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Acer Aspire Revo
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Acer Aspire Revo Nettop Review

NVIDIA Ion performance for budget-minded consumers

Late last year, NVIDIA surprised everybody with the launch of its Ion platform, a concept that was to forever bind an energy-efficient GeForce motherboard GPU with one of Intel's most successful products to date, the Atom processor. Although the platform was appreciated by leading industry players like Microsoft and Google, system vendors were late to announce a product that would take advantage of the features made available by NVIDIA's new pride and joy. However, after months of anticipation, the first NVIDIA Ion-based product made its official debut, with Acer being the first system vendor to announce one. Although it was initially rumored as the Acer Hornet, the first NVIDIA Ion product was launched as the Aspire Revo, a small-sized nettop capable of providing users with a true home entertainment solution. The desktop computer system featured a design similar to that of Nintendo's much-hyped Wii gaming console, while providing the end user with a choice for a low-power PC, capable of delivering support for some gaming applications, Microsoft Windows Vista and 7 operating systems, as well as 1080p video. Even if Acer initially outed the product back in early April, the nettop had some difficulties becoming available to the market. Reviews came in late, as they were published towards the end of April. Still, after a few months with Aspire Revo out in the open, Acer can now observe how the collaboration with NVIDIA will provide it with an increased market share in the nettop segment. On that note, we had our first chance at putting the Ion-based Aspire Revo through its paces earlier this month, an event we waited for with great anticipation. Some of us here at Softpedia were already thinking of our next computer purchase, setting our eyes one some of these new low-power PCs that could provide for an excellent second PC solution. Now, without further ado, we should head on the review itself, pointing some of the pluses and minuses of the low-power PC. [[BREAK=Hardware Specifications and Testing Methodology]]Technical Specifications

Motherboard: NVIDIA MPC79

CPU: Intel Atom 230 1.6GHzGPU: NVIDIA GeForce 9400Memory: 2GB DDR2Storage: Hitachi Travelstar 160GB (HTS543216L9A)Operating system: Windows Vista Home Premium/Windows 7I/O: 8 x USB 2.01 x HDMI1 x VGA1 x eSATA1 x Ethernet LAN1 x Kensington Lock1 x Mic-In/Audio-OutFeatures: Stand, VESA mount One of the main things that NVIDIA has insisted on since the debut of its Ion platform is that, unlike other Intel-only based systems, its solution could actually enable computer users to do a bit of gaming, while maintaining the low-power consumption specification.

Although this is certainly not the case for some of those high-end gaming applications such as Crysis, the Ion platform can certainly be used for gaming, which translates into the fact that the Acer Aspire Revo can also be considered a gaming-ready system.

However, gaming is probably not a priority for those considering buying one of Acer's Ion-based nettops, which is why we left the gaming benchmarks for a future encounter with an NVIDIA Ion nettop. Nevertheless, we put the Aspire Revo through its paces, testing some of its main features in both Windows Vista and Windows 7 environments. But before we head on to the results, we should clarify a couple of things.

First of all, although the Aspire Revo is already available on the market, we had to make do

with an engineering sample that had some issues when trying to boot into Windows 7. This problem appeared randomly, which is why we associated it with the fact that we weren't testing a market-ready product.

Secondly, we were keen on finding out if there were any performance differences under the two operating systems, especially since the upcoming Windows 7 OS will be optimized for GPUs, rather than CPUs.

Finally, we think that the Aspire Revo was designed as an HTPC system that could also provide users with an everyday computing experience, which is why we tested it accordingly. [[BREAK=Hardware and real-life performance]] *Design and exterior* One of the main things that has been said about the Aspire Revo since its release is that it resembles one of the world's most recognizable gaming consoles, the Nintendo Wii. Since we laid our eyes on the small nettop, we were sure that Acer's design team found a bit of inspiration in the successful gaming console, as the Aspire Revo does resemble the said gadget, in some aspects. It is slim and can be installed vertically, while most of the connectivity options are featured on the rear of the system. Nevertheless, the Aspire Revo manages to distinguish itself with an interesting design that allows it to be installed in a number of ways, especially considering the VESA mounting support.

On the exterior, users will be provided with quick access to all of the system's connectivity options, which are quite impressive. Despite the system's small form factor, the platform allowed Acer to provide users with an HDMI port, media card reader and even and eSATA port. Aside from that, you'll get your usual array of connectivity ports, also including a small Kensington lock and the power connector. On two sides of the system, there are a couple of ventilation holes, but only one of them is designed for the system's fan, while the other is just near the system's hard disk drive, at the bottom of the Revo, if placed vertically.

 We already stated that we had to make do with an engineering sample, which is why our next issue might not affect future users of the Revo nettop. The system is equipped with a transparent stand that can be used to install the nettop in a vertical position. Unfortunately, we quickly found out that the oval-shaped stand, which featured an anti-skid rubber pad, could not hold the Aspire Revo into place. There's no immediate peril for the system's integrity, but the overall feeling is that it's a loose end, something that still needs some work done.

 Inside the Aspire Revo Opening up the Aspire Rev nettop, which can be easily customizable with a different storage solution or increased memory capacity, is a rather simple process if you take into consideration a few aspects. On the bottom side of the system, just where you connect the stand, there's a single screw that can easily be removed. After removing the screw, the chassis will loosen up and the side of the Revo can be snapped off after disengaging a few plastic clips. Don't get confused by the chassis' exterior design, which could trick you into believing that you have to remove only the blue-colored part. The side of the Aspire Revo also includes the white part. The motherboard of the Aspire Revo has clearly been customized to fit the shape of the chassis. However, upgrading the system's components shouldn't be that difficult, even for inexperienced users. The SO-DIMM memory modules are placed near the system cooler, which is designed to deliver cooling to both the Intel Atom CPU and the NVIDIA Ion chipset. The 2.5-inch SATA hard drive has been tightly screwed into place, but can also be upgraded with higher-capacity storage solutions. Overall, the inside of the Aspire Revo looks pretty clean. On that note, we have a strong feeling that, at some point, a modding

enthusiast will tear the Aspire Revo apart and try to bring their own personal touch to the design of the system. *Benchmark Results* As we do with the majority of computer systems that we have a chance at testing, here at Softpedia, the Aspire Revo was put through a couple of runs of our usual benchmark applications. However, before we put the Revo through the regular tests, we did want to test out some of those CUDA-enabled applications that NVIDIA had been talking about, in both Windows Vista and Windows 7 operating environments. This includes video playback on both a standard LCD 20-inch and a 27-inch HD Ready TV.As we found out after a couple of clips, playing full HD 1080p videos on Acer's Aspire Revo nettop can be a pleasure, especially when the videos are stored on a local hard drive. The GeForce Ion chipset had no issues in providing us with the best quality in both Windows Vista and Windows 7 operating systems. There were no performance issues when using either the 20-inch monitor or the 27-inch HD Ready TV. However, the Atom processor had some problems when trying to play HD videos form online sites like YouTube. Beyond the video playback on an external display, we also wanted to see how NVIDIA's CUDA technology would benefit users of the Ion-based system. As you probably already know, CUDA is a programming language that allows application developers to optimize their software for the parallel computing capabilities of the GeForce graphics processing unit. A number of such applications have already been made available on the market, including some really cool ones like Badaboom and vReveal. We had the chance to test the trial versions of these two applications on the Aspire Revo, on both Windows Vista and Windows 7 operating systems. With Badaboom, the NVIDIA GPU was able to transcode a full HD 294MB clip from Bolt in about 4min and 20 seconds, with results being similar in both operating systems. This basically means that you'll be able to use your low-power Aspire Revo to put HD videos on your portable media device, or any other media-capable device, in a matter of minutes. Obviously, having a better desktop PC with better graphics can deliver an increase in performance, but the Aspire Revo proves to be an excellent choice, given its other features.
[IMG=21][IMG=22][IMG=23] [IMG=24]vReveal is an application that has been designed to use the graphics processing unit, in this case, NVIDIA's GeForce GPUs, to enhance certain videos that suffer from poor quality, due to various factors. Because the Aspire Revo comes equipped with a GeForce GPU of its own, we put it through a run with a trial version of vReveal. We found out that, despite the fact that the performance wasn't its strong point in vReveal, the application could still be of great use to those home users that want to upgrade the quality of their personal videos. For the final part of our testing, we put the Revo through a couple of runs in Futuremark's 3DMark and PCMark Vantage benchmark applications, using both Windows Vista and Windows 7 operating systems. Although the performance wasn't high, the desktop had no issues in getting the job done. One of our main surprises was the performance difference in Windows 7, compared to Windows Vista. 3DMark Vantage is where you'll see the biggest difference, which will probably make you want to upgrade to Windows 7 as soon as possible.
[IMG=25][IMG=26][IMG=27][IMG=28] [[BREAK=Conclusions]]The Good
[IMG=31]There's no lying about it, we liked the Aspire Revo, we liked very much. The integration of NVIDIA's Ion chipset makes all the difference, as it even makes the slow Atom processor look ready to step up in the world. The system offers a great level of energy efficiency, a quiet working environment and the computing power you need to get the job done. I'm here talking to all those home computer users that have a desktop PC for surfing the Internet, watching movies, playing music, doing a bit of gaming and generally using the PC for low-performance applications. The Ion chipset is probably Revo's biggest quality, but we do have to point out that Acer did a great job with the exterior design of the system. It looks ready to be installed in almost any part of your home. Also, having the possibility of upgrading your small PC is a nice feature that we highly appreciate. The Bad Throughout the review, we did point some things that we didn't like about the Revo, including that not-so-stable stand that the PC vendor included in the package. Also,

due to the fact the chassis features a glossy design, it will be subject to a lot of fingerprint smudging. Aside from that, we could say that the Revo's biggest setback is its Atom processor, but then again, the Atom processor is what keeps the system to its low-power requirements. Overall impressions We had been anxiously waiting for the Aspire Revo to arrive in our labs even since its was first rumored about. It was certainly a pleasure of getting up close and personal with it and have it put through its paces. We aren't afraid to recommend it, but we do have to point out that if you are interested in the Aspire Revo, you should probably wait until Microsoft officially takes the wraps off its next-generation operating system. That's because the Windows 7 and NVIDIA Ion platform appear to provide you with the best computing experience for this segment. [IMG=30][IMG=31][IMG=32] We are waiting for other NVIDIA Ion-based devices to come along, but we are more interested in some of those NVIDIA Ion 2-based solutions, especially if they provide support for VIA's own processors, which will make a nice alternative to Intel's own chips.