Gigabyte U2442N Ultrabook Review

Review | Test Results | Details | Specifications | 1 Comment

Greg Hook looks at Gigabyte's entry into the world of Ultrabooks

Introduction

Given the continuing year on year rise in tablet sales, mostly due to Apple's iPad, the poor laptop computer is getting left behind. In the face of an 'instant-on' mobile device that can offer most of the functions that many users need from a laptop, sales figures are dropping each year. But in 2012 the Ultrabook was released to combat this decline. Back then to be classed as an Ultrabook the device had to be less than 23mm thick and resume from hibernation in a maximum of 7 seconds and of course use Intel micro-architecture. If it didn't meet Intel's Ultrabook specifications then it couldn't be marketed as such. The hope being that with models offering touchscreen capabilities (particularly with the introduction of Windows 8) and an almost instant on function, the sales being lost to tablet devices would start to be clawed back.

The idea was good but sadly due to the huge cost premium that an Ultrabook demanded over the equivalent specified laptop and also being significantly more expensive than tablets, the initial expected sales of 20M for 2012 were soon revised down to 10M. Thanks to subsequent cost reductions and improvements, the latest forecasts for 2013 are for excellent growth in the Ultrabook market. Gigabyte have tapped into this growing market and added to their excellent range of laptops with the U series range of Ultrabooks. These offer 14" screens in a variety of configurations and price ranges.

The one we have for review is the Gigabyte U2442N Ultrabook which offers a 14" 1600 x 900 HD+ screen, an Intel dual core i5-3210M Processor, 8GB ram, dual storage in the shape of a 128GB SSD and 750GB HDD and Nvidia GT640M graphics. The U2442N is not just aimed at the Ultrabook market, but also those wanting a high performance device for gaming and multimedia. Let's see just how well it performs...

Summary

This sleek, stylish and impossibly thin Ultrabook certainly appears to tick all the boxes. At just 21mm thick and weighing just 1.69Kg it's amongst the lightest laptops/Ultrabooks that we have ever reviewed here at AVForums and certainly won't weigh you down. From opening what Gigabyte call the 'Hairline-Brushed Aluminum Champagne Gold Cover' to revealing the silver matt interior and backlit keyboard, it certainly looks a classy bit of kit. But looks are not everything, it's what's inside that counts, and this Ultrabook it doesn't disappoint.

The 3rd generation Intel dual-core i5 processor runs swiftly along at a turbo speed of 3.1Ghz, together with 8GB ram. A most welcome dual storage system offers a speedy 128GB Lite-on SSD together with a 750GB HDD meaning storage should not be an issue. We then get to the key component of this system, the Nvidia GT640M graphics chip with 2GB of VRAM. The onboard graphics alone wouldn't have been enough to justify the £900 price tag, but at a 1600 x 900 resolution the GT640M graphics chip really impressed in the gaming tests we ran - particularly in light of some rather dismal benchmark test results. Testing with Battlefield 3 on low settings and Call of Duty: Black Ops 2 on maximum settings, we had perfectly playable average frame rates in the 40s but it was Max Payne 3 that really impressed, with an average frame rate of 58.

For multimedia and gaming use, this Ultrabook offers everything you should need. It's by no means the fastest 14" Ultrabook/Gaming Laptop and don't be fooled into thinking you will be able to play the latest games on high settings, but with a bit of compromise in the quality

Gigabyte U2442N

Laptop
Suggested price: £897

Reviewed 10th June, 2013 by Greg Hook

Key Features

- 14" HD+ 1600x900 LED Backlight Display
- Intel Dual Core i5-3210M Processor at 2.50Ghz and 3.1Ghz in Turbo Mode
- Nvidia GT640M 2GB Dedicated Graphics
- 8GB RAM
- 128GB mSATA SSD and 750GB HDD

Pros

- Good value for money
- Excellent build quality
- Very quiet even during gaming
- Very portable and lightweight at just 1.69Kg

Cons

- Very poor on-board speakers
- Matte screen may not be to everyone's liking

settings you certainly shouldn't be disappointed. Our time to desktop test gave a boot time of 27 seconds from cold, but the Ultrabook feature that is more relevant here is the resume from hibernation time. This is the feature that is most impressive with Ultrabooks and with the U2442N it resumes in just 9 seconds. Not quite the 7 seconds specified in Intel's Ultrabook specifications but still very quick. No longer will you moan at having to wait ages whilst your computer boots up!

It's not all positives though as due to the tiny thickness of the device, you do not get any type of Blu-ray or DVD drive. Although an external drive can currently be found for just £20, so that shouldn't be a major stumbling block. Another negative are the hideously poor quality on-board speakers, despite including THX TruStudio Pro Technology which Gigabyte claims to offer groundbreaking audio performance 'by effectively eliminating sound distortion, enhancing volume and reinforcing even the smallest details of the sound'. This would be fine if the speakers could cope but they can't. Listening to music for example, the tinniness is at a level that becomes painful to the ears. Headphones are definitely recommended here.

For £900 (or as low as £805 if you shop around) this system offers excellent value for money, especially compared to Dell's chunky Alienware M14x which with similar components costs well over £1,150. With its extremely thin Ultrabook size and just 1.69Kg of weight, the Gigabyte U2442N should provide all the portability and gaming or multimedia performance that you'll ever need. The excellent performances during our gaming tests and generally impressive features and specifications, we're happy to award an AVForums Recommended badge. The shocking on-board speaker quality is the only thing that really lets this system down and the one thing that prevented the U2442N from being awarded our Highly Recommended badge.

Scores	N/A	Very Poor	Poor	Average	Good	Excellent	Reference
Build Quality	☐	☐	☐	☐	☐	☑	☐
Features	☐	☐	☐	☐	☑	☐	☐
Specification	☐	☐	☐	☐	☑	☐	☐
Included Software	☐	☐	☐	☐	☑	☐	☐
Benchmarked Performance (averaged)	☐	☐	☐	☑	☐	☐	☐
Noise Level	☐	☐	☐	☐	☐	☑	☐
Gaming Performance	☐	☐	☐	☐	☑	☐	☐
Video Playback Performance	☐	☐	☐	☐	☑	☐	☐
Sound Quality Performance	☐	☑	☐	☐	☐	☐	☐
System Temperature	☐	☐	☐	☐	☐	☑	☐
System Connections	☐	☐	☐	☐	☑	☐	☐
Upgradeability	☐	☐	☑	☐	☐	☐	☐
Value for Money	☐	☐	☐	☐	☑	☐	☐
Overall	☐	☐	☐	☐	☑	☐	☐

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Design and Aesthetics

The first thing that should hopefully grab your attention with the U2442N is the design. On the outside we have a very sleek brushed silver aluminium (or champagne as Gigabyte like to call it) finish and inside you're greeted by a lovely matt silver finish. The standard QWERTY keyboard (no number keypad) is backlit and has three brightness levels (or off). This is controlled via the Gigabyte Smart Manager software but there's also a nifty light sensing feature which, when left on automatic, will automatically adjust the backlight to suit the external lighting conditions. Otherwise it's just the usual row of function keys to the top and a quick access button for the Gigabyte Smart Manager software next to the power button. For you typists out there the keyboard itself feels very comfortable and responsive although, as with most laptops of this size, the touchpad does get in the way when typing but can easily be disabled to prevent any accidental operations.

The build quality is excellent with all the connections including the power connector feeling very secure and stable. Gigabyte certainly haven't followed the same route as certain other laptop manufacturers with the power connector feeling like it will snap off or fall out at any moment. It all feels very well built. The screen again follows the same good build quality with strong hinges and no flexing when opening or closing. As far as 14" Laptops go, this is one of the better looking ones and the overall design is impressive. Thanks to the matt silver finish around the keyboard you certainly won't be forever wiping off fingerprints with this one!

Weight and Heat

Now onto the major selling point of the U442N, it's size. The overall footprint is 340mm x 235mm with a thickness of just 20mm. The weight is also impressive at just 1.69Kg. For a system with a specification as hefty as this one, the size and weight are big positives. Compare those with similar top end 14" laptops from Dell for example weighing in at 2.1kg or even the 17" gaming laptops we have reviewed weighing in at a hefty 3.9kg. For long sessions on your lap, this (excluding heat) should be very comfortable and will not weigh you down at all.

As for the heat briefly mentioned above, this sleek form factor system does put out a fair amount. Gigabyte have designed a clever dual air vent design which means both the GPU and the CPU have their own air vents. The dual air vents are to the rear of the Ultrabook with additional heat vents underneath. During testing and general use we found most of the heat was coming from underneath which could make it rather toasty on your legs for prolonged use. Given the specification of the machine though, it's no surprise there's a fair of heat to exhaust.

Connections and Interface

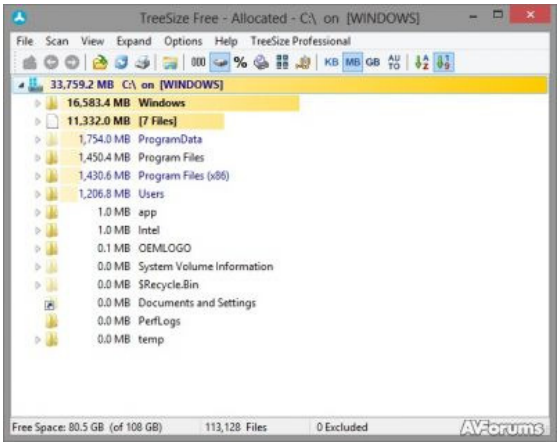
The laptop has a reasonable array of connections. To the left side we have 2 x USB 2.0 ports, microphone and headphone connections, the RJ45 network connection, a D-Sub VGA port and not forgetting the ever popular Kensington lock. To the right side we have the power connector, HDMI port and 2 x USB 3.0 ports together with an SD card reader. No connections to either the front or rear. Our minor complaint here is the lack of a S/PDIF connection or any DVI or display ports but in general the connections shouldn't see you struggling for a spare USB port.

A few other points to note are firstly a handy battery status check feature where you can easily see how much battery power is remaining when the notebook is off. You just simply click the right mouse button and the LED lights will light up to indicate how much battery power is remaining. Above the screen we have the usual webcam, which with this laptop is just a 1.3 Megapixel version. Due to the very small 20mm thickness of this laptop, unsurprisingly there is no Blu-ray or DVD drive present. This could be a big issue if you have a slow internet speed that prevents the quick downloading of large files, but an external drive can of course be connected and these currently start from just £20, so no major issue there.

Overview

Our review copy arrived with Windows 8 installed and after a few simple questions were answered, we quickly got to the Windows 8 start screen. It's good practice with a new PC to check that all the drivers are up to date and the latest updates and patches are applied. The system arrived with an older Nvidia 306.14 driver version but a quick download from Nvidia's website after having passed their Notebook driver verification check and the latest 320.18 drivers were installed. Especially with the graphics drivers it's always best to have the latest compatible drivers as you may find a not insignificant boost in performance compared to the older drivers.

For a 14" laptop that costs a mighty £900 you would expect a pretty decent specification and you certainly won't be disappointed here. We get a 14" 1600 x 900 non-glossy LED backlight display, a fast dual core Intel i5-3210M CPU running at 2.5Ghz standard speed and up to 3.1Ghz in turbo mode, together with 8GB ram and a pretty decent mid-range Nvidia GT 640M graphics adaptor. As you can see in our gaming tests below, this 640M does fair reasonably well, particularly in the Max Payne 3 test which has always hammered the gaming laptops we have reviewed recently such as the Toshiba Qosmio series. However with the U2442N we found a very decent and playable frame rate in all the gaming tests which was a surprise given the relatively poor results in our benchmarks tests, which you can see on the test results page. This system also has the new 2T2R WiFi with 802.11b/g/n which according to the specifications should allow data transfer up to 300 Mbps plus Bluetooth 4.0.



A major plus point to the Gigabyte U2442N is the dual storage. Firstly we have a speedy 128GB Liteon LMT-128M3M 6Gb/s SSD with excellent read speeds benchmarked of 535 MB/s and write speeds of 341 MB/s which impressively were slightly higher than the manufacturer's claimed speeds. The 128GB drive gives a rather low formatted usable space of 108GB which after the Windows install will leave you with just over 80GB of free space. Should more space be required you can always move the pagefile.sys to the HDD which should free up another 5GB. But space shouldn't really be too much of an issue as you always have the 750GB Western Digital Scorpio Blue HDD to fall back on which has a usable free space of 698GB. You should comfortably be able to fit at least 3 games on the SSD to keep things as fast as possible on that front.

Battery Life

An issue that we can never seem to get away from with these higher specification laptops is the very poor battery life. For multimedia and gaming use on the move you can barely get into a game or the first few scenes of a movie before the battery warnings start to appear which means you are normally always tied to a power point. This seems to negate any benefits of a portable machine in our eyes. The fully integrated battery with this machine is a Li-polymer, 11.1V giving 47.73Wh and, to our surprise, we were impressed with the battery life we saw during our tests. For gaming we tested with Max Payne 3 and from a full charge we managed to get 53 minutes from the laptop before the battery died. Considering our previous bests with other gaming laptops have been less than 30 minutes, this is good to see.

More significantly though and completely different to our previous gaming laptop reviews is that the frame rates during gaming didn't take a nose dive as soon as the power cable was unplugged. With some machines the hardware is already struggling to cope even on mains power, what you don't need is for your favourite games to become unplayable when on the move. Happily this was definitely not the case with the U2442N. With Max Payne 3, for example, we saw frame rate drops in just the low single figures. For general browsing use you should be able to get a good 3-4 hours out of the battery with a good 2-3 hours for streaming

or watching HD videos. You can of course modify the power settings for better performance but, even then, some laptops still won't give you everything under battery power.

Display

The screen in this Ultrabook is a 14" HD+ 1600x900 LED backlight display. With the brightness turned up to full it's a very clear display and the text looks crisp, easily readable and the colours are bright and vibrant. Using Passmark's monitor test program on the black test section we can see some light bleed from the edges of the display but nothing too extreme that would cause any issues. We did have a single stuck green pixel sadly but it only was noticeable when dark images were on the screen. The screen has the matte finish which does help to reduce unwanted reflections, especially when on the move and has a much lower power draw than the gloss bright screens. Although we do prefer the gloss bright screens as they give a much clearer image and don't have that 'orange peel' effect that you get with the matte screens, but to be fair to this system it's one of the better examples of a matte screen that we've come across.

Onboard Sound

The audio here is provided by 2 x 2watt speakers located just above the keyboard. Gigabyte proclaim that you will get 'Tremendous Sound Quality with THX TruStudio Pro Technology which gives an incredible audio quality that lets you hear every moment of the action as it was intended'. Now this TruStudio Pro technology may be very good and with a decent pair of speakers you would probably be very pleased, but sadly this laptop does not have a decent pair of speakers. Far from it. The speakers are very tinny and the sound quality is extremely poor, especially when listening to music where the tinniness is almost painful when vocals are heard. Given the high specifications and good performance we have seen with the rest of this laptop it is disappointing that for £900 Gigabyte have chosen to put such poor quality speakers in the chassis. We would definitely recommend headphones unless you want your ears to start bleeding.

Pre-installed Software

As we have seen in previous reviews with the Toshiba Qosmio gaming laptops, some manufacturers seem to think laptop users are less tech savvy than their desktop PC owning brothers and that they need huge amounts of bundled software pre-installed to enable them to carry out even the most basic of tasks. This is fine if the software does the job and is lean on space and system resources but often it just mimics a feature that Windows does by itself and tends to clog up the system. Thankfully Gigabyte have not followed Toshiba's route and there is very little pre-installed software. The system arrived with Power DVD 10, a piece of pointless (given the awful on-board speakers) THX TruStudio software and lastly the Gigabyte Smart Manager. This Smart Manager offers quick access to functions such as the keyboard backlighting, screen brightness and volume.

Gaming Tests

The Gigabyte U2442N comes with the mid-range Nvidia GT 640M graphics adaptor with 2GB of DDR3 VRAM and a processor clock of 624MHz. Don't be fooled into comparing this with a desktop Nvidia 640 graphics card as according to Passmark's videocard benchmark list it falls way down their list and the desktop equivalents are along the lines of a Radeon HD 4850 or Nvidia's GTX295. As far as mobile graphics adaptors go the current beast is the Radeon 7970M and the GT640M performs considerably worse than this, but for a 14" screen at 1600 x 900 as you will see below, acceptable and better frame rates were achievable in our Call of Duty: Black Ops 2, Battlefield 3 and especially the Max Payne 3 tests. All were tested under mains power to get maximum performance.

Battlefield 3 - 1600 x 900 resolution

Released in late October 2011, Battlefield 3 was the long awaited sequel to the hugely popular Battlefield 2. Building on the original Frostbite engine used in Battlefield: Bad Company 2, Frostbite 2.0 aimed to test PC hardware to the maximum. With the dual core i5-3210M processor running at a turbo mode of 3.1Ghz and coupled with the lower spec GT640M graphics our initial hopes were not high, especially after some rather poor benchmark results. But we did receive acceptable results here.

Firstly, given the hardware we aren't going to be playing on high settings with BF3, but with the 14" screen size lowering the graphics settings from Ultra to low was not immediately noticeable as it would have been on a 17" laptop for example. With these low settings and using the FRAPS benchmark tool we achieved average frame rates of 40.39 which allowed for perfectly smooth gameplay without any stuttering or frame rate issues. If you don't mind sacrificing a few more frames, medium settings should be achievable also.

Call of Duty: Black Ops 2 - 1600 x 900 resolution

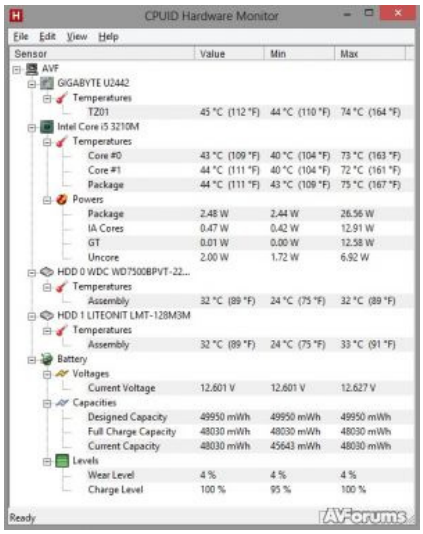
The very latest Call of Duty game, released in November 2012, uses the same engine as the previous Call of Duty titles, but with the addition of DX11 and various other graphics improvements. The previous Call of Duty titles could run on pretty much anything and even with the DX11 improvements that Black Ops 2 brings, it should still run on most systems. With everything on maximum at 1600 x 900 resolution we received an average frame rate of 48.63 which was fully playable with no stuttering or lag. The settings can always be lowered if you want to get closer to an average 60FPS.

Max Payne 3 - 1600 x 900 resolution

Released on the PC in June 2012 and complete with the excellent bullet time feature, this is another critically acclaimed first person shooter that given this system's specification we opened with a certain trepidation, but we were very surprised at the results. With the settings on normal we received an average frame rate of 58.38. This is an excellent result from the mid range 640M graphics chip. Especially when compared with the likes of the Toshiba Qosmio X870-119 with a much faster GTX670M graphics chip that we reviewed recently that couldn't even reach 30FPS on the lowest of settings. Admittedly that was on 1920 x 1080, but even lowering the resolution with that machine couldn't get a decent frame rate. So the 58 FPS achieved here is excellent.

Temperatures and Noise

The HWMonitor screenshot below shows the maximum temperatures the various system components reached during a testing session of the various benchmarks and games. The CPU temperatures at idle are about 40°C whilst under test conditions reached a maximum of 75°C. As described above via Gigabyte's unique dual air vent design the heat appears to be very efficiently dispersed from the system. Of course your lap gets a little toasty during a long session, but the Ultrabook suffered no crashes or other issues during any of our testing or gaming sessions.



We were very impressed with the noise level with this laptop. For general use and web browsing the laptop is silent. A slight fan noise can be heard when watching HD videos from Netflix for example, but unless you watch with no sound, you won't hear it. With no DVD or Blu-ray drive that usual drive noise doesn't come into play here. During gaming or running intensive applications and benchmarks the system noise increases but not obtrusively so. With the volume muted and at a distance of 1' from the screen we measured just 41dBs from our sound level meter. Should you be suffering with the shocking on-board sound rather than using headphones, the system noise is at an impressively low level that it will not overcome the sound of your game for example.

Home Cinema Integration and Blu-ray Playback

As with all modern PCs these days, you just connect your HDMI cable to your system and away you go. Following on from Windows 7, Windows 8 has made it just as easy and the laptop automatically clones the display to the TV via the HDMI cable and the sound automatically goes along too, without any settings to change whatsoever. This system does come with Power DVD 10 pre-installed but as there is no DVD or Blu-ray drive that is redundant unless you have an external drive to use with it.

Connected to our homegroup with Windows 8, streaming audio or video files was effortless and video files, pictures or anything that you desire can be played back with no effort at all. Playing back HD video from Netflix or BBC iPlayer worked without issue and thanks to the very low system noise level you weren't aware of the laptop being there all the time as you are with noisier systems.

Our feedback for Gigabyte

- Increase the quality of the on-board speakers

If you are interested in buying the Gigabyte U2442N, we hope you will use our advertisers.

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