin laptops (which is what Ultrabooks are) struggle at reproducing quality sound from their tiny speakers. Manufacturers may tout whatever special audio features, but remember that all that doesn't matter when you listen to an Ultrabook's on-board speaker sound. Connecting external speakers helps, but don't buy an Ultrabook for its on-board sound alone.

Recommendations:

Our Ultrabook recommendations are based on Intel's Ivy Bridge architecture. Of all the Ultrabooks we've tested so far, the Dell XPS 14, HP Envy 4-1002tx and Samsung Series 5 are three of the best Ultrabooks out currently available. The Dell XPS 14 is the most premium of the lot, while the HP Envy 4 has a build that is much better than what one expects at its price of ₹56,000.

DECISION TIME ULTRABOOKS

Manufacturers are trying to extract higher profit margins by selling them at the price of a high-end mainstream laptop -- between ₹50,000 to ₹1,00,000. But if past trends are any indication, as more manufacturers flood the market with plenty of Ultrabook offerings, and as the volume of their sales pick up, their costs will automatically go down. And that's starting to happen. Three months ago would've been too early, but now is the right time to buy an Ultrabook, so go ahead full steam.



External drives are a great way to have more portable storage. Nowadays thanks to HD media players, external drives are also a good way to store media files and play them off of your HDTVs. While we have done an

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F501A-XX187R White
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• Genuine Windows® 7 Home Basic
• 39.6cms (15.6) HD Glare
• 4 GB DDR3 1600
• 500 GB 5400rpm
• Bag
• 1 year Global On-site* Warranty
MRP ₹35,999/-
ASUS recommends Windows® 7.
www.asus.in
Toll Free No.: 1800-2090-365
*Applicable on selected cities

external drives comparison test this month, we also thought it was pertinent for you to know what to look for when buying an external drive.

Specs that matter

Capacity

Well, there is no such thing as enough capacity. The digital hoarders that we all are, we always need more space to store our photographs, that vacation video, those HD movies and so on. So you need to decide for yourself how much capacity will be ideal for you. If you just want to store photographs and music, we feel a 500GB drive is more than enough. If you want to store photos, music, movies, games, then look at a 1TB drive at the very least. But then one day you will eventually run out of whatever capacity you buy today.

Interface

This may have been a critical question a couple of years back for Windows users, but now it's a no-brainer. USB 3.0 drives are the way to go. Most of the laptops and motherboards these days come with a USB 3.0 port and it offers a significant speed bump over USB 2.0 drives. What's more, USB 3.0 is backwards compatible with USB 2.0, so fret not if you do not have a USB 3.0 port currently, the USB 3.0 drives will work fine with USB 2.0 ports as well. For those using older systems, USB 3.0 drives are a means of future proofing. For Apple users however, if you are not using the 2012 line of MacBook Pros and the MacBook Air then you will not find a USB 3.0 port. For such devices, if you want to go faster than the USB 2.0 standard, opt for a drive with a FireWire 800 interface. These days you are also getting a lot of drives with a Thunderbolt interface, but they are really expensive.

Portable or powered?

Portable drives are those that do not require a power supply whereas powered drives house a 3.5-inch drive which require external power. So when should one opt for which? If you are the kind who likes to carry data around, are a sucker for compactness, then the portable drive is the way to go. And with capacities going upto 2 TB there is enough space for all your needs. Powered drives offer a much more economical cost per GB as compared to portable drives. They are comparatively bulky and require a constant power supply to work. These kinds of drives are ideal if you are not going to move the drive around. If you want a drive that will sit alongside your computer, or a drive to backup the data on your system externally, then opt for a powered drive.

Rugged drives

These kinds of drives are quite easy to recognise. They will most probably have a rubber casing, with the USB ports sealed from the environment. The drive within is not only water resistant but also capable of surviving falls, as it has shock absorbers which prevent the drive from getting damaged. These kinds of drives are ideal for people who will be accessing their drives outdoors. Also if you have buttery fingers, then don't bother going for drives with a glossy finish, opt for one with a rubber casing. These drives are priced at a slight premium which is understandable.

NAS drives

If you are a household where you have a desktop, a couple of laptops, a tablet and some smartphones, basically multiple devices, it makes sense to go for a NAS drive. A NAS drive or Network Attached Storage drive basically connects to your router and users can access data on that drive via the wireless or wired network. So instead of having to pass around the external drive with your movies around the house, you can store it all on one drive and many users can access that drive at the same time. You get capacities as high as 4TB in the NAS segment.

DECISION TIME SSDS

If you are considering upgrading your system in the mid-range budget, give SSDs a thought. If you are not going to use any heavy applications or are not so concerned with speedy access, then opt instead for a good 7200 RPM drive. Of course, that is no match for an SSD, but if you do not need that kind of speed then avoid the SSD.

If you have a lot of games and are tired of waiting for them to load, get an SSD and see the improvement in speeds. An ideal system should have an SSD+HDD combination with the SSD having the OS and a couple of heavy applications (which take ages to load on an HDD) and an HDD for storing your data. Don't contemplate an SSD if all you want is more capacity. SSDs are meant to improve your overall system performance and are not ideal to be used as storage drives.

NAND memory prices are expected to come down by the end of the year - which will make SSDs cheaper. So keep an eye on the prices and if you can, postpone your SSD buying till the end of the year.

Utilities to consider

A lot of drives these days come with a lot of utilities bundled with the drive. The very least you should expect are backup and encryption utilities. Backup is necessary to have a copy of your data, you can schedule backups and so on. It's best to use the Sync option, so that whenever you update something on your system it will get synced with your external drive. Encryption of data helps keep it secure.

Length of interface wire

Make sure the length of the interfacing wire is respectable enough. There are some drives which come with the interface



When it comes to external hard drives, make sure you get USB 3.0 interface drives, even if you don't have the connector. Future-proofing is the smartest way to buy

wire (USB 2.0 / USB 3.0) attached to the drive. These drives can get a bit uneasy to use. Always make sure that the interface wire is separate from the drive body.

Specs that don't matter

Speed

Only if you are looking at high capacity drives, there is no point looking at the speeds. So long as the external drive houses even a 5400 RPM drive, you are good to go.

Cloud Storage

While a good feature to have, this should not be a criterion for selecting an external drive. You have your Dropboxes and Google Drives of the world for cloud storage.

Recommendations

Very high capacity

There are a lot of 3 TB drives on the market. We personally like the Seagate Backup Plus which along with decent speeds and economical cost per GB, also gives you the option to backup your data from social networking sites such as Facebook, Flickr and YouTube.

NAS Drive

The Western Digital 4 TB drive is the one you should be looking at if you want a huge capacity NAS drive. It has two, 2 TB drives which come in a RAID 0 configuration by default. The Seagate Satellite drive is another interesting option, which houses a Wi-Fi radio within it and can be used as extended storage for your tablets and smartphones. Using an app, content from the Seagate Satellite can be accessed by your mobile devices.

High-speed drives

The Hitachi Mobile Touro drives sport 7200 RPM internal drives, so they offer fabulous speeds when compared with their counterparts. These drives are ideal for professionals who value speed over capacity.



Solid State Drives (SSD) have become quite popular these days with system builders, thanks to their extremely fast access times and brilliant transfer speeds. Pairing a low capacity SSD with a high capacity HDD is something that is being seen quite often these days. So you have your operating system and some heavy applications such as Photoshop on the SSD and other data on the slower HDD. This makes the system run faster and heavy programs load faster. So what are the points to be considered before getting an SSD? Read on...

Specs that matter

Usage

This is one of the main reasons to ponder over before making that SSD purchase. Are you looking for just a boot drive or a boot drive with enough space for storing your most frequently used programs or the SSD will be the only drive in your system? Once you are decided on this, then things become easier. Also keep in mind your budget. SSDs these days start from as low as ₹4,000 and can go all the way well over the mid-range PC-rig budget. Lower capacity will not necessarily mean lower prices as many SSD manufacturers have a series of SSDs for different categories of users.

Controller support

Controllers are the hearts of SSDs which are otherwise just a collection of flash NAND memories. It's the SSD controller which decides which data goes where and how to optimally access data from various NAND memory chips. Last year and over the major portion of this year, we saw the majority of SSD makers opting for the SandForce based controllers, which gave great speeds. In the coming months, there will be many more controllers which will see the light of the day. It's pertinent for you to check which controller your drive will support before getting the drive. Read up on that particular controller. You do not want to spend money on an SSD drive just to realise that it has some crappy controller which will not give optimum performance. The SandForce SF2281 controller is quite the popular controller. But two SSDs with this same controller may give a different performance.

Types of memory

The NAND memory chips that you see on SSDs can be of three types: Synchronous, Asynchronous and Toggle mode NAND. From a consumer's perspective, asynchronous NAND memory is the comparatively cheaper memory as compared to the more expensive synchronous memory.

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Bigger touchpad for intuitive multi-gesture
F501A-XX187R White
• Intel® Core™ i3-2350M (2.3G,3M)
• Genuine Windows® 7 Home Basic
• 39.6cms (15.6) HD Glare
• 4 GB DDR3 1600
• 500 GB 5400rpm
• Bag
• 1 year Global On-site* Warranty
MRP ₹35,999/-
ASUS recommends Windows® 7.
www.asus.in
Toll Free No.: 1800-2090-365
*Applicable on selected cities

Synchronous memory will be faster than asynchronous memory in operations such as Windows startup, Photoshop image loading, gaming, uncompressed file copying. Toggle NAND memory is somewhere in between offering the cost benefits of the asynchronous memory with the performance benefits of synchronous memory.

Native garbage collection and TRIM support

It's a thumb rule that flash memory degrades over time. There is only a limited number of write cycles it can bear. A flash memory cell has large memory areas called 'blocks' which are made up of smaller memory chunks called 'pages'. Data is written in pages. So long as the pages in a flash memory are empty, there is no issue with adding data. But once the flash memory cell is full with data and you want to add more data, then it can get tricky, as data is not deleted page-wise, but block-wise. Whenever data needs to be written to a page, the entire block is written instead of just the particular page due to hardware limitations. So whatever data already exists needs to be stored in a temporary cache before it can be rearranged and then re-written onto the block. The maintenance of data involves two aspects, TRIM and garbage collection. A garbage collector is basically a dump for unwanted data. And data is termed/flagged unwanted by the controller is marked using the TRIM command. So with the use of both, the number of write cycles are effectively reduced, thus, increasing the SSD's life. TRIM is natively supported in Windows 7 and the latest Mac OS X iteration, but older versions of Windows such as XP and Vista do not, so make sure if you are on older systems, get a drive which supports native garbage collection. All new SSD support TRIM however, older gen SSDs which do not support TRIM are still available on the market so research well.

Size matters

Check out benchmarks and find one which matches your set of applications to figure out which SSD is best suited for your needs. For most users this will not make any difference, but we know our audience happens to consist of some ultra-geeks for whom every MB/s matters. There are various form factors available. The most common is 2.5-inch, followed by the 1.8-inch SSD which in turn is suited for more compact configurations. Also, certain motherboards come with mSATA slots for making use of Intel's RST(Rapid Storage Technology). 60GB SSDs are best suited for this use, anything above is overkill.

Specs that don't

External casing

Many SSDs these days come with an SSD bracket, but an SSD-purchase decision should not hinge on this aspect. However, it's good to have.

Looks

SSDs will be placed inside your system, so external bright or metallic paints matter little. It's what inside that matters.

Recommendations

Corsair Force GS 240GB

This SSD sports toggle-mode NAND chip, which offers blazing speeds at the same time keeping the costs lower. We found the cost per GB to be lower than its Force GT drive and at a much better performance.

Kingston HyperX 120 GB

If you want a speedy SSD with quality components. Real life sequential tests easily crossed 200 MB/s whereas random operations were over 150 MB/s. Priced around ₹14,000 this drive makes sense if you are looking at for a drive to hold your OS as well as a couple of heavy applications and a game.

Crucial m4

One of the early entrants in the SSD market, the Crucial m4 series have only recently arrived in the Indian market. They offer great all-round performance.

Samsung 830 Series

Samsung has sent shivers down their competitor's spines with the 830 series. Also, since Samsung happens to be one of the major NAND chip makers globally, they have a home field advantage.

Intel 520 Series

If long term stability akin to enterprise offerings is something that you are interested in then the Intel 520 Series is the way to go. Recent price drops have made this a much more attractive purchase.

OCZ Agility

If massive amounts of storage at low cost is what you desire then you can opt for OCZ's agility series which provides the same while giving above average performance.

OCZ RevoDrive / Intel 910 Series

This is for people with deep pockets. PCI-e SSDs offer performance like no other, the sheer performance of PCI-e SSDs can only be matched if you have multiple 2.5-inch in RAID 0 off an enterprise RAID card.



When it comes to game consoles, you only have 3 devices to actually choose from, the XBOX360, PlayStation 3(PS3) and the Nintendo Wii; but the experience on each is worlds apart. How will you decide on which one to buy? Ideally, if you're a gamer, and you have the money and the time, we would say buy them all! They're all equally good and deciding between them is quite a difficult task. It's like trying to choose between a bike, car and SUV; they're entirely different beasts but essentially allow you to get from point A to B, but the experience and capabilities vary and in the end, it all boils down to your preference.

Stuff that matters

Games

First, let's talk about the games. The XBox 360 has some incredible exclusives such as Halo, Gears of War, Fable, etc. but then the PS3 has amazing exclusives such as GranTurismo, Metal Gear Solid, Uncharted, etc.; the Wii? Super Mario, Wii Fit and many more interesting titles. If you really have to pick one exclusively for gaming, it's best to go through the entire list of titles and see if anything specific appeals to you. Most of the popular games are available on both the XBox and PS3,



Gaming consoles are an essential part of your entertainment system these days

but very rarely on the Wii. On the other hand, the games available on the Wii will provide you with a gaming experience that is quite unique (or was till the motion controllers for the other consoles came out) and the games can be a lot of fun.

Multiplayer

Coming to the multiplayer aspect, there is a lot of rivalry here as well. While PSN does offer you a lot of features for free that come at a premium on XBox Live, the service is crippled in terms of its social aspect. That said, paying for a PSN subscription will give you considerably less value than if you pay for an XBox Live gold membership. Both services net you free games and access to Netflix and such (not relevant in India at the moment). The Wii is way behind in terms of a meaningful online experience, but then that is not the USP of the console in the first place.

Home entertainment

What about a complete home entertainment centre?
This is again a point of contention between the Xbox 360 and PS3. The PS3 offers you Blu-ray support out- of-the-box, and gives you a 1080p, 3D output. The Xbox 360 did get 3D support later, but it doesn't come with a Blu-ray drive. The Wii is worst off here, not supporting DVDs and only having support for SDcards and videos.

The Xbox 360 (if you bought the version that supports it) and PS3 have in-built HDDs and support a few popular formats; they can also access supported NAS drives.

Interface

If we're to consider the interface and the movie watching experience in general, the novel experience offered by the Kinect on the Xbox 360 is something that might appeal to a lot of people. The new dashboard with voice and gesture support can be a lot of fun to use, especially as you don't need a remote-control to take advantage of it. The PS3's interface isn't bad either, but it doesn't compare to the Xbox 360 in terms of its novelty and maybe even ease-of-use.

Motion controllers

The 3 consoles mentioned here all have support for motion-sensor based gaming of one form or the other. Which one is better depends on how you like to play, though the Kinect sensor for the XBOX360 has taken quite a lead in terms of its popularity, acceptance and versatility.

Stuff that doesn't matter

Some stores will advertise Netflix and Hulu support, etc. as advantages but the fact of the matter is that there is actually no proper support for those services in India.

Another aspect to consider is the hard disk. Both the PS3 and XBOX360 come with options for the inbuilt hard disk and if all you're looking for is extra storage for movies and photos, don't shell out more for the higher capacity drives. You can very easily buy external HDDs, format them in FAT32 and use them with your console at a fraction of the cost of getting an updated HDD (in terms of the price per GB).

Recommendations

If your primary focus is on gaming, choosing the right console depends almost entirely on what games you want to play. For movies and media, it's a tie between the Xbox 360 and PS3. The PS3 gives you Blu-ray and full HD, but despite lacking HD support, the Xbox 360 gives you a unique experience with the Kinect kit, that and a promise of tight integration with Windows 8 based devices in the future. The Wii was very popular but its popularity has waned over the years. It's still a very good device and perfect if you're looking for fun, family-friendly games, especially for kids.

As far as hand-held consoles go, your best (and only) option is the PS Vita. At a cost of almost ₹20,000, almost as much as a proper console, but the device is powerful and if you already own the PS3, an ideal companion.



The vast segment of graphics cards undergoes an upheaval every year with an entire family of cards being released by both competitors gradually through the year. This year we saw the NVIDIA 600 series and the AMD 7000 series being launched with some offerings of either series yet to release. In such an ever-changing market the best buy keeps on changing and we are gonna help you figure out what suits your purpose the best.

When talking about technology, nearly all the numbers matter but we will break it down into stuff that you need to be concerned about and things that you can let go of. Depending upon your usage you'll need to choose between Desktop graphics or Workstation graphics.
The current choices are -

Desktop: NVIDIA: GeForce - Gaming | AMD: Radeon - Gaming
Workstation: NVIDIA: Quadro - Design; Tesla - Computation | AMD - FirePro; Design and computation

Specifications that matter

Both competitors have some impressive proprietary technologies which bring out all the shiny goodness while playing games to boast of. Though these cards are not well suited for heavy computation loads they are capable of crunching out some great numbers occasionally. So if you are primarily a gamer then the desktop series are what you need to consider.

There are games that favour one particular manufacturer and the games look stunning on them, while on the competitor's card they do look great but the stark difference is clearly noticeable. This in turn doesn't mean that you should end up buying cards from both manufacturers and plug in whichever renders the game best (though there are people who do that).

Now here, greater the number, better the performance unless that parameter is temperature.

Core frequency/base frequency

This is the speed at which the GPU card runs, the higher this number, the more powerful the card will be and subsequently more is the heat that will be generated.

Memory type

Almost all cards today use GDDR5 type memory but there are variants that are rebranded GPUs of previous generations that still use DDR3 memory and are thus, slower.

However, the older GPUs were only capable of handling so much and it's only the newer cards which are capable of utilising the bandwidth that comes with GDDR5.

DirectX and OpenGL support

If you are into playing a lot of games then knowing what version of DirectX is important.

Then again all cards since the past 3 years do support DirectX 11 and you don't need to worry about that. The same goes for OpenGL.

DECISION TIME GPUS

Whether you need to buy a new graphics card comes down to finding out which component happens to be the bottleneck in your system.

And once that is established there are multiple ways to get more performance. Benchmarking web-sites have records of various configurations, all you need to do is check which of the following gets you the most in terms of performance.

1. Overclocking your current card - A little OC, even if it is around 50-100 MHz helps out.
2. Scaling it up - Get the same model that you currently own and link it in an SLI/CrossFireX configuration. This is quite effective given that you may be able to get performance similar to that of high end cards at roughly half the price or even lower. There are certain criteria that need to be kept in mind to enable a proper SLI/CF configuration which you can easily find on the internet.
3. Sell your current card to get the extra cash and get a good card which can last you 2-3 years.

Check out the comparison test in our August 2012 issue for more details. If your card is 4 generations or more behind then grab some money, get out and get a card from the latest family from either competitor.

Monitors supported

By this we don't mean models but simply the number of monitors that can be run off a single card. NVIDIA's 600 series supports 4 monitors while AMD's 6000/7000 series supports 6 monitors.

Technology

If you are into programming and wish to work with a certain technology like CUDA then that must be considered. However, if you use technology which can be run on both NVIDIA and AMD cards then you need not bother.

NVIDIA

CUDA Cores: NVIDIA's unified shader architecture takes care of pretty much all the calculations there are. They are mentioned under the label "Shaders" in GPU-Z.
Boost clock - With the 600 series onwards a new feature called "Boost frequency" was introduced, which is similar to the turbo boost found on processors.

AMD

Shaders - The AMD shader count and NVIDIA shader count varies because they're interpreted differently by them and should not be equated on a performance scale.

Things that don't matter

The brand

Most brands use the reference PCB for their mid-range and low-end cards, so brand isn't a factor. Though, once you start pondering over the premium segment the brand does come into perspective, certain brands use buzzwords to describe common technology while some do put the extra moolah into some R&D and bring out technology worth considering. All brands use great coolers for premium cards in the high-end segment and for the majority of consumers, this isn't that big a factor. Just go with the brand that you trust and provides good after sales service in your region.

Factory overclock

Overclocking low end cards can cause a lot of problems as the coolers aren't designed to handle the extra load and for the mid-range cards, using tools like MSI's Afterburner will help you get similar performance without shelling out extra for a premium card. Premium cards scale well and as in the mid-range segment, can be easily overclocked.

Memory

This one has been done to death, there are very few games for whom massive amounts of Graphics memory is required, for the absolute majority you need not go for extra memory.

Recommendations

High-end (₹30,000 - 48,000)

ASUS GTX 680-DC2T
ZOTAC GTX 680
ASUS GTX 670-DC2T

Mid-range (₹10,000 - 30,000)

ASUS HD7770- DC2T

Low-end (Below ₹10,000)

Galaxy GT 640 1GB.

worldview

OUR PICK OF THE BEST TECH ARTICLES FROM AROUND THE GLOBE

(MUST READS)



A HISTORY OF DUBSTEP

You must've already heard this form of music somewhere or the other. We are talking about Dubstep, and with this article The Verge takes you on a historical tour of the music form.

http://dgit.in/OAUM5x

HOW APPLE IS BECOMING BORING?

Dan Lyons, the creator of the Fake Steve Jobs satirical blog, gives his thoughts on why Apple is slowly becoming a boring company. This article was written a day before the Apple iPhone 5 launch and as web reactions proved, it indeed turned out to be a not-so-exciting launch.

http://dgit.in/PwBQXX

11 THINGS LEARNED AT IDF

Some cutting edge tech such as Haswell architecture, Video Aware Wireless Networks and other things was showcased at the Intel Developer Forum in San Francisco.

http://dgit.in/RocTSz

YOUR BODY: A BATTERY?

We all remember the scene from The Matrix when Neo wakes up from his dream in that dream-pod to discover millions of others in those pods, whose bodies are being used as batteries. This article explores how the 'wasted' energy produced by humans can actually be put to practical use.

http://dgit.in/RorwFD

(PopSci Corner)

DON'T BUY A DSLR



Are mirrorless cameras sounding the death knell of the DSLR? Why do you even need a DSLR? In this age of sleek gadgets and featherweight gadgets, the DSLR is an unwieldy behemoth. Does it even have a purpose anymore? http://dgit.in/QtGx78



What will it take to abandon the iPhone?
With the iOS 6 maps fiasco making headlines around the world, but not denting sales (5 million iPhone5s were sold in 3 days) what would it really take for us to finally abandon the iPhone and look for "greener" pastures?
http://dgit.in/TpwraE



"There is no such thing as time"
Is there really no Time in the universe? Is it all just an illusion that we perceive? What place does humanity have in the grand scheme of things? Astrophysicist Adam Frank's new book ponders over this same topic. An excerpt.
http://dgit.in/QcSq1q



The implausibility of homeopathy
Homeopathy is supposedly a very ancient and proven science, but mocked by many medical professionals around the world. Is it really as improbable as it sounds? PopSci looks into the maths behind this alternative medicine.
http://dgit.in/ShOSUd

SHORTS

ICE COMMANDER RIP



Towards the end of August, the first man to have walked the moon breathed his last. While many paid their tributes, The Economist's obituary on Neil Armstrong is one that will stay with you long after you have read it.

http://dgit.in/OCXCwv

STATE OF THE WEB INDEX

In this Q&A, Sir Tim Berners Lee, explains the objective of the World Wide Web Foundation's latest project – Web Index. It is basically the world's first multi-dimensional measure of the web's growth, utility and impact on people and nations. India is ranked #33 by the way.

http://dgit.in/RoD5N5

OUR LIFE, A SIMULATION?



In this one-on-one, NASA scientist Rich Terrile, talks about the possibility that our reality, may in fact be a computer simulation, designed by a programmer from the future.

http://dgit.in/OEjB6j

POST-TOUCHSCREEN ERA

This article explores the technologies that will be ubiquitous in the post-touchscreen era of input. It shows video demos of these technolgies under test and also has quotes from researchers of projects working on these technologies.

http://dgit.in/Uc5kil

iPhone 5 benchmarks

- By Sebastian Anthony

Slower than the Galaxy S3, faster than the Nexus 7s

PCMAG DIGITAL NETWORK

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Over the weekend, the first iPhone 5 benchmarks have started to appear on Geekbench. The results, if they're real, highlight two very interesting facts: The new core inside the A6 SoC is Apple's own creation, rather than a Cortex-A9 or A15; and despite the new core, the latest dual- and quad-core Android devices are just as fast, or faster.

The iPhone5,2, officially known as model number A1429 (the Verizon model if you're in the US), scores 1601 on Geekbench. According to Geekbench, the iPhone 5 has two ARMv7 cores clocked at 1.02GHz, 1GB of RAM, and the same caches as the A5 (32KB L1 instruction, 32KB LA data, 1MB L2). The iPhone 4S (A5 SoC) has an average Geekbench score of around 600, so the iPhone 5 is more than twice as fast — which tallies with Apple's performance claims.

To put the iPhone 5/A6 in context: The quad-core Galaxy S3 (Exynos 4 Quad, a Cortex-A9 design) has a Geekbench score of around 1800; the dual-core One X (Snapdragon S4, Krait) scores around 1600; and the quad-core Nexus 7 (Tegra 3, Cortex-A9) scores around 1600. We must also bear in mind that Geekbench makes full use of multiple cores, which gives the quad-core chips an unfair advantage — after all, there are few if any smartphone apps that make good use of four cores. In reality, the A6 will probably perform very similarly to the dual-core Snapdragon S4.



The iPhone 5's benchmarks have two standout features: The A6 is clocked very low (just 1GHz, versus the 1.4-1.5GHz chips in most other smartphones), and its memory performance is out of this world. Compared to the 4S (Cortex-A9), the iPhone 5 has somewhere in the region of 3 to 5 times better memory performance. Even compared to a newer chip, such as the Snapdragon S4, the A6 is still almost twice as fast. Despite the low clock speed, the A6's dual-core CPU still has between two and three times the theoretical performance of the A5, again tallying with Apple's claim of 2x performance. The Snapdragon S4 has slightly better integer and floating point performance, but at a much higher clock speed (1.5GHz). It is the A6's low clock speed and excellent performance that suggests that Apple has designed its own core, rather than using a beefed-up Cortex-A9 or new Cortex-A15. Anandtech is also confirming, through its own research, that the A6 indeed features a custom CPU core.

The benchmarks suggest that the A6 core is similar to Krait — which is wider than Scorpion (the previous Snapdragon S3 core), but without deepening the pipeline. A wider out-of-order architecture allows for an increase in IPC (instructions per clock), but without driving the clock speed (and thus power consumption) up. Remember, Apple has also increased battery life between the iPhone 4S and iPhone 5, which is partly thanks to Qualcomm's single-chip 28nm radio and the shift to 32nm on the A6, but there's undoubtedly some funky stuff going on inside the SoC too.

Why did Apple design its own core?

Two questions remain: If the A6 SoC does contain a custom-made CPU core, why didn't Apple advertise that fact during the keynote presentation? Furthermore, why did Apple design its own core anyway?

I can only guess at the answer to the first question. It could be that Apple is sworn to secrecy through a licensing deal (maybe Qualcomm designed the core for Apple?), or that it's working on patenting the design. It's possible that yields of the chip (which we presume are being made on Samsung's 32nm process) are low, and that only some iPhone 5s will have the new core inside.

As for why Apple designed its own core, the answer is fairly simple: Apple is a control freak. Its previous SoCs, the A4, A5, and A5X, used conventional Cortex cores — but otherwise they were heavily customized. Designing its own CPU core was just the next logical step. With its own core, and perhaps its own instruction set extensions, Apple can ensure that iOS 6 and the A6 are perfectly synergistic, further increasing performance and lowering battery consumption. There is also the possibility that the Cortex-A15 simply doesn't provide the power efficiency that Apple requires, forcing the company to design its own core that is both efficient and quick.

WHAT MAKETH THE IPHONE5??

Anand Lal Shimpi dissects the system-on-chip inside the iPhone 5 - the A6 -which is an Apple designed SoC. The article clearly is meant for the uber-geek for whom words such as ARM, clock speeds, battery life, performance are music to the ears. Read on:
http://dgit.in/SAue5x

POWERFUL PINNERS

For all those Pinterest fanatics out there, this is a definitive list of 51 powerful pinners from all across the world, who have in excess of a million followers. As expected 90 percent pinners are women.
http://dgit.in/VblLIE

DIY CAMERA BAG



Feel that camera bags are too expensive? How about making your own camera-carrying bag? This tutorial gives a step-by-step method to make your own camera bag. Some of you may require your Mom's help with the sewing bit.
http://dgit.in/NBOp69

A PILOT-EYE VIEW



We have all seen videos from the side-windows of air-planes. Ever wondered what it is like to see things from a pilot's perspective? This video gives a lovely view of the scene from a pilot's seat:
http://dgit.in/Pzo2fv

How hackers will jailbreak the iPhone 5?

- By Sebastian Anthony

How does a hacker jailbreak an iPhone or iPad, though? Well, I'm glad you asked, because the answer is rather interesting.

Defining the problem

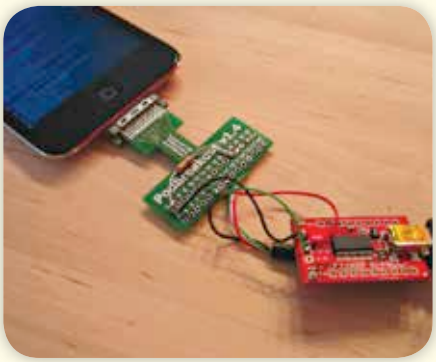
To begin with, hackers aren't interested in hacking the iPhone 5 itself — they're actually looking for a flaw in iOS 6 and the A6 SoC, both of which are brand new and relatively unknown. In the iPhone 4S's case, it withstood hacking attempts for months — much longer than any other Apple device — before it finally fell.

To create an untethered jailbreak for the iPhone 5, hackers will first have to find an exploit in the iOS 6 kernel, and then they'll have to work out a way of circumventing the hardware-level security provided by the SoC so that they can inject arbitrary, unsigned code into the boot ROM — the first code that is executed when an iDevice is powered on. This custom code will disable the iDevice's security features, allowing you to install non-App Store programs, such as Cydia. Voila, one jailbroken iPhone.

Finding a kernel exploit

On something like a Linux PC, where you have full access to the source code and the ports on the back of the computer, finding a kernel exploit is relatively easy — it's just a case of painstaking analysis, leaving no stone unturned. iOS's source code is closed, however (though XNU, which it is based on, is open source), and the hardware is relatively locked down.

In the case of iOS 4 and 5, both of which have been jailbroken, the kernel has a built-in debugger — a tool that spits out a lot of information about the kernel's behavior, so that Apple's internal software team can find and squash bugs. This debugger is only accessible via serial connection, however — and obviously, the iPhone doesn't have a serial connector on the bottom. Or does it?



It turns out that the old 30-pin Apple connector actually has two pins set aside for serial communications — and to use them, all you have to do is solder together a few simple components that can be bought for around $30.

With the home-brew cable made, an Apple hacker can open a serial connection with the iDevice, gaining access to the kernel debugger. Once you have access to the kernel debugger, it's a matter of finding an exploit — a flaw in the kernel that can be used to gain root access to the device. This step is incredibly complicated, requiring a vast amount of software expertise. For more info, hit up Stefan Esser's excellent Black Hat and CanSecWest [PDF] presentations on iOS kernel exploitation.

Tethered or untethered?

Once you've found a kernel exploit and gained root access, you have achieved a tethered jailbreak. If the hacker can also find a vulnerability in the device's hardware-level security (as Limera1n did with A4-based iDevices), then the exploit can be loaded into the boot ROM and executed every time the device is powered on — an untethered jailbreak.

In the case of Apple's A5 SoC, which debuted in the iPad 2 in March 2011, it took ten months to find an exploit that would allow an untethered jailbreak. In the words of a Chronic Dev Team spokesperson: "I don't know if any iOS hacker anticipated how much the A5 chip would completely change the game & up the stakes. The endless war we fight to jailbreak has become more & more difficult with each new device released, and our recent battle against A5 only proved this further."

Jailbreaking the iPhone 5 and A6 SoC

The iPad 2 and iPhone 4S, powered by the A5 SoC, were by far the hardest iDevices to crack — previous devices usually only lasted a few days or weeks. This was partly because Apple is continually working to thwart would-be hackers — and also because Apple hired Nicholas Allegra (aka Comex), one of the key members of the iDevice hacking community. Not only did this slow down the jailbreaking of the A5, but more importantly Comex will have spent the last year hardening the A6 SoC against as many attack vectors as possible.

To read more, go here: http://dgit.in/VBVBAd

(worldview)

SOKRISPYMEDIA

This channel has some surreal videos on it. We were super impressed



with Chalk Warfare - where the participants draw weapons and then fight with those very weapons. The editing is slick, quality quite cinematic and there are always tutorials associated with each video to tell you how it was made.
http://dgit.in/Ucb7Vi

(QR Code)

For a list of all the links from this section, head over to http://dgit.in/WorldViewOct2012
Or point your phone to the QR code above

(PRODUCT LAUNCHES)

CANON EOS 6D



Canon's latest entrant in the entry-level full-frame sensor category - the Canon 6D - sports a 20.2 MP CMOS sensor, a WiFi radio, GPS and is touted to have the lightest full-frame body. Pricing will be around USD 2099 (approx ₹1,13,500) and will start shipping in December

APPLE IPHONE 5



The iPhone 5 is slimmer, lighter and more powerful than the iPhone 4S. It sports a 4-inch Retina Display, LTE radio, an A6 SoC, an improved camera, a completely new power connector and earbuds, 10-hr battery life, etc. Priced from USD 199 with a two-year contract.

SONY XBR-84X900



Sony announced its 84-inch 4K TV at this year's edition of IFA, Berlin. The XBR-84X900 will have a resolution of 3840x2160, will support passive 3D viewing, WiFi connectivity, will sport two 50W 10-inch standing speakers. Pricing is not yet available, but expect to pay in lakhs

WORDJUMBLE

ABSOLUTE TIMEPASS

L	W	N	I	L	L	U	S	T	R	A	T	O	R	W
R	R	X	I	N	T	E	R	C	O	N	N	E	C	T
E	C	M	N	D	I	D	U	P	S	C	A	L	E	P
G	O	R	E	V	I	E	C	S	N	A	R	T	H	V
U	R	W	H	A	K	N	I	L	N	W	O	H	V	R
L	T	L	C	M	I	R	R	O	R	L	E	S	S	I
A	E	E	Q	E	A	S	T	E	R	O	I	D	R	Z
T	X	N	S	G	R	A	C	E	N	O	T	E	E	I
O	Y	S	C	M	X	K	L	U	R	E	D	A	E	H
R	I	O	M	A	S	S	D	R	I	V	E	R	Z	K

There are at least 13 tech words in this jumble. Can you find them all?

Top 3 YouTube Picks

Make sure your boss doesn't catch you goofing off with one of these playing on your screen



First look: iPhone 5
Duration 01 min, 41 sec
The confident replies of the people despite their ignorance is hilarious.
http://dgit.in/OE19Fo



Gangam Style
Duration 04 min, 13 sec
The world has gone nuts about this K-pop number. Check it out, if you haven't already!
http://dgit.in/Oc3uwX



Thor's hammer for real
Duration 08 min, 18 sec
Ever wondered what it would be like to wield Thor's mighty hammer?
http://dgit.in/PfmXIX



Interview with David Yin, Dev Business - SEA, Vserv.
For the complete interview visit: dvwx.in/PgOdr3



Microsoft creates Guinness world record!

Windows App Fest, Microsoft's 18 hour non-stop marathon coding festival held at Karnataka Trade Promotion Organization (KTPO) in Bangalore registered itself into the Guinness book of world records for the maximum number of developers coding for a single event at a common location. The total number of coders was logged at 2,567 by the Guinness officials present at the venue. The initial number of developers expected by Microsoft India at the beginning of the Windows App fest was around 3,500.

While a major chunk of the participants consisted of students from science and engineering background, the app fest also saw professional developers and teams from app development companies taking part in the event. Microsoft also flew in some of their best tech teams to work alongside the participants to help the participants convert their ideas into final applications. >

Read the entire article at http://dvwx.in/PJPrLC and share your comments.

*footer

*End of RIM's growth?

>> RIM is in the midst of a long-running slump in sales, but despite that, it has still managed to sell enough devices to keep adding to the BlackBerry user base, albeit slowly. In August, 2011, RIM said it had surpassed 70 million BlackBerry subscribers worldwide; the most recent number, as of early June, was 78 million.

http://dvwx.in/TnbzAX



*Now sell Android apps in India

>>Google recently allowed developers in India to sell paid applications and enable in-app purchases on the Google Play Store.

http://dvwx.in/NLluwt

*Dice Holdings buys Slashdot and Sourceforge

>> Dice Holdings, the owner of job portals such as Dice.com has announced that it will buy the online media businesses of Geeknet which includes websites such as Sourceforge, Slashdot and Freecode. Geeknet will instead start focusing on growing its business from ThinkGeek, which according to its press release generated around $20 million in revenues.

http://dvwx.in/VjSM6N

*side panel



*Woz hates Apple-Samsung fight!

>>Apple's co-founder Steve Wozniak, shares his view on landmark patent decision. He's also excited about the iPhone 5, specifically about its camera. Read more:

http://dvwx.in/VjRzwb

*More about Linux, Red Hat and Open Source

>> An interesting inforgraphic, get to know some intresting facts about Linux, Red Hat and Open Source.

http://dvwx.in/UsXy2f



*A look at CSS Variables

>>You may wonder why CSS needs variables. With web technology evolving, you might be interested in knowing why:

http://dvwx.in/TMxsHd



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Never let browsers hold you back!

>> Modernizr helps you detect native support for HTML5 and CSS3 features in web browsers. We'll tell you why and how you could use it in your own projects! > by Ketan Singh

The advent of HTML5 and CSS3 and the ever-growing number of platforms trying to keep up with their standards has invoked unbridled enthusiasm among designers and developers alike. However, not many of them confidently use HTML5 and CSS3 at the production level, without any fallback options. This is primarily because of the slow transition to new and more supportive browsers by the users.

For designers, it has always been a pain to let go of those cool features available in newer web technologies, simply because some browsers don't support them as expected!

Nevertheless, if you do feel the urge to show your creativity with HTML5 and CSS3, while ensuring that the users with older browsers don't get left too far behind, Modernizr is here for you.

What is Modernizr?

Modernizr is a small JavaScript library that detects the availability of native support for individual CSS3 and HTML5 features in a web browser.

Although Modernizr sounds like it's out to 'modernize' every browser it runs on; that's not entirely true.

Its primary job is to detect support for individual features for you, which you as the developer have to make use of. However, it does have some 'modernizing powers' as far as Internet Explorer is concerned. Keep reading to find more on that.

What other options do I have?

Unfortunately, there is no such perfect tool or trick, which can solve all your cross-browser compatibility issues automatically. However, there are a number of hacks, tools and design decisions that can help you partially mitigate certain issues.

Most developers usually deploy the 'Browser sniffer' hack (user agent sniffing). They include a special JavaScript or PHP based snippet, called a 'sniffer' in a particular webpage, which is usually meant to detect the client's 'user agent' information.

The 'Browser sniffer' hack is very unreliable and ambiguous, because a browser's 'user agent' information is user-configurable.. Moreover, Modernizr was particularly built to replace 'browser sniffing' altogether, along with all the deception and ambiguity that comes with it.

A relatively saner decision would be to recognize a reasonable set of browsers that you are willing to support and then develop accordingly. This approach is widely used and you should consider using it if all the contents of your webpage are equally important and a strictly identical layout is expected across all the targeted browsers. However, it most probably eliminates any chance of using HTML5 and CSS3 features on the page.

Some developers opt for the graceful degradation design decision, which refers to the practice of building your webpage with the latest features and best browsers in mind. In addition, you add tools to detect the availability of support for those features. To prepare for 'no support,' you deploy alternative measures to scale down, but make sure a reasonable version is rendered.

Now that you have Modernizr in your arsenal, we'll tell you how it goes one-up!

What makes Modernizr so special?

Modernizr is a great tool when it comes to solving cross-browser compatibility issues, because of its power of feature detection. It is much more reliable and robust as compared to browser sniffing or any other hack. Browser sniffing means simply asking the browser a naïve "Who are you?".

Feature detection means telling the browser "Let me see what features you can support"! Now, you can't hide much, if your mom herself starts looking out for the candies in your pocket, can you? Modernizr expects you to understand that it is not always necessary to display things in an identical manner across every browser out there.

Modernizr is built upon the concept of progressive enhancement, which advocates rendering web pages progressively, based on characteristics of the client. It encourages you to build your projects in a bottom-up and layered way, in order to render individual 'feature-specific' layout and content on the fly. Modernizr expects you to understand that it is not always necessary to display things in an identical manner across every browser out there.

Developers use Modernizr mostly to accomplish two common motives. Some developers liberally use CSS3 in their projects, and use Modernizr to create 'hackish' CSS fallbacks to mimic the same effect in 'non-supportive' browsers.

Others use it to render reasonably distinct content, layout and behaviour, based on the support available for a particular set of individual features in the browser.

How do I install Modernizr in a webpage?

To start using Modernizr in your projects, you first need to 'build and download' your preferred version of Modernizr from http://

modernizr.com/download. You have an option to download the production version (small in size, loads fast) or the development version (large in size, good for learning).

Assuming that the downloaded file is modernizr.custom.34635.js and it is stored in the js folder of your website; install it on a webpage by using a script tag in the head area of your page. That's it! Your 'Modernizr-ready' source code will look something like:

```
<!doctype html>
<html><head>
<script src='js/ modernizr.custom.34635'></script>
</head><!– other stuff here... –>
</html>
```

Installed, what next?

Once the library is installed in a webpage, it is ready for feature test & detection.

Modernizr runs quickly on page load to test and detect features; it then creates a JavaScript object with the results, and also adds classes to the html element for you to key your CSS on.

The 'live' html element for the webpage, when viewed in the latest Chrome browser, might look something like:

```
<html class="js flexbox no-touch hashchange history rgba multiplebgs backgroundsize borderradius boxshadow textshadow opacity cssanimations csscolumns cssgradients csstransforms csstransitions fontface generatedcontent video">
```

Google Chrome supports variable opacity, as prescribed by the CSS3 specification; hence, the class 'opacity' is dynamically inserted inside the html element. Chrome for desktops usually does not support 'touch', hence the prefix 'no-' is included with the term 'touch' here.

Assume that we have a 'div' element in the body with its id set to 'mycoolbox'. We can write its CSS styling in the following manner:

```
#mycoolbox {
height : 252px;
width : 252px;
}
.no-opacity #mycoolbox {
/* used when browser doesn't support opacity */
background-color : rgb(10, 87, 110);
}
.opacity #mycoolbox {
/* used when browser supports opacity */
background-color : rgb(60, 137, 160);
opacity : 0.2;
}
```

These CSS definitions will make the 'opacity supporting browsers' render the 'mycoolbox' div with 20% opacity. In browsers that don't support opacity, the 'no-opacity' class will induce a new 'mimicking' colour!

*pointers

>>Nuggets of cool code at work



*Modernizr with Faruk Ates

>>Faruk Ates, one the creators behind Modernizr is going to tell you what it is, what it does, and why you should use it.

Duration > 35:21

http://dvwx.in/OTNMRw



*Modernizr's test suite: Behind the Scenes

>>Paul Irish shares how he built the Modernizr test suite: caniuse, jsonselect, detect-global, qunit, jquery deferreds, github.js.

Duration > 20:12

http://dvwx.in/UHJH8g



*Zuckerberg on Facebook, and more

>>Facebook CEO Mark Zuckerberg talks to TechCrunch founder Michael Arrington at TechCrunch Disruptive.

Duration > 03:52

http://dvwx.in/Qt48EW



*Fast UIs for cross device web

>> Boris Smus talks on web sites that support multiple device form factors, discusses single page sites and some of the layout features in modern mobile browsers.

Duration > 49:31

http://dvwx.in/QaVD1p

In addition to modifying the html element, Modernizr also creates a JavaScript object, simply called Modernizr, which has a list of Boolean-valued properties for each individual tested feature.

For example, If the browser supports 'touch', the Modernizr object will contain a Modernizr.touch property with its Boolean value set to true.

To make use of possible support for 'touch' in a browser, you can write conditional JavaScript statements like:

```
if (Modernizr.touch) {
//code that has something to do with touch capability
}
else {
//code to handle the unavailability of touch capability
}
```

Similarly, other browser capabilities can be harnessed using such JavaScript conditional statements. Have a look at Modernizr's documentation at http://modernizr.com/docs/ to get the complete list of features tested by Modernizr.

Popular websites like css-tricks.com, about.com and posterous.com among many others use Modernizr to selectively deliver HTML5 and CSS3 content to its users. If you use a debugger like FireBug, you should take a sneak peek at their live source code to witness the 'live Modernizr action'.

Is that it?

We apologize if we kept you waiting for the 'Internet Explorer modernizing' thing! Nevertheless, this feature is certainly worth the wait!

Modernizr comes bundled with something called HTML5 Shiv, which provides you the capability to render basic HTML5 elements in IE browsers! It will add HTML5 and CSS3 support in Internet explorer browsers; while you need to make sure that you do include HTML5 Shiv while building your Modernizr download package!

So, should I use it?

If you choose to code your webpages in a layered manner, and you don't intend very strict uniformity in the layout across every browser you wish to target, you should seriously consider using Modernizr in your projects.

All said and done, Modernizr is hands down the best tool out there, which can save you hundreds of geek-hours, if you do care to give your users the best of both the worlds with great browser-support and experience, without sacrificing the goodness of the new and shiny features of CSS3 and HTML5! >

Read the original article online on devworx. Visit www.devworx.in



>>David Yin, GM – Developer Business – SEA, vserv.mobi

How does AppWrapper automate the monetisation process?

The AppWrapper simplifies the process of monetisation down to a single click. It's a zero coding approach to app monetisation. The developer doesn't need to waste time trying to integrate SDKs into the app. With the AppWrapper, the developer just needs select the app, click the AppWrapper button and monetisation gets enabled in less than 60 seconds.

The technology is a tremendous innovation in the app monetisation space that we have applied a patent for. It can enable both – premium advertising as well as micro transaction-based monetisation approaches in parallel.

Does your platform pose any technical restrictions?

The platform poses no technical restrictions – any Android app (.apk), J2ME app (.jad / .jar), Windows Phone app (.xat) can be enabled for monetisation via the AppWrapper in one click.

What kind of analytics does the service provide?

Vserv.mobi provides excellent real-time web-based analytics. It allows app developers to understand various aspects of how their apps are being consumed and track earning. Our web interface allows real time ad requests originating from the app, number of clicks on such ads, micro transactions completed, revenue earned, average app session time, what country is the app being used in, and much more. >

Read the entire interview online, at **dvwx.in/PgOdr3** and share your comments.

*join us!



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Whether you're an app development company based out of India, an application developer, or simply an enthusiast – you are nonetheless, a catalyst in India's growth as a software development powerhouse. Be it the Large Hadron Collider at CERN, or the Curiosity Explorer currently roving across Martian terrain, Indian technologists and developers are a very close part of cutting edge innovation across the globe. We want to help you innovate!

devworx is an attempt to recognise such stories in software innovation, early on! Irrespective of where you stand in the scenario illustrated, we invite you to be a part of us. Whether you're an established app development company, a policy maker influencing the mobile ecosystem, or an individual developer, there's a lot to share with the community. We eagerly want to hear your story. Write to us today! Visit www.devworx.in and go to the Contact us and Careers pages for further information. You can also email us at editor@devworx.in.

*open source

Sabayon

>> If you really enjoyed Sabayon 9, this is just another step towards World domination (yay!). There you have it, shining at full brightness, for your home computer, your laptop and your servers, virtualised or not. Even comes with Amazon EC2-ready kernels, Gnome 2 and more.

http://dvwx.in/OTk6E5

Opensuse

>>The latest release of the world's most powerful and flexible Linux Distribution brings you speed-ups across the board with a faster storage layer in Linux 3.4 and accelerated functions in glibc and Qt, giving a more fluid and responsive KDE desktop.

http://dvwx.in/VtDcWe

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Join the discussion on Facebook and stay updated on latest news and features. Scan the QR code using your smartphone, now!

Prefer 140 characters? Follow us: @devworx.

Complete interview
Want to read the complete interview with Usui San? Head to this link:
dgit.in/epson_minoriusui



Asha 308 and 309 launched
Nokia has unveiled the Asha 308 and Asha 309, the latest additions to the Asha Touch family of mobile devices

New Digital Horizons

Epson's a household name in the printers and projectors category. Mr. Minoru Usui, on his recent India visit, sat with us to give us a sense of where the industry's heading in the near future. Excerpts from our interview:

Nimish Sawant
nimish.sawant@thinkdigit.com



Minoru Usui, President, Seiko Epson Corporation

Is India an important market for Epson? What are your specific plans for India in the next 5 years?
Yes of course, India is a very important market for Epson now, and it will continue to grow in importance. It's essential for Epson to listen carefully to the requirements of Indian customers, and to develop products that meet these needs. Part of my reason for visiting India this month and in the past has to speak to our local staff, visit customers and therefore directly obtain information about the Indian market and customers.

What is your view on 3D Printing? When will we see a consumer-grade affordable 3D printer in the market?
Epson is looking closely at the possibilities for 3D printing. Our original Micro Piezo inkjet technology is extremely versatile and certainly has potential for 3D and a wide range of other printing applications.

It's difficult to say exactly when such a printer will become readily available, but we will continue to review the market carefully and work hard to create products that meet the needs of our customers.

Traditional print industries are declining in growth, digital publishing is steadily increasing. As a printer manufacturer, how is this trend affecting you and the industry?
The volume of output from commercial digital printing will grow by 400 per cent from 2010 to 2015. Epson's Micro Piezo technology provides high speed, high reliability, and is kind to the environment. We have already started to leverage these advantages by creating printers for applications such as outdoor signage, commercial photo printing and packaging labels. We therefore believe we are well placed to take advantage of the shift to digital printing.

Printers using Micro Piezo technology are ideal for on-demand printing – exactly the right amount at the right time-printing, which we believe will continue to expand.

Is there an increased pressure demanding printer manufacturers to produce greener printers with minimal environmental impact? How are they different from a normal printer?
Yes, over the years we have taken a variety of measures to make our products greener including removing potentially harmful substances, making them easier to recycle and reducing their energy use.

In recent years environmental concerns have become especially become important in the office, and we have launched a range of business inkjet printers that have considerable environmental advantages over laser printers, including using around 90 per cent less electricity. In commerce too, for example, our SureLab product is aimed at high-street commercial photo shops. This product eliminates the harmful chemicals used in conventional analog photo printing processes.

How will the printer industry shape up in the next decade? Could you give us any forecasts or predictions?
First, I believe we will see the steady expansion of inkjet printing in the office. Inkjet offers advantages over lasers in terms of running costs, first print out speed, and energy consumption, and it is Epson's task to make customers aware of the fantastic business inkjet printers we offer.

Second, as on-demand printing expands, we will see an acceleration of the shift to digital printing in commerce and industry. As mentioned above, Epson will step up its efforts to provide products that address actual needs in these areas.

Some of your 3D projectors are priced at similar price points as 3D Smart TVs. Is it fair to compare projectors with HDTVs? Which one is the better option for users and why?
It's not a straight comparison because projectors and TVs have different roles in home entertainment.

Large screen TVs may not be practical for some customers who have smaller living rooms, and are not cost effective at 80 inches and above. Certainly projectors are the better option when people want to enjoy entertainment at 100 inches and above.

Projectors are easy to set up and use, and can readily bring big screen entertainment to customers wanting to enjoy movies, sports and games.

Are projector sales according to your expectations?
While I am pleased with how customers have accepted our innovative projectors, I am never fully satisfied. We are always looking to improve sales by providing products with functions and features that address specific customer needs. Epson has been the world leading projector manufacturer for 11 years, and we are looking to build on the expertise and advantages we have gained to strengthen this position.

The most unusual festivals

Since this is a festive period and most of you will be in a festive mood, we think it'll be a good time to educate you on some of the most unusual festivals celebrated around the world today. From jumping over new born babies to setting out a buffet for monkeys. Many of these festivals have a deep religious significance to the people concerned so try not to laugh!



El Colacho

A centuries old tradition involving grown men dressing up as "devils" and jumping over neat rows of new born babies on mattresses. This unusual tradition is considered to be the most dangerous festival in the world. Ignoring the risk of a grown man landing on a baby, how would you like it if your first memories involve devils jumping over your head?

Monkey buffet

A feast laid out in the honour of Lord Hanuman, yes our very own Lord Hanuman, the Monkey Buffet is laid out every year in Lopburi, Thailand. A lavish layout of fresh fruits and whatever stuff monkeys like to eat is meant to entice these primates to the area. Look at the little critter below, now doesn't it look so happy?





Boryeong Mud Festival

Your parents must have always told you not to eat or play in mud. If that always rankled you, you should have been born Korean. Mud from the Boryeong is trucked to Daecheon to create a "Mud Experience Land". Did you ever imagine mud could be so much fun? Rebel! Head over to South Korea, show your parents the true nature of mud!



Noche de Rábanos

Celebrated since 1897, this Spanish festival involves the creation and presentation of some of the most stupendous art sculptures ever seen. Some of them can weigh up to 3 kg! Only 3 kg? Yep. These sculptures are made from radishes. Craftsmen and afficionados from all over Spain showcase some of the most detailed radish sculptures ever seen.

The Redneck Games

Involving such high-brow sports as seed spitting, mud-pit belly-flop and armpit -serenade, this annual event began as a protest against a snide remark regarding the hosting of the 1996 Olympic games in America. No, don't turn your nose up at this. Are you capable of serenading your loved one with armpit music? Well, a 12-year old kid can do it better than you.





Naki Sumo baby crying

This is an event held in Sensoji Temple, Tokyo. A 400-year old tradition involving towering sumo wrestlers holding babies high above their heads to see which one cries first! The baby who cries the longest and loudest is the winner. Made to cry by oversized men dressed in pseudo-diapers is not our idea of fun. But, well, to each his own.

Digit 101
An overview of your motherboard. Can you tell the difference between a PCIe and a PCI slot?

HP Labs India celebrates 10 Years
Established in 2002, HP Labs celebrate its 10 year anniversary demonstrating pen based input, broadcast networks, intelligent hub and more

How we unwind



Magicka nights!

We've been keeping one beedy eye on Steam's deals for quite some time now and when we spotted a Magicka 4-pack for ₹400, we pounced on it and grabbed ourselves a copy. Since then, most of the team has spent nights screaming at each other across the TC; "REVIVE" being the most prominent call! Our fingers have gone numb with the spell casting but we'll never stop!

Borderlands 2

After spending more than 4 weeks chewing his nails of waiting for the release of this game, Mithun finally got the chance to play it this month. His joy was short-lived though, not being too comfortable with the series, he got his arse handed to him by some oversized boss creature within the first 5 minutes and his heartfelt expletives are still ringing in our ears.





Smite

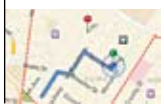
'An ally has been slayed!' was one sentence that bugged the hell out of Nimish and Jayesh, yet Sid continued playing this infernal game. Soon Mithun fell prey to its charms and began playing Joust matches with Sid. In an effort to defend his obsession he tried telling us everything from "you can learn about vedic gods," to "it's the future of MOBA games." We'll reserve our opinion on that one for a bit.

digit DIARY

This was a month of celebration. To begin with, we were celebrating 5 years under the new management. All of us were required to pitch in and Anirudh and Robert decided to help by trying to make fancy looking bows from strips of ribbon. They sat with a PC and tried to figure out what was going on in a whole pile of YouTube videos explaining the whole process. After an hour of effort, the result? A mangled strip of ribbon that looked like it had been chewn up by a particularly malevolent dog. They finally gave up the effort and we had a bowless party.

Siddharth also celebrated his birthday this month, just before issue closing (we've published the pics on the Community page). He finally discovered that the cake wasn't a lie when he eventually found himself in the bathroom extracting bits of chocolate from the stubble he proudly calls a beard (no match for Jayesh's own growth). Oh, before we forget, Siddharth is now officially "Sid bhaiyya". We had a new intern join us this month, Chaitanya, and for some reason Siddharth evoked a very "brotherly" reaction from him, resulting in the above title!



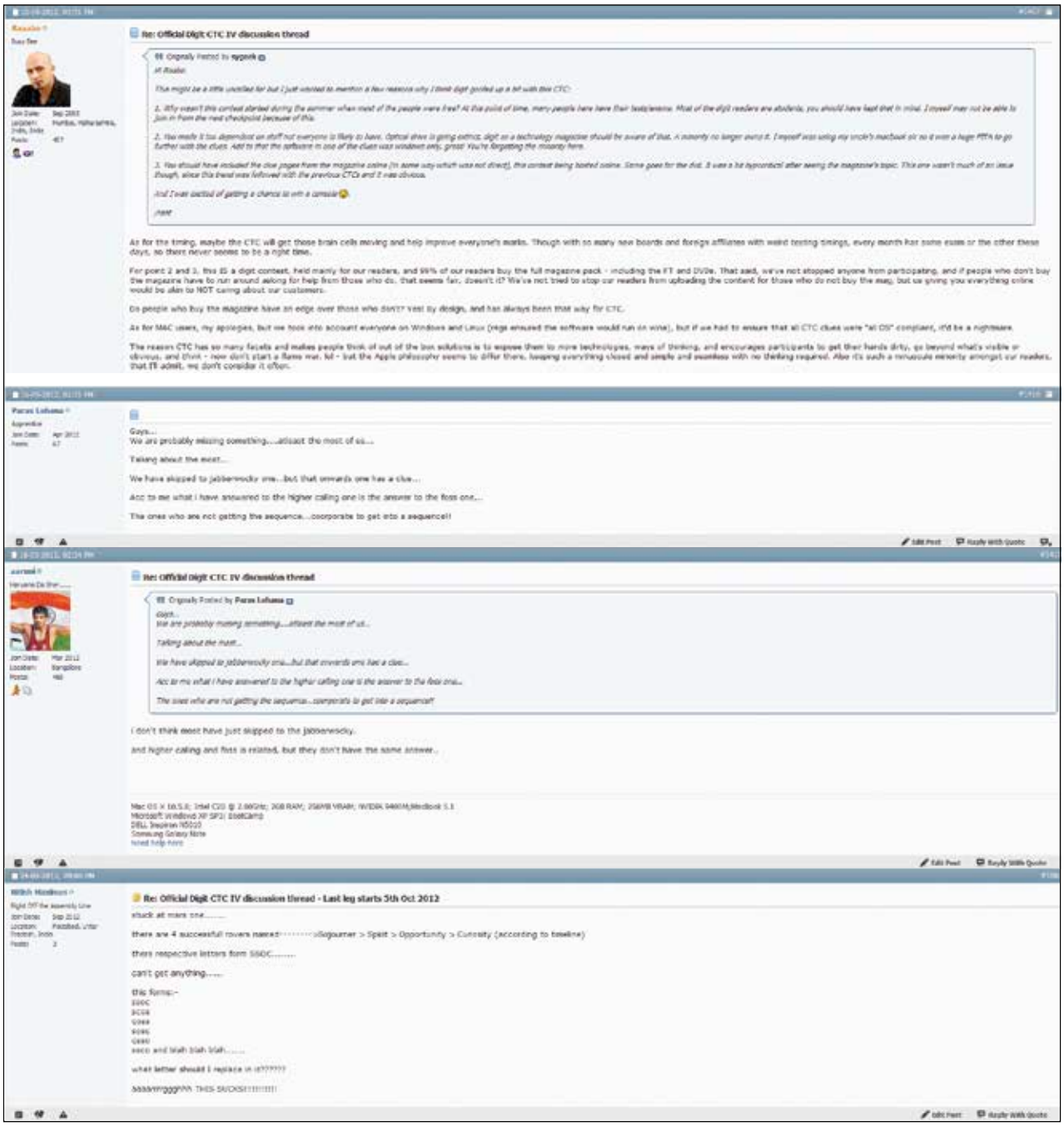


iOS 6 map-bashing
This BuzzFeed article explores how the newly launched iOS 6 maps aren't only wrong but dangerous as well. **http://dgit.in/P1Gtr2**

Future jet-fuel: ProBio3
According to French scientists, future passenger jets will fly using agricultural and forest waste

Head over to online communities for some of the best discussions, buying advice and user reviews. Of course, you'll meet like-minded (and not-so-like-minded) geeks, leading to some of the most constructive arguments you'll ever have.

The forum was abuzz with CTC talk last month, check out a few snippets below...



Foxconn riots

Riots broke out at the Foxconn factory involving 2000 workers, 40 of whom had to be hospitalised. Workers blamed harsh treatment by security guards



Nissan Terra SUV

Terra SUV, a concept car from Nissan, powered by a hydrogen fuel cell and an iPad as the instrument cluster was unveiled at the 2012 Paris Motor Show

Siddharth celebrated his birthday last month, in typical Digit style. Check out the "magnificent" collage we uploaded to facebook, and also some of the other discussions taking place there... http://dgit.in/RVaeQP

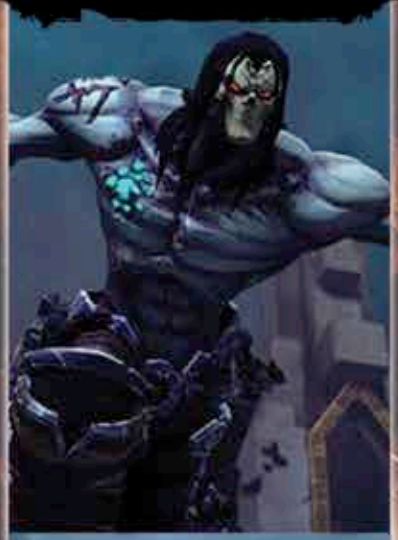


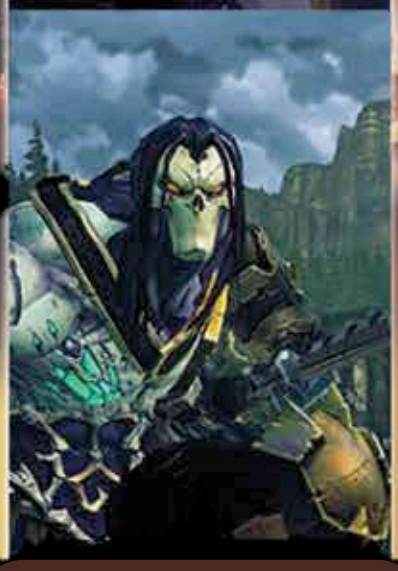












DARKSIDERS II
Death Lives!

Sameer 'Psycho Mantis' Mitha
feedback@skoar.com

You play as Death, one of the four horsemen of the Apocalypse who is on a journey to prove the innocence of his brother - War and to restore humanity. It isn't necessary that you play the first game to know what's going on this time around but if you have, you will see some familiar faces and will feel right at home with the look and feel of the game and how the story pans out.

One down side to the game is that it's easy to forget or not care about the story as it will move slowly if you are one who easily gets absorbed in the side quests and missions of the game.

The action in the game is quite good and we are happy to say that the controls aren't as complicated as the first game. Death's primary weapons are two scythes, which he can use to take down the enemies, and you have access to a plethora of other secondary weapons such as hammers, axes and more that help you mix up the combos. Some of the secondary "heavy" weapons are slow and can cause a lot of damage. Death also has access to a gun, which adds to the combat of the game, something we loved in the Devil May Cry games.

The Puzzles and side quests can cost you many sleepless nights and borrow heavily from the Zelda franchise. There is a puzzle around every corner and it can be something as simple as finding a key to open a locked door or something more complex as restoring the supply of lava and water to a forge.

Another element where puzzles are introduced is with respect to the boss fights. Not all bosses can be taken down with hacks and slashes. Some require strategic thinking and that adds to the variation in gameplay keeping it fresh.

The level up system in Darksiders 2 has been redone when compared to the first game. When you start out as Death, you are puny and have limited abilities. In a matter of few hours, we had upgraded the scythes to almost full, unlocked some nice special abilities and pimped Death out to look like a badass – a very satisfying experience.

The graphics of the game are good if not the best in the business. You will encounter a variety of location from dark and gritty dungeons to the lush out doors. All the locations look beautiful and have a distinct feel. Textures look sharp for the most part and the overall ambiance of the levels in the game is very good. The voice acting of the game is satisfying and well done but it is difficult to feel attached to any of the characters. There is the witty joke here and the sarcastic comment there, but nothing in totality to keep you fulfilled. The background score is very well varied with adrenalin pumping tunes during battle and soft orchestral scores while navigating the environment.

Verdict

If you are a completionist, you can easily derive 20+ hours from the game making it a bang for your buck. Apart from that, Darksiders 2 plays it safe by borrowing elements from popular franchises. If you are looking for an action adventure game with clever puzzle elements thrown into the mix then this is definitely the game for you.

MOAR!

- **Developer:** Vigil Games
- **Publisher:** THQ
- **Platforms:** Xbox 360, PS3, Wii U and PC
- **Price:** PC: ₹999 Xbox ₹360 and PS3: ₹2,799





Hong Kong Hustle

Jayesh "Big Daddy" Shinde
feedback@skoar.com

Sleeping Dogs reminds you of several games, all very good in their own right. However, often a game that takes inspiration from various successful games runs the danger of falling short of expectations and not delivering on its promise. Several games have so faltered, but not Sleeping Dogs. Even if its sandbox feel is similar to GTA IV, its combat similar to Batman's Arkham Asylum, its story similar to a Hollywood blockbuster, Sleeping Dogs is more than just a sum of its parts. It's thoroughly enjoyable action-adventure game that provides loads of fun.

The story of the game reminds you of The Departed (or its original inspiration, the Hong Kong-based Infernal Affairs), where you play a cop called Wei Shen. He's just returned from a brief stint in the States, and his undercover assignment in Hong Kong takes him deep into the underbelly of the city's Triad gangs. It's an interesting plot, Shen's required to gather information and pass it on to his handler, but he's also expected to break rules and do the bidding of the underworld. You meet many interesting characters as the story develops, encountering situations that never border on boredom, and the central plot unfolds quite fast.

Sleeping Dogs' gameplay is like GTA's, third-person open-world environment to explore. Controls and game mechanics are pretty much what you expect for the game, nothing out of the ordinary. Sleeping Dogs relies heavily on martial arts and close combat, with the system deployed similar to the one used in Batman Arkham Asylum and City games. The combination of elements derived from the GTA and Batman games work really well for Sleeping Dogs – landing a bone-bashing punch or kick on your opponent is pretty cool. Apart from the central storyline, the game has various mini games and side quests to keep you busy. As you progress through the game, you can unlock Wei Shen's skills through an RPG-like skills tree, yet another interesting twist to the tale. Sleeping Dogs incorporates multiple layers and depth to its gameplay to very good effect.

Graphics of the game are very good, although character modelling could've been better. Step out of your safe house to find the fictional Hong Kong a constant presence – the city's alive and abuzz pretty much all the time and very well put together. Wandering through a crowded farmer's market gives you a realistic sense of Hong Kong, and the cut-scenes mixing English and Chinese dialogues heightens the sense of realism even more. Sleeping Dogs' soundtrack cuts across various genres, adding to the overall mood and tone of the game. Its voice acting is unexpectedly good. Stealing cars and driving around the city is great fun, the arcade experience a nice and simple touch.

Ultimately, what makes the game unique is its good-guy bad-guy balancing act. Wei Shen's character develops differently while he undertakes Triad missions vis-a-vis his cop missions. Add to that an assortment of side missions – hacking, bugging, tracking subjects – and the allure of exploring Hong Kong, and you start to marvel at Sleeping Dog's largesse.

Verdict

GTA fans will enjoy the game more than anyone, acknowledging Sleeping Dog's unique sights and sounds and exciting combat style add some fresh perspective to the genre. It's unlike any other game you'll play this year, bringing so many elements together and executing it with flying colours.

MOAR!

- **Developer:** United Front Games & Square Enix
- **Publisher:** Square Enix
- **Platforms:** Xbox, PS3, PC
- **Price:** PC: ₹999 Xbox ₹360 and PS3: ₹2,799





Prepare to die

A glutton for punishment

Anirudh "Mad Zombie" Regidi
feedback@skoar.com

Dark Souls is one of the hardest games we've played in a long time. You need to be prepared to die and die again and again and again and again and again and you'll still revel in it. It isn't that this game has some sort of murderously intelligent AI or that it has an artificially jacked up difficulty level, the enemies re-spawn after every checkpoint (bonfires) and each enemy will always follow its own, but consistent, attack pattern. In any other game, these very same issues would be something we would complain about but not so in Dark Souls. When it comes to combat, you have everything that you need, you know where the enemies are, you know their attack patterns, you can even figure out what weapon would suit you best and despite all this, you'll still die a hundred times and every single time it will be your fault. You always know that you screwed up and you'll feel stupid for not being able to deal with it and you'll want to try and try again till you succeed.

The same goes for the boss fights, with the added exception that instead of one fixed attack pattern, they might have 2 or 3 patterns depending on their health. Why the combat is so much fun is hard to really explain. Maybe it's because it never feels like the game is unfair, or that the mechanics are never at fault. It always is your fault that you screwed up and it is that urge to improve your game that pushes you forward, taking that punishment over and over again to get that little bit better. One misstep and you fall off a ledge. Why? You were in a hurry and forgot about it. You spend that last bit of stamina on just one more swing of your axe and then you realize you've got nothing left to dodge that massive club coming down on your head and you just know that it was your greed that got the better of you.



Punishment and reward, these are what make or break a game and Dark Souls somehow got it right. This game is no mindless, button-mashing frenzy; it requires thought and it requires patience and even more importantly, ceaseless vigilance. The game won't hold your hand in anyway, it forces you to grow up, to think for yourself; there are no objective markers, no journal to keep track of quests and no map to show you where to go. There is a story but it's not immediately apparent. The lowliest minion can make short work of you, if you're not careful and the biggest boss can be a cake walk with the right tools. The game will throw challenge after challenge at you and you will face them and you will overcome them. *

Verdict

Dark Souls is not a game that will appeal to everyone. If you're used to having your hand held at every turn or just generally want to play a game to unwind, this is not for you. This is a game that demands your time and will stress your patience to its limits. With Dark Souls, From software has created one of the most compelling and atmospheric action RPGs ever and it is an experience that must not be missed.

Don't forget to check out our online review for a more detailed perspective.

MOAR!

- **Developer:** From software
- **Publisher:** Namco Bandai
- **Genre:** action RPG, open world
- **Price:** PC: ₹2100 (steam)



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Digit congratulates the winners of *NAS@Home* Contest

Grand Prize

WINNER



First of all I like to thank the DIGIT review panel for selecting me as one of the five winners of the contest.

To begin with, this is the first review I am posting for DIGIT and I had one of the best experiences through this time.As soon as I was declared as the winner, I got a call from the TD panel to confirming the receipt of the device within 2 days of time. And as promised it was there on my doorstep waiting for me to kick off the review. TD has been so generous to have supplied an additional HDD for the ease of review. Thanks for that once again.

Chandan was in constant touch with me and motivating me for a better review and within the time. TD has supplied all the required docs which helped me skip through the process of self learning about the product. The product was flawless and was the best product I have ever reviewed. Wishing TD and the panel all the best with their good job and may receive many accolades in the industry.



2nd Prize Winner

Hrushikesh Ghatpande

Preparing a review is not simple. You need to possess little amount of everything to do it. Some technical knowledge, soft and presentation skills, willingness to appreciate a gadget, honesty and confidence...



3rd Prize Winner

Roshan Ashraf Shaikh

Anyone can have a contest where your writeup is judged based on the review of the product that you already own but giving a product for evaluation, getting to keep the NAS unit no questions asked is something you don't get to see such contests...

4th & 5th Prize Winners

digit SQUAD Member



Akash Yadav

Few weeks ago, I received an email newsletter from Thinkdigit, mentioning about a NAS@Home contest, winners gets a chance to review Synology DS112J the best three reviews get additional bonus prizes...



Kedar Deore

It was my first experience with a NAS and first time writing a review of any sort, and to stand out I decided not to include information that is readily available on the web...

To read their reviews in detail, visit Digit Forum at http://dgit.in/nas-home



Preview

Siddharth "staticsid" Parwatay
feedback@skoar.com

Ever had one of those crazy potty thoughts where you wondered which mythological god would kick the most ass? Is Zeus' thunderbolt more powerful than Thor's hammer? Or better yet what would happen if we put some of the all powerful entities from Indian mythology into the mix? SMITE the latest MOBA game from Hi-Rez studios (makers for Tribes) gives you the chance to do just that. For those of you new to the genre, MOBAs are Multiplayer Online Battle Arena games. In fact you may have even played one of these games and not known the genre. Think of the immensely popular DOTA (Defence Of The Ancients) and you'll know what we're talking about.

There are of course other games such as Heroes Of Newerth and League of Legends that follow this format and in that SMITE is no different. And what is this format? Quite simple - you spawn on one side of the map with your four comrades. There are three lanes or approach routes that lead up to the enemy base. Along the these routes there are defensive structures called towers. Your objective is to break through these defences and kill a minotaur in the enemy camp. Throughout the gameplay sets of computer controlled creeps or minions will spawn and make their way along each of the lanes towards the enemy camp. Minions are expendable creatures and your character - champion, hero or god as it's called in SMITE - will invariably use them to draw fire. By killing creeps or other gods you gain XP with which you can level up and upgrade skills. Speaking of skills each god has unique skill suited to the kind of character. As for the gods, there are mages, tanks, melee fighters, range fighters etc. All of this is boilerplate stuff. So what's the big deal about this game? SMITE deviates from the top-down view and goes into the action with a third person view. Also the action is more immersive as character movement controlled by keyboard instead of mouse control which has traditionally been the norm. The gameplay is super fun. There's a huge variety of gods that you can unlock using favour points that you earn in each match. Each god has his/her specialties. Some are good early game, some become lethal after levelling up considerably, some have nuke skills (with long cooldown periods), some are fast and good for chasing down and picking off weak enemies and for strategising with teammates you have predefined voice commands (besides chat of course). Oh and a bonus thrill - there are Indian gods and mythological beings to choose from! There's Agni, Kali, Vamana and Bakasura for now and the possibility of more Indian gods joining the ranks as the game approaches release. Now the game did spark minor murmurs of controversy abroad concerning the idea of having playable gods but the concept isn't new here or particularly offensive. Remember the indigenously developed PS 2 game Hanuman?

The game is currently in beta and we find very little wrong with it per se. There are balance issues (which MOBA doesn't really?) but the most irritating thing is the wait time before matches. You have to wait on average five to eight minutes while the server finds players and puts you in a match. Hopefully, these will be ironed out by the time the game officially launches. *

Verdict

Getting into the action with WASD controls and the innovative third person camera puts a new refreshing spin on the old DOTAesque format. We liked it for the immersive action, aesthetics, variety in gods, and it's noob-friendliness i.e. the auto buy items and auto upgrade skills option.

MOAR!

- **Developer:** Hi-Rez Studios
- **Platforms:** PC only
- **Price:** Free to play
- **Release Date:** Q1 2013

Minimum requirements

- **Processor:** Core 2 Duo 2.4 GHz or Althon X2 2.7 GHz
- **RAM:** 2GB (XP), 3GB (Vista, Win7)
- **Graphic card:** ATI Radeon 3870 + or Nvidia GeForce 8800 GT +
- **Space:** 10 GB free



Digit 101 - Motherboard

Your motherboard is not as boring as it may seem to be, there is some great technology that goes into making one. Here are some of the common components -

CPU Power
This is the region from where your CPU satisfies its power needs, the socket looks similar to a PCIE power connector but there are differences between them both with regards to the pinout. Check for the pins with corners cut to match the right cable. Variants - 4PIN, 6PIN, 8PIN, 8PIN+4PIN, 2x 8PIN/4PIN.

VRM circuitry
The power for the CPU is channelled via the Voltage Regulator Module. All the power phase designs that you get to read about is implemented in the VRM design.

RAM slots
Fits only one type - DDR1, DDR2 or DDR3. The notch and pin count helps to differentiate between these RAM types. Often colour coded to indicate which slots when occupied work in tandem to create a multi-channel mode. The max till now is 4-channels.

CPU Socket
This is where your CPU is installed. Always switch it on only if a CPU cooler is attached, they tend to get real hot real fast. This one is a LGA2011 socket.



Motherboard Power
The entire motherboard is powered from this socket including certain low power peripherals like LAN cards, expansion cards etc. Often, if a peripheral needs more power then it will carry a separate connector on it, be it 4-pin Molex or SATA power.

CMOS Battery
It helps the CMOS to remember all settings. This is the reason why you don't have to set the date and time at every boot.

PWM Fan header
There'll be multiple such headers across the board. Connect your CPU fan to the one labelled for it to avoid boot-up issues. Can be 2-PIN, 3-PIN or 4-PIN. 3-PIN variants can sense the current RPM of your fan while 4-PIN variants are PWM so they can be better controlled.

PCIExpress x16 slot
Offers the most bandwidth for peripherals. Often used by Graphics cards, RAID cards, Sound cards, PCI-e SSDs etc. Basically supports all PCI-e devices 1x/4x/8x/16x.

SATA data sockets
Depending on the revision and make of the chipset (stock/third-party), you can connect SATA devices here. It's backwards compatible so you can connect old SATA I and II devices too. Certain third-party chipsets don't support ATAPI devices, so check your manual for more information.

PCIExpress x1 slot
Commonly used by LAN cards and similar expansion cards.

PCI slot
An ancestor of the PCI-e slot that offers lesser bandwidth.

PCH
Underneath this heatsink lies the Platform Controller Hub for the motherboard or simply put, the "chipset", it handles communication between all peripherals and the CPU.

POST indicator
Power on self-test LED counter gives the error code if any occur during the boot sequence.

Front Panel Audio header
Audio I/O connector from your front panel goes here.

Power/Reset S/W
Convenient switches for folks who end up using the computer in an open configuration.

FireWire Header
If your cabinet has a front panel firewire connector then it'll be plugged into this 9 pin header. Also known as IEEE 1394.

USB 2.0 Headers
If you feel the need for extra USB ports then connect the headers here. Each header gives you 2 USB ports but power is shared across them. Certain models come with high amperage headers which can charge demanding devices like iPods. Consists of 10-pins.

Front panel switches/lights
This headers is where you hook up the Power s/w, Reset s/w, HDD LED, Power LED which are on the Front Panel of your computer cabinet.

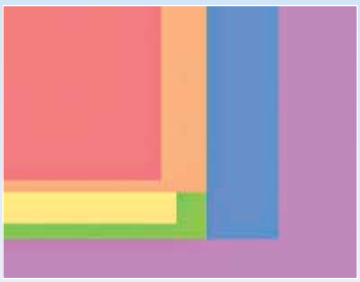
CIR Header
If your cabinet has any Infrared transceivers then this is where you connect it to use it with your computer.

USB 3.0 Header
Connect your USB 3.0 cable here, also supports 2 ports off 1 header. Consists of 20 pins.

CPU sockets

1) Intel
Current - LGA 2011, 1155, 1156, 1366, 775
Future - LGA 1150

2) AMD
Current - AM2+, AM3, AM3+, FM1,
Future - FM2



ATX motherboard size comparison (in mm)

FlexATX	229x191
MicroATX/Embedded ATX	244x244
Mini ATX	284x208
Standard ATX	305x244
Extended ATX (EATX)	305x330
Workstation ATX (WATX)	356x425

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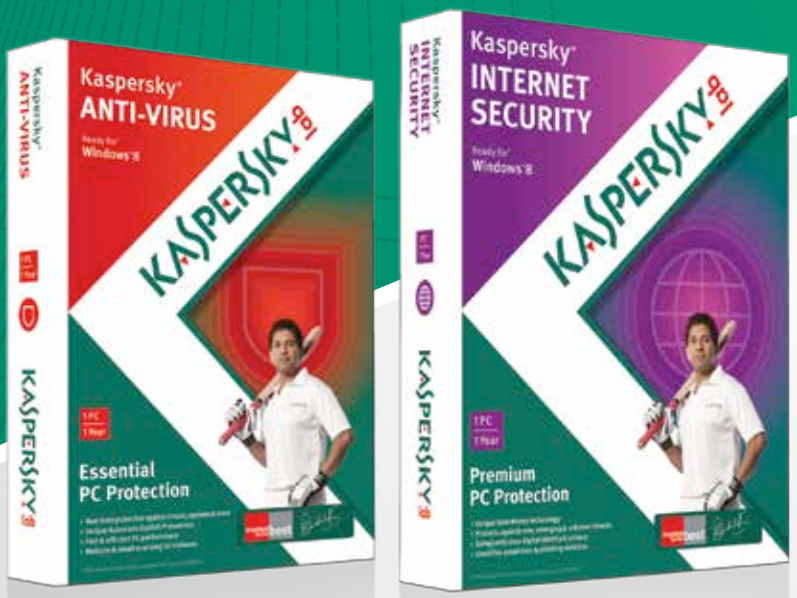
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