

## **Outline for Lenovo S10 Netbook presentation**

**George Kornbluth**  
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10. What is it – specs
11. Features
12. Price
  
20. Performance
  
30. Competition - features & prices & comparisons
  
40. Demonstrations
41. Office
42. U-tube
43. Other vidio
44. Audio
  
50. Other member's notebooks to show & tell or talk about

## Lenovo IdeaPad S10 - 423135U (Black) -- Specs

Sale price: **\$399.00**\*

1. Intel ATOM Processor N270 Single Core ( 1.60GHz 533MHz 512KB )
2. **Genuine** Windows XP Home Edition
3. 10.2 WSVGA AntiGlare TFT with integrated camera 1024x600
4. Intel Graphics Media Accelerator 950
5. 1 GB PC2-5300 DDR2 SDRAM 667MHz
6. 160GB 5400
7. Broadcom 11b/g Wi-Fi wireless
8. Industry Standard Touchpad
9. 2.64 lbs
- 10.3 Cell Lithium-Ion (std.) 6 Cell (available)
11. One year mail-in parts and labor (system battery: one year)

**Competitive Notebooks****PC-Mark05 Score**

<b>Lenovo IdeaPad S10 (1.60GHz Intel Atom, Intel GMA 950)</b>	<b>1,446 PCMarks</b>
Acer Aspire One (1.60GHz Intel Atom, Intel GMA 950)	1,555 PCMarks
ASUS Eee PC 901 (1.60GHz Intel Atom)	746 PCMarks
MSI Wind (1.60GHz Intel Atom)	N/A
ASUS Eee PC 900 (900MHz Intel Celeron M ULV)	1,172 PCMarks
HP 2133 Mini-Note (1.6GHz VIA C7-M ULV)	801 PCMarks
HTC Shift (800MHz Intel A110)	891 PCMarks
ASUS Eee PC 4G (630MHz Intel Celeron M ULV)	908 PCMarks
ASUS Eee PC 4G (900MHz Intel Celeron M ULV)	1,132 PCMarks
Everex CloudBook (1.2GHz VIA C7-M ULV)	612 PCMarks
Sony VAIO TZ (1.20GHz Intel Core 2 Duo U7600)	2,446 PCMarks
Fujitsu LifeBook P7230 (1.2GHz Intel Core Solo U1400)	1,152 PCMarks
Sony VAIO VGN-G11XN/B (1.33GHz Core Solo U1500)	1,554 PCMarks
Toshiba Portege R500 (1.2GHz Intel Core 2 Duo U7600)	1,839 PCMarks

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**Netbook** From Wikipedia, the free encyclopedia

A **netbook** (a [portmanteau](#) of [Internet](#) and [notebook](#), similar to [Netizen](#)) is a type of [laptop computer](#) "designed for wireless communication and access to the Internet"<sup>[1]</sup>.

Like their desktop counterparts ([nettops](#)), netbooks are well-suited for accessing [web-based applications](#), [cloud computing](#), and [rich Internet applications](#), and are less appropriate for running complex or resource-intensive [applications](#)<sup>[2]</sup> directly from the netbook itself.

While the devices range in size from below 5 inches<sup>[3]</sup> to over 13<sup>[4]</sup> and weigh between 2 and 3 pounds<sup>[5]</sup>, at the end of 2008 the typical netbook featured a 3-lb (1.4 kg) weight, a 9-inch (23 cm) screen, wireless Internet connectivity, [Linux](#) or [Windows XP](#), an [Intel chip](#), and a cost of less than US\$400.<sup>[6]</sup>

Netbooks represent a "greener" alternative to larger laptops "thanks to lower power demands, fewer toxic components, and a resource-efficient approach to computing."<sup>[7][8]</sup>

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## History

The current influx of small form-factor laptops categorized as netbooks began in 2007 when [Asus](#) unveiled the [ASUS Eee PC](#), originally designed for emerging markets.<sup>[9]</sup> The 8.9 × 6.5 in (23 x 17 cm) device weighed about two pounds and featured a 7-inch display, a keyboard approximately 85% the size of a normal keyboard, and a custom version of [Linux](#) with a strongly simplified user interface ([GUI](#)), geared toward netbook use.<sup>[10]</sup> Following the [EeePC](#), [Everex](#) launched its [CloudBook](#) in mid February 2008 with a more classical Linux version, [MSI](#) released the [Wind](#), [Dell](#) and [HP](#) both released a "Mini" series (the [Inspiron Mini](#) and [HP Mini](#)), and others soon followed suit. Due to market forces Asus and other netbook makers also began to deliver models that used [Windows XP](#) instead of Linux.<sup>[9]</sup>

By late 2008, netbooks had begun to take [market share](#) away from [laptops](#)<sup>[11]</sup> and overtook iPhone sales by 900,000 units in Q3.<sup>[12]</sup> It is estimated that almost thirty times more netbooks were sold in 2008 (11.4 million, 70% of which were in Europe<sup>[13]</sup>) than in 2007 (400,000),<sup>[14]</sup> and for 2009 sales are expected to grow a further 189% to 21.5 million<sup>[14]</sup>. Sales are projected to increase up to 50 million by the year 2012.<sup>[15]</sup> This trend is compatible with the rise of [web-based applications](#) as well as [mobile networking](#) and, according to [Wired Magazine](#), netbooks are evolving into "super-portable laptops for professionals".<sup>[16]</sup>

At the start of 2009, models based on [ARM](#)<sup>[17][18]</sup> and [PowerPC](#)<sup>[19]</sup> architectures were released, indicating a shift away from [Intel](#) processors like the [Atom](#). (Interestingly, some hybrid models contain both Intel and ARM architectures, where the ARM chip runs some of the applications to increase power efficiency, while Windows compatibility is achieved with the [x86](#) Intel processor.<sup>[20]</sup>) Models using [System-on-a-chip](#) (SoC) architectures also appeared around the same time, resulting in very low-cost systems.<sup>[21]</sup> As every version of Windows requires an [x86](#)-family microprocessor (except [Windows NT](#)-based versions up to and including [Windows 2000](#))<sup>[22]</sup> these systems currently only run Linux or [Windows CE](#).

## Antecedents

The roots of the netbook can be traced to [Nicholas Negroponte](#) and the [One Laptop Per Child \(OLPC\) project](#),<sup>[23][9]</sup> as well as the development and failed launch of the [Palm Foleo](#) by [Jeff Hawkins](#), cofounder of [Palm Computing](#). The Foleo presaged the netbook as a light, small computer and the concept of mobile computing tied to the Internet and connected servers.<sup>[23]</sup>

As well, the *netbook* follows the concept of the [NetPC](#),<sup>[24]</sup> conceived by [Oracle](#) CEO [Larry Ellison](#). The NetPC was designed to make unnecessary the purchase of ever-more-powerful PCs, instead allowing the use of terminal-type PCs with little processing power and no disk drives to run programs on Internet-connected servers instead of on the PC itself.<sup>[24]</sup>

## The term *Netbook*

This article refers to the term "netbook" as a [genericized trademark](#).

A [trademark](#) by definition applies to a specific product or service. A [genericized trademark](#) is a trademark that has become the [colloquial](#) description for a general class of product or service, rather than the specific meaning intended by a trademark holder.

Led by the popularization of small-form-factor laptops by [Asus](#) and then others, the term "netbook" has been [genericized](#) since early-to-mid 2008<sup>[25][26][27]</sup> as an industry classification rather than a reference to a specific product. By April 2008, [Intel](#) had begun officially using the term "netbook" colloquially to recognize a specific sub-category of laptops.<sup>[28][10]</sup> The term has since proliferated.

By contrast, [Psion](#) has previously trademarked the term *netBook* for a specific product,<sup>[29]</sup> and has attempted to enforce the trademark with respect to websites using the term in their site names, i.e., using the term to describe a specific, for-profit service.

A similar genericized trademark is [Crock-Pot](#). Crock-Pot is sold by [Rival Industries](#), but "crock pot" and "crockpot" are common synonyms used by cooks to describe [slow cookers](#).<sup>[30]</sup>

See also: [Psion and the term Netbook](#)

See also: [Trademark](#) and [Genericized Trademark](#)

## Hardware

While specifications and features of netbooks continue to evolve (for example with the introduction of 12-inch screens and [ARM processors](#)), one report at the end of 2008 suggested the typical netbook featured a 3-lb (1.4 kg) weight, a 9-inch (23 cm) screen, wireless Internet connectivity, [Linux](#) or [Windows XP](#), an [Intel chip](#), and a cost of less than US\$400.<sup>[6]</sup> Microsoft will only allow XP to be installed by the manufacturer on netbooks with no more than 1 GB of RAM, requiring Windows Vista otherwise. It is permissible for a user to purchase and install a copy of Windows XP although it may not be supported by newer hardware, and could be difficult or impossible to install.

Netbooks may also forgo [hard](#)<sup>[31]</sup> and [optical disc drives](#), instead using [solid-state](#) storage devices such as internal solid-state hard drives and [SD](#) cards for their small size and weight, robustness, and durability (although solid-state mass storage may often not use less power than traditional disk drives). Software must be downloaded or read from a [flash drive](#) on machines with no optical drive. An external USB optical drive can be used to address this limitation,

although it is usually unnecessary for Linux-based systems. All netbooks on the market today support [Wi-Fi wireless networking](#) and many can be used on [mobile telephone networks](#) with data capability. Mobile data plans are supplied under contract in the same way as mobile telephony.

## Software

Netbooks typically employ [Microsoft Windows XP](#) as their operating system or a netbook-specific variation of [Linux](#) (e.g., [Ubuntu](#)). Microsoft estimates 70% of netbooks employ Windows XP.<sup>[32]</sup>

Microsoft has extended the availability of [Windows XP](#) for ultra-low cost personal computers from June 2008 until June 2010,<sup>[33]</sup> possibly to keep netbooks from gaining market share at the expense of desktops and "value" laptops<sup>[34]</sup> and to avoid increased use of [Linux](#) installations on netbooks.<sup>[35]</sup> Microsoft is also testing<sup>[36]</sup> and has demonstrated<sup>[37]</sup> a 'Starter' edition of [Windows 7](#) (limited to three running applications<sup>[38]</sup>) for this class of devices.<sup>[39]</sup>

Some users install other operating systems (including other distributions of [Linux](#), netbook-specific operating systems like Jolicloud and [Easy Peasy](#), other editions of [Windows XP](#), or Mac [OSX](#)) if compatible with the device's hardware and [application software](#), but users typically rely on online applications and services which do not require powerful [hardware](#) on the local computer.<sup>[40]</sup>

## See also

[Wikimedia Commons](#) has media related to: [Netbooks](#)

Look up *[netbook](#)* in [Wiktionary](#), the free dictionary.

- [Comparison of netbooks](#)
- [Nettop](#), a desktop equivalent of the netbook
- [Operating systems](#)
  - [Linux](#)
  - [Windows XP](#)
- [Netbook Trends and Solid-State Technology Forecast](#). pricegrabber.com. pp. 7. [https://mr.pricegrabber.com/Netbook Trends and SolidState Technology January 2009\\_CBR.pdf](https://mr.pricegrabber.com/Netbook_Trends_and_SolidState_Technology_January_2009_CBR.pdf). Retrieved on 2009-01-28.

## References

1. <sup>^</sup> [Intel.com: Thoughts on Netbooks](#)
2. <sup>^</sup> ["Cheap PCs Weigh on Microsoft"](#). Business Technologies, The Wall Street Journal, December 8, 2008. <http://blogs.wsj.com/biztech/2008/12/08/cheap-pcs-weigh-on-microsoft/>.
3. <sup>^</sup> [UMID Netbook Only 4.8"](#)
4. <sup>^</sup> [CES 2009 - MSI Unveils the X320 "MacBook Air Clone" Netbook](#)
5. <sup>^</sup> [Netbook Trends and Solid-State Technology Forecast](#). pricegrabber.com. pp. 7. [https://mr.pricegrabber.com/Netbook Trends and SolidState Technology January 2009\\_CBR.pdf](https://mr.pricegrabber.com/Netbook_Trends_and_SolidState_Technology_January_2009_CBR.pdf). Retrieved on 2009-01-28.
6. <sup>^</sup> <sup>a</sup> <sup>b</sup> ["Tech's hope in 2009 - or curse?"](#). Fortune Magazine, December 24, 2008, Jon Fortt. [http://money.cnn.com/2008/12/24/technology/fortt\\_netbooks.fortune/index.htm](http://money.cnn.com/2008/12/24/technology/fortt_netbooks.fortune/index.htm).
7. <sup>^</sup> [Why Netbooks Are Greener than Laptops](#)
8. <sup>^</sup> [The Net Impact of Netbooks? It Depends on Who Uses Them for What](#)

9. <sup>^ a b c</sup> ["Netbooks vs. Notebooks"](#). PCMagazine.com, Tim Bjarin, September 12, 2008.  
<http://www.pcmag.com/article2/0,2817,2330274,00.asp>.
10. <sup>^ a b</sup> ["Intel Sets Out Netbook and Nettop Plans"](#). Trustedreviews.com, Edward Chester, 4th Apr 2008.  
<http://www.trustedreviews.com/notebooks/news/2008/04/04/Intel-Sets-Out-Netbook-and-Nettop-Plans/p1>.
11. <sup>^</sup> Ian Lamont (2008-10-04). [""Netbooks" Move Up In Notebook Rankings"](#). *Slashdot*.  
<http://hardware.slashdot.org/article.pl?sid=08/10/04/1827200>. Retrieved on 2008-10-23.
12. <sup>^</sup> NetBookBoards.com (2008-12-12). [""Netbook" Sales Overtake iPhone Sales"](#).  
<http://netbookboards.com/notebooks/netbook-sales-overtake-iphone-sales/>. Retrieved on 2008-12-10.
13. <sup>^</sup> [70% of Netbook sales are in Europe](#)
14. <sup>^ a b</sup> [Analysis: Did Intel underestimate netbook success?](#)
15. <sup>^</sup> Nicole Kobie (2008-08-12). ["Netbook sales to top 50 million by 2012"](#). *PC Pro*.  
<http://www.pcpro.co.uk/news/217917/netbook-sales-to-top-50-million-by-2012.html>. Retrieved on 2008-10-23.
16. <sup>^</sup> [Puny, Trendy Netbooks Are Growing Up to Suit Business Users](#)
17. <sup>^</sup> [LimePC: \\$199 Freescale-powered netbook - Video](#)
18. <sup>^</sup> [Pegatron showcases prototype \\$199 netbook](#)
19. <sup>^</sup> [LimePC linux on Freescale MPC-5121e PowerPC CPU](#)
20. <sup>^</sup> [\[http://www.eetimes.eu/213402291](http://www.eetimes.eu/213402291) ARM processor runs applications in some Intel-based PCs, claims executive]
21. <sup>^</sup> [Windowsfordevices.com Jz47xx SoCs descriptions](#)
22. <sup>^</sup> [Windows NT3.1 was released for Intel x86 PC compatible, DEC Alpha, and ARC-compliant MIPS](#)
23. <sup>^ a b</sup> ["Jeff Hawkins and the World's First Netbook"](#). PCMagazine.com, Tim Bjarin, November 21, 2008.  
<http://www.pcmag.com/article2/0,2817,2335072,00.asp>.
24. <sup>^ a b</sup> ["Beware the Netbook Hype Machine"](#). PCMagazine.com, Lance Ulanoff, November 19, 2008.  
<http://www.pcmag.com/article2/0,2817,2334940,00.asp>.
25. <sup>^</sup> [Google Trends for 'netbook' in 2008](#)
26. <sup>^</sup> <http://www.engadget.com/2008/12/28/psion-says-its-only-going-after-those-profiting-from-the-term/>
27. <sup>^</sup> <http://www.guardian.co.uk/technology/blog/2008/dec/24/psion-netbook-threats>
28. <sup>^</sup> ["Thoughts on Netbooks"](#). Intel.com, Paul Bergevin, March 03, 2008.  
[http://blogs.intel.com/technology/2008/03/thoughts\\_on\\_netbooks.php](http://blogs.intel.com/technology/2008/03/thoughts_on_netbooks.php).
29. <sup>^</sup> [Psion netbook news release](#)
30. <sup>^</sup> ["Is Slow Cooker Synonymous with Crock-Pot?"](#). *Food News Service*. <http://www.ochef.com/764.htm>. Retrieved on 2008-01-24.
31. <sup>^</sup> [What is a Netbook computer?](#)
32. <sup>^</sup> [Microsoft Missing Netbook Growth as Linux Wins Sales \(Update2\)](#)
33. <sup>^</sup> [Microsoft Announces Extended Availability of Windows XP Home for ULCPCs](#), April 3, 2008 Press release
34. <sup>^</sup> [Microsoft to limit capabilities of cheap laptops](#), IT World May 12, 2008
35. <sup>^</sup> [Microsoft U-turn to stop Linux dominating ultra low cost PC](#)
36. <sup>^</sup> [Microsoft seeking Win 7 testers for netbooks?](#)
37. <sup>^</sup> [Ars@PDC: Steven Sinofsky on Windows 7 and netbooks](#)
38. <sup>^</sup> [Windows 7 to Ship In Six Different Versions](#)
39. <sup>^</sup> [Confirmed: Windows 7 'netbook edition'](#)
40. <sup>^</sup> [Shoot For the Clouds](#)

## External links

- [The rise of the Netbook](#)
  - [Netbooks hit right spot for schoolchildren](#)
  - [The State of the Netbook, Part I: WEee have lived before](#)
  - [How to buy a mini laptop or netbook](#) - At TheMiniLaptop.
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## Lenovo IdeaPad S10 Review

by JerryJ - 9/28/2008

### Build and Design

The design of the IdeaPad S10 is unsurprisingly similar to other netbooks we've seen in recent months, but Lenovo has managed to include a few pleasant surprises. What first appears to be a giant beefy hinge for the 10-inch display is actually the 3-cell battery with a small hinge on either side of the tiny laptop. Overall, the look is quite nice. When I took the S10 with me and was using it in public with my 2-year-old daughter nearby several other parents asked me if the S10 was a toy laptop for my daughter. That is unfortunate since, as we are about to mention, the S10 is a remarkably capable ultraportable laptop.

The build quality of the IdeaPad S10 is extremely solid for a subnotebook of this size and weight. The construction is mostly plastic but all of the plastics feel strong enough to handle being tossed around inside a bookbag.

In terms of upgradeability, the S10 is much easier to upgrade than many netbooks currently on the market. Some of the netbooks we've seen to date require complex disassembly in order for you to get to the storage drive, system RAM, or wireless cards. Even worse, some other netbooks have slots for upgrades but no connections on the motherboard so it is impossible to upgrade them. This is not the case with the S10.

### Keyboard and Touchpad

Most low-priced, full-size notebooks currently on the market feature poorly built keyboards that show significant flex/bounce when typing pressure is applied. Thankfully, most netbooks have remarkably firm keyboards due to the fact that the chassis is so small there isn't much empty space inside the notebook for the keyboard to flex or bounce.

The keyboard on the IdeaPad S10 is less cramped than what we've seen on most 7-inch and 8.9-inch netbooks, but the S10 keyboard is still extremely compact. Most touch typists will probably need some time to figure out proper finger placement on the keyboard in order to avoid making typos. Again, this is nothing new for netbooks, which usually require you to use a "hunt and peck" style of typing rather than traditional touch typing methods. Bottom line, this keyboard isn't designed to be used as a primary/main computer. For users who are considering the S10 as their "main computer" in their home or office, a full-size external keyboard and external mouse are recommended.

The touchpad design, while smaller than a traditional laptop touchpad, is surprisingly nice for a budget netbook. The touchpad in our review unit was a Synaptics touchpad with excellent sensitivity, responsiveness, and smooth tracking. The touchpad buttons are located in the correct position and have nice, deep, well-cushioned presses with a satisfying "click" when pressed. A nice addition to the touchpad was support for Synaptics multi-touch gestures which allow you to do things such as zoom in or zoom out simply by "pinching" or "spreading" the touchpad with your fingertips.

### Display

The matte 10.2" WSVGA (1024x600) AntiGlare TFT display on the S10 is nice and vibrant with rich colors and good contrast. The white levels are very clear and the matte surface prevents glare and reflections which help make the screen easier to read outdoors under bright sunlight.

Horizontal viewing angles are good, so you and a friend won't have trouble watching a movie on the 8.9-inch screen at the same time. Vertical viewing angles are acceptable, but colors do tend to become darker and slightly inverted when viewed from below.

## Ports and Features

Port selection was pretty impressive on the S10 compared to other netbooks, with the standout features being an ExpressCard slot for additional expansion and built-in Bluetooth for using an external mouse and keyboard without needing to sacrifice one or more of the two USB ports.

In fact, if there isn't much to complain about here other than the fact that the S10 has only two USB ports. However, if we had to choose between a third USB port or an ExpressCard slot and Bluetooth we will gladly sacrifice the third USB port. Here is a quick tour of what you get:

Front: No ports, just indicator lights and the speakers.

## Performance

This Intel Atom based netbook won't be breaking any speed records, but it performed more than adequately for normal activities. Windows startup took less than 30 seconds and internet browsing, word processing, and even photo editing tasks were downright "snappy." While the 3D graphics benchmark numbers aren't particularly impressive, it's important to keep in mind that netbooks are not designed for playing computer games. The S10 and similar netbooks are mobile internet portals and productivity tools for getting some quick work done without needing to carry a giant laptop.

*PCMark05 measures overall system performance (higher scores mean better performance):*

Notebook	PCMark05 Score
<b>Lenovo IdeaPad S10 (1.60GHz Intel Atom, Intel GMA 950)</b>	<b>1,446 PCMarks</b>
Acer Aspire One (1.60GHz Intel Atom, Intel GMA 950)	1,555 PCMarks
ASUS <a href="#">Eee PC</a> 901 (1.60GHz Intel Atom)	746 PCMarks
<a href="#">MSI Wind</a> (1.60GHz Intel Atom)	N/A
ASUS <a href="#">Eee PC</a> 900 (900MHz Intel Celeron M ULV)	1,172 PCMarks
HP 2133 Mini-Note (1.6GHz VIA C7-M ULV)	801 PCMarks
HTC Shift (800MHz Intel A110)	891 PCMarks
ASUS Eee PC 4G (630MHz Intel Celeron M ULV)	908 PCMarks
ASUS Eee PC 4G (900MHz Intel Celeron M ULV)	1,132 PCMarks
Everex CloudBook (1.2GHz VIA C7-M ULV)	612 PCMarks
Sony VAIO TZ (1.20GHz Intel Core 2 Duo U7600)	2,446 PCMarks
Fujitsu LifeBook P7230 (1.2GHz Intel Core Solo U1400)	1,152 PCMarks
Sony VAIO VGN-G11XN/B (1.33GHz Core Solo U1500)	1,554 PCMarks

Toshiba Portege R500 (1.2GHz Intel Core 2 Duo U7600)	1,839 PCMarks
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*wPrime processor comparison results (lower scores mean better performance):*

<b>Notebook / CPU</b>	<b>wPrime 32M time</b>
<b>Lenovo IdeaPad S10 (Intel Atom @ 1.60GHz)</b>	<b>127.172 seconds</b>
Acer Aspire One (Intel Atom @ 1.60GHz)	125.812 seconds
ASUS Eee PC 901 (Intel Atom @ 1.60GHz)	123.437 seconds
<a href="#">MSI Wind</a> (Intel Atom @ 1.60GHz)	124.656 seconds
ASUS Eee PC 900 (Intel Celeron M ULV @ 900MHz)	203.734 seconds
HP 2133 Mini-Note (Via CV7-M ULV @ 1.6GHz)	168.697 seconds
ASUS Eee PC 4G (Intel Celeron M ULV @ 630MHz)	289.156 seconds
ASUS <a href="#">Eee PC</a> 4G (Intel Celeron M ULV @ 900MHz)	200.968 seconds
Everex CloudBook (VIA C7-M ULV @ 1.2GHz)	248.705 seconds
Fujitsu U810 Tablet PC (Intel A110 @ 800MHz)	209.980 seconds
Sony VAIO VGN-G11XN/B (Core Solo U1500 @ 1.33GHz)	124.581 seconds
Sony VAIO TZ (Core 2 Duo U7600 @ 1.2GHz)	76.240 seconds
Dell Inspiron 2650 (Pentium 4 Mobile @ 1.6GHz)	231.714 seconds

*3DMark06 comparison results:*

<b>Notebook</b>	<b>3DMark06 Score</b>
<b>Lenovo IdeaPad S10 (1.60GHz Intel Atom, Intel GMA 950)</b>	<b>N/A</b>
Acer Aspire One (1.60GHz Intel Atom, Intel GMA 950)	122 3DMarks
Sony VAIO TZ (1.20GHz Core 2 Duo U7600, Intel GMA 950)	122 3DMarks
HP dv2500t (2.0GHz Intel Core 2 Duo T7300, NVIDIA GeForce Go 8400M GS 128MB)	1,055 3DMarks
Sony <a href="#">VAIO FZ</a> (2.0GHz Intel Core 2 Duo T7300, Intel X3100)	532 3DMarks
HP dv6000t (2.16 GHz Intel T7400, NVIDA GeForce Go 7400)	827 3DMarks

*3DMark03 Graphics Performance Benchmark (higher scores indicate better performance):*

<b>Notebook</b>	<b>3DMark03 Results</b>
<b>Lenovo IdeaPad S10 (1.60GHz Intel Atom, Intel GMA 950)</b>	<b>569 3DMarks</b>
Acer Aspire One (1.60GHz Intel Atom, Intel GMA 950)	751 3DMarks
<a href="#">MSI Wind</a> (1.6GHz Intel Atom, Intel GMA 950)	589 3DMarks
Lenovo ThinkPad T60 (2.16GHz Intel Core 2 Duo T4400, ATI X1400 128MB)	4,622 3DMarks

## Speakers and Audio

The speakers on the IdeaPad S10 are reasonably impressive for a budget netbook. While the two tiny stereo speakers located on the front edge of the netbook produce good volume levels with minimal distortion and acceptable range, it's worth mentioning the somewhat odd placement.

Since the speakers are located on the front edge of the notebook the sound isn't being directed up and toward the user when the S10 is used as a laptop. In fact, our staff usually refers to laptop speakers with this type of placement as "crotch speakers" because the speakers are directing sound to your waist rather than your ears. Given the compact design of the S10 there weren't many other places for the speakers to go, but we'd like to see a different speaker location on next year's model.

The headphone jack on the S10 works well with the three different brands of earphones I used during the test. No static or other noise was noticed through the jack besides imperfections in the audio source itself.

## Heat and Noise

As we continue to see in our labs, nearly all of the Intel Atom-based netbooks produce a reasonable amount of heat while running. The IdeaPad S10 remained on par with the competition in this regard. Even under normal conditions such as surfing the web, typing documents, or downloading email attachments, exterior temperatures peaked above 100 degrees Fahrenheit after more than 25 minutes of use. Granted, this level of heat isn't horrible by any means, but it might be a little uncomfortable on your lap after an hour.

The hottest spot on this netbook was the area around the hard drive and RAM. The external temperature readings below (listed in degrees Fahrenheit) were recorded while browsing the Web and running two HDTune tests in a row after approximately 30 minutes of use:

In terms of noise, our review unit of the S10 remained quiet during most of the testing period ... except during graphics benchmarks. When the relatively weak integrated graphics were stressed during our review the internal cooling fan kicked into high gear. The fan noise wasn't horrible by any means, but it would be loud enough to get a teacher's attention in a quiet classroom. Again, this only happened when stressing the S10's graphics, so it shouldn't be an issue for casual web browsing.

## Battery

Under normal use, backlight at 100 percent and using wireless for web browsing and watching several streaming videos at 75 percent volume, the S10 managed to deliver three hours and 43 minutes of battery life. This is similar to what we've seen from Atom-based netbooks with 3-cell batteries, so there isn't much to complain about here. However, as we've said in the past when reviewing other netbooks, these tiny laptops would make excellent mobile companions if they just had an option for a 6-cell or 8-cell battery for all-day use. In any case, lowering the screen brightness and turning off the wireless card should provide enough battery life for prolonged use with the 3-cell battery.

## Conclusion

Is the Lenovo IdeaPad S10 the best netbook currently on the market and the best value for your dollar? Well, the answer isn't simple, particularly considering the way that new netbooks seem to arrive every week. The S10 does several things right that we wish more manufacturers did with their netbooks.

First, Lenovo was smart enough to realize and ExpressCard slot is important if you want to make a netbook useful. The ExpressCard slot gives you the option of adding more USB ports, Firewire, eSATA, or any number of other ports to the S10. More importantly, the ExpressCard slot makes it easy to add a broadband modem to the S10 so that you can stay connected to the internet anywhere with cell phone reception.

Second, the S10 has built-in Bluetooth. Frankly, we're amazed that every netbook doesn't come with built-in Bluetooth since it allows you to connect devices to the netbook without using one of the USB ports.

Last, but certainly not least the S10 combines the surprisingly capable Intel Atom processor with a standard hard drive. While budget SSDs are nice, most consumers can't get over the limited storage capacity of SSDs and that is why hard drives still have a place in netbooks.

On the other hand, the S10 still suffers from some of the same limitations as other netbooks: relatively high temperatures, small battery, and a cramped screen and keyboard.

Ultimately, the Lenovo IdeaPad S10 is a great ultra-portable laptop priced below \$500. However, if you're willing to put up with a bulkier notebook then it's still possible to find a computer with more features and performance for almost the same price on sale.

## Pros

- Small and light
- Easy to use
- Very well built and durable
- Easy to upgrade RAM, and hard drive
- Comes with Bluetooth
- ExpressCard slot offers extra expansion options

## Cons

- Gets a little hot
- Only two USB ports
- 3-cell battery is nice, 6-cell battery would be better (available)

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**Interesting Netbook comments:**

*I still don't understand the appeal. Why buy a netbook when for \$100 more you can buy a full fledged laptop with a 15" screen, more RAM and a 64-bit dual core chip?*

One word: *Vista*. I'm betting that the re-emergence of (and new lease on life for) XP can at least partly explain the netbook's current popularity.

I am surprised at the PC vendors. The iPhone has shown that mobile computing has legs but it has to be more than technology it has to be an experience.

1. Lightweight — to older folks.
2. NO MSFT VISTA — 'NUFF SAID.
3. Lower power use.
4. Less expensive.
5. Not related to Fannie, Freddie and Barney Frank.

"laptops can never be too small nor too light nor have a long enough battery".

One word..."Small Size & Lite Weight"...that's why.

Most important .. IT FITS IN YOUR PURSE!! So it's with you always..

As for NVidia, they are fixing to launch their Ion platform, which pairs an Intel Atom cpu with their Geforce 9400 mobile video chip. Result? Something the size of a paperback book that can play HD video on the cheap. It's getting lots of press and has many people excited.

I have a 2-pound Asus EeePC, and I take it places I wouldn't ordinarily schelp a laptop. I have the Linux version, but I'm something of a Unix idiot savant. It runs Skype and can substitute for a phone but I haven't really used it for that purpose—though I plan to, the next time I'm abroad in a costly call-home country and don't want to collect local SIMs.

Why spend money on such a netbook? Why not pay another \$50 or \$100 for a "real" laptop? The answer is true portability. If you've ever lugged a \$400 laptop on a long trip, you've probably regretted it. Netbooks are VERY lightweight, small, and rugged, and do everything you really "need" a computer to do.

My netbook (MSI Wind) is my home PC. With an external keyboard, mouse and monitor, it's indistinguishable from any other computer at my desk, but I unplug a couple of cables and I've got a wireless notebook with a 5-hour real world battery that's the size and weight of a hardback book. A bottom-feeder 15" notebook may only cost an extra \$100, but they are a pain to lug around and are too big to comfortably use in an airplane coach seat even before the battery gives out after 2 hours.

And because it runs XP instead of the bloated, processor-hogging Vista, I can simultaneously run everything I want at one time with excellent performance. For example, I currently have open Firefox, Skype, a bittorrent client, an open-source image editor and OpenOffice Writer.

Considering the price, size, weight and battery life, this netbook is one of the best computers (if not the best) I have ever worked with in the past 20 years. Hyperthreaded Atom 1.6 GHz has proven to be more than adequate. Considering that it consumes roughly 10% of power when compared to a Core 2 Duo Intel chip, I think Atom chip makes perfect sense for most of the users. A 5,400 RPM 160 GB hard disk makes me wonder - what am I missing? I tried importing 200 MB worth of pictures (roughly 100) in to F Spot photo manager, and the performance was good. I mean not as good as on my desktop (with AMD Athlon Dual Core 2.6 GHz and a 7,200 RPM hard disk) but much better than I have anticipated. My photo hosting site offers full screen slideshows, I tried that on EEE PC and it works perfectly.

Pay \$250 for a 120gb Ipod?, for another \$200 have major computing power.

I got myself a Lenovo S10 IdeaPad last month- and I love it. It does everything my five-year-old laptop does- but faster. I love it. For me, it's a 'pc companion', chair-arm computer, and travel companion. I loaded it up with Open Office and Firefox, and it works quite well. I use my wi-fi connection at home to visit all the little web-links that pop up on Discovery and PBS while I'm watching. It's a real multi-media experience.

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## ***The Blackberry Storm Is Not a Notebook (And Neither Is the iPhone)***

December 31, 2008 by K.T. Bradford

I will admit, I only clicked on the link to Cnet Asia's interview with RIM co-founder Mike Lazaridis because the headline said "The Storm is a Notebook, says RIM's founder". Nevermind that the interview is not really about that – it literally takes up one very short exchange – Cnet Asia knew this statement would get a lot of attention.

Forgive me, I'm about to give them some attention.

I can't help it. It bothers me when tech people say things like this. I'm sure that Lazaridis knows the Blackberry consumer base really well. But he does not seem to get the netbook consumer base. He makes the same mistake Steve Jobs made in thinking that people only use netbooks to access the Internet and email. More and more I'm starting to agree with Brad (of Liliputing) that the netbook name gives a false impression of the uses for mini-notebooks.

Of course, people use them to access the internet and email, but that is not all they're good for. Lazaridis seems to discount the need for screen real estate, the ability to run "full versions" of programs – not just ones designed for tiny screens – and a keyboard experience similar to that of a regular notebook. I can write and read on a smartphone screen in a pinch, but I can do so much more on a netbook and for a longer period of time.

The question that prompted Lazaridis' statement was: Would you consider netbooks as your competitors?

I think this may be the key to understanding why RIM or Apple would attempt to make the case that their handheld devices are netbooks or like netbooks – they do see them as competition. I don't think they should worry too much about it.

A netbook is wonderful and portable, but I don't want to pull it out every time I need to make or receive a call. Plenty of mobile professionals have ultra-portables, yet still sync up their contacts and calendar to a Blackberry or smartphone. Being able to answer an email quickly with a Blackberry while walking down the street is convenient and not something easily done by a netbook. And, until someone puts an accelerometer on a netbook, iPhone games will continue to be more fun on the go.

The Bottom Line: Netbooks are laptops – small, yes, and not as powerful as their larger siblings. But laptops nonetheless. A Blackberry is not a laptop. An iPhone is not a laptop. Nor do we want them to be !!

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