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**MSPM’S**

**Deogiri Institute of Engineering and Management Studies, Aurangabad**

**Department of Basic Science and Humanities**

Report on

Lenovo ideapad 530S &

Submitted By

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CERTIFICATE

This is to Certify that Mr. Abhishek Sapkal and Atharva Pansare has successfully Completed his Report on date 29/8/2019.

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Lenovo Ideapad 530S

The 15-inch IdeaPad 520S, its thin-and-light, pseudo-premium design carried hints of attributes that one would normally associate with much pricier laptops such as Dell’s XPS 15. Now, with the revised IdeaPad 530S, Lenovo takes this strategy further and punches up against such heralded ultra-high-end rivals with an even slimmer case, beautiful aesthetics (spearheaded by its XPS-like thin bezels and aluminum casing), and thoroughly capable components.

While configurations with discrete graphics are available, our review unit is powered by the typical Intel UHD Graphics 620 alongside an Intel Core i5-8250U SoC, 8 GB RAM, and a 256 GB NVMe SSD. But the real shocker is the price: just $699 MSRP, which is perhaps *30% less* than one might reasonably expect to pay for a comparably-equipped XPS 15

**Lenovo Ideapad 530S-15IKB**

**Processor**

Intel Core i5-8250U

**Graphics adapter**

Intel UHD Graphics 620, Core: 300 - 1100 MHz, Memory: 1200 MHz, 23.20.16.4905

**Memory**

8192 MB

, DDR4-2400 MHz

**Display**

15.6 inch 16:9, 1920 x 1080 pixel 141 PPI, N156HCA-EAB, IPS, glossy: no

**Mainboard**

Intel Sunrise Point-LP

**Storage**

SK hynix PC401 HFS256GD9TNG, 256 GB

**Weight**

1.676 kg ( = 59.12 oz / 3.69 pounds), Power Supply: 214 g ( = 7.55 oz / 0.47 pounds)

**Case**

Fully adorned in silver aluminum casing, the IdeaPad 530S visually impresses from the outset. With its carefully CNC machined edges and rounded corners, the precision of the construction and general build quality leave little for criticism. The sole bit of plastic is found flanking the display, where the black slim bezel adheres to the panel (again, a la XPS) for a consistent look throughout the entire perimeter. Surely conscious of the quibbles surrounding webcam placement on competing models, Lenovo has opted for a slightly larger top bezel to accommodate the tiny webcam in its normal location.

While appearances are one thing, the quality differential between the IdeaPad and higher-end competitors such as the [Dell XPS 15](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) and [MacBook Pro](https://www.notebookcheck.net/Apple-MacBook-Pro-15-2018-2-6-GHz-560X-Laptop-Review.317358.0.html) does begin to expose itself once pressure is applied to the surfaces. Though certainly durable enough for everyday use (and stronger than most budget competitors to boot—twisting the base produces no notable creaking), the thinness of the aluminum casing is evident, manifesting in the form of detectable flex under moderate pressure across the breadth of the base unit. Likewise, the display lid isn’t nearly as rigid as that of the XPS, though it still manages reasonably good torsion resistance and protection against pressure from behind. Alas, these are the necessary sacrifices one must make in order to reach such a stunningly affordable price tag while still maintaining such an attractive design and capable components



**Connectivity**

The IdeaPad 530S features a decent selection of ports, but it has suffered a bit as a result of its diet. Specifically, it’s lost the Ethernet port, and unfortunately, while three total USB ports are still onboard (one of which is Type-C Gen 1), there are no options for Thunderbolt connectivity. Otherwise, however, the IdeaPad matches the XPS 15 in terms of port selection, and it tramples over the ASUS VivoBook (with its ancient USB 2.0 ports). The larger [HP Pavilion 15](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html) still includes the Ethernet port in addition to the rest, however, and the [HP Spectre](https://www.notebookcheck.net/HP-Spectre-x360-15-i7-8705G-Radeon-RX-Vega-M-GL-Convertible-Review.323436.0.html) 15 outdoes all of the competitors with not one but *two*Thunderbolt ports.

Port placement is convenient, lining the left and right edges of the machine exclusively. This is unsurprising due to the central drop-back hinge design obscuring the rear of the machine while in use. However, the ports on the left side have been crammed a bit closer together than is convenient; larger connectors will block adjacent ports in some cases.

[](https://www.notebookcheck.net/fileadmin/_processed_/2/f/csm_DSC_1076_watermarked_dadf3f3645.jpg)Front: No connections

[](https://www.notebookcheck.net/fileadmin/_processed_/c/9/csm_DSC_1077_watermarked_3550c0566a.jpg)Rear: No connections

[](https://www.notebookcheck.net/fileadmin/_processed_/a/c/csm_DSC_1078_watermarked_4c50cb9a0e.jpg)Left: Charging port, HDMI, USB 3.0, USB 3.1 Gen 1, 3.5 mm combo audio

[](https://www.notebookcheck.net/fileadmin/_processed_/3/c/csm_DSC_1079_watermarked_05c2df51fe.jpg)Lenovo OneKey Recovery, card reader, USB 3.0

### **SD Card Reader**

Perhaps both the [XPS 15](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) and IdeaPad 530S include identically-sized SD card readers, but performance couldn’t be further apart. In our JPG copy and AS SSD read tests, the IdeaPad is basically dead last with a pitiful 27.35 MB/s and 28.95 MB/s in each test—some 350% and 590% below the speeds of the XPS (which leads), respectively, and far below the class average.

The SD slot does not fully accept the card; roughly half of the SD card sticks out of the port during use.

|  |  |
| --- | --- |
| **SDCardreader Transfer Speed** | |
| **average JPG Copy Test (av. of 3 runs)** | |
| [Dell XPS 15 2018 i5 FHD 97Wh](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) | 123 MB/s ∼100%+350% |
| [Acer Aspire 3 A315-41-R7BM](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html)   (Toshiba Exceria Pro SDXC 64 GB UHS-II) | 75.9 MB/s ∼62%+178% |
| [Asus VivoBook 15 X570UD](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html)   (Toshiba Exceria Pro M501 UHS-II) | 73.1 MB/s ∼59%+167% |
| Average of class Multimedia   (11.2 - 190, n=174) | 57 MB/s ∼46%+108% |
| [HP Pavilion 15-cs0053cl](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html)   (Toshiba Exceria Pro SDXC 64 GB UHS-II) | 36.31 MB/s ∼30%+33% |
| [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html) **(Toshiba Exceria Pro SDXC 64 GB UHS-II)** | **27.35 MB/s ∼22%0%** |
| [Dell Inspiron 15 5579-9672](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html)   (Toshiba Exceria Pro SDXC 64 GB UHS-II) | 26.3 MB/s ∼21%-4% |
| **maximum AS SSD Seq Read Test (1GB)** | |
| [Dell XPS 15 2018 i5 FHD 97Wh](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) | 199.7 MB/s ∼100%0% |
| [Acer Aspire 3 A315-41-R7BM](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html)   (Toshiba Exceria Pro SDXC 64 GB UHS-II) | 86.2 MB/s ∼43%-57% |
| [Asus VivoBook 15 X570UD](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html)   (Toshiba Exceria Pro M501 UHS-II) | 86.2 MB/s ∼43%-57% |
| Average of class Multimedia   (10.2 - 253, n=171) | 73.2 MB/s ∼37%-63% |
| [HP Pavilion 15-cs0053cl](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html)   (Toshiba Exceria Pro SDXC 64 GB UHS-II) | 38.56 MB/s ∼19%-81% |
| [Dell Inspiron 15 5579-9672](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html)   (Toshiba Exceria Pro SDXC 64 GB UHS-II) | 29.7 MB/s ∼15%-85% |
| [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html) **(Toshiba Exceria Pro SDXC 64 GB UHS-II)** | **28.95 MB/s ∼14%-86%** |

### **Communication**

[](https://www.notebookcheck.net/fileadmin/_processed_/d/7/csm_DSC_0001_watermarked_ca1073ac1a.jpg)

The Intel Dual Band Wireless-AC 8265

Wireless communication was notably better, fortunately. The inexorable Intel Dual Band Wireless-AC 8265 adapter in today’s unit manages 652 Mb/s and 530 Mb/s in receive/transmit respectively, which are very good results overall.

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| --- | --- |
| **Networking** | |
| **iperf3 Client (receive) TCP 1 m 4M x10** | |
| [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html) **Intel Dual Band Wireless-AC 8265** | **652 MBit/s ∼100%+5%** |
| [Asus VivoBook 15 X570UD](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html) Realtek RTL8822BE Wireless LAN 802.11ac PCIe Adapter | 623 MBit/s ∼96%0% |
| [Dell Inspiron 15 5579-9672](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html) Qualcomm Atheros QCA61x4 | 612 MBit/s ∼94%-2% |
| [Dell XPS 15 2018 i5 FHD 97Wh](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) Killer Wireless-n/a/ac 1535 Wireless Network Adapter | 542 MBit/s ∼83%-13% |
| Average of class Multimedia   (44 - 949, n=136) | 497 MBit/s ∼76%-20% |
| [Acer Aspire 3 A315-41-R7BM](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html) Qualcomm Atheros QCA9377 Wireless Network Adapter | 338 MBit/s ∼52%-46% |
| [HP Pavilion 15-cs0053cl](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html) RealTek Semiconductor, Device ID: C821 | 245 MBit/s ∼38%-61% |
| **iperf3 Client (transmit) TCP 1 m 4M x10** | |
| [Dell Inspiron 15 5579-9672](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html) Qualcomm Atheros QCA61x4 | 657 MBit/s ∼100%+135% |
| [Asus VivoBook 15 X570UD](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html) Realtek RTL8822BE Wireless LAN 802.11ac PCIe Adapter | 589 MBit/s ∼90%+110% |
| [Dell XPS 15 2018 i5 FHD 97Wh](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) Killer Wireless-n/a/ac 1535 Wireless Network Adapter | 539 MBit/s ∼82%+93% |
| [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html) **Intel Dual Band Wireless-AC 8265** | **530 MBit/s ∼81%+89%** |
| Average of class Multimedia   (46.1 - 949, n=135) | 474 MBit/s ∼72%+69% |
| [Acer Aspire 3 A315-41-R7BM](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html) Qualcomm Atheros QCA9377 Wireless Network Adapter | 345 MBit/s ∼53%+23% |
| [HP Pavilion 15-cs0053cl](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html) RealTek Semiconductor, Device ID: C821 | 280 MBit/s ∼43%0% |

### **Accessories**

A compact 65 W AC Adapter (sans the sometimes-inconvenient ground plug) is packed in with the IdeaPad 530S. It’s relatively light at just 214 g, but its consolidated design also means that it can block adjacent outlets in some cases.

### **Maintenance**

Thanks to a removable bottom panel, maintenance on the IdeaPad 530S is relatively easy. Ten Torx T5 screws secure the cover, after which some light prying around the perimeter quickly dislodges it. Once inside, the battery, WLAN adapter, M.2 SSD, heatsink/fan, and speakers are simple to replace. The RAM can also be upgraded/replaced, but due to its location beneath a thin metal shield, it’s difficult to reach without damaging the shield during the removal/reinstallation process. As is usually the case with most modern thin-and-light laptops, the keyboard is among the hardest parts to service; not only is it beneath the board, but it’s also attached to the top cover via numerous plastic spot welds, essentially making it impossible to replace.

[](https://www.notebookcheck.net/fileadmin/_processed_/8/9/csm_DSC_1084_watermarked_fa429bf0de.jpg)Most replaceable components are easily accessed beneath the bottom panel.

[](https://www.notebookcheck.net/fileadmin/_processed_/7/7/csm_DSC_0006_watermarked_b55fc4549e.jpg)The RAM is indeed replaceable...

[](https://www.notebookcheck.net/fileadmin/_processed_/6/7/csm_DSC_0007_watermarked_8ef808b27f.jpg)...following removal of the delicate heat shield.

[](https://www.notebookcheck.net/fileadmin/_processed_/2/b/csm_DSC_0005_watermarked_061fde12c3.jpg)The keyboard, meanwhile, is permanently affixed to the top cover via plastic spot welds.

### **Warranty**

The IdeaPad 530S ships with a 1 year depot warranty.

## Input Devices

### **Keyboard**

The IdeaPad 530S’ keys feature short travel with medium actuation force, but feedback is relatively sharp, which led to a relatively short adjustment period before we felt comfortable typing on it at higher speeds. Spacing and layout is good as well, though the fact that the grey keys are labeled in white makes visibility a bit tougher than it should be in certain conditions. Despite its relative proficiency, the IdeaPad keyboard is still a ways off from the best Ultrabook keyboards in this class, such as that of the [HP Spectre](https://www.notebookcheck.net/HP-Spectre-x360-15-i7-8705G-Radeon-RX-Vega-M-GL-Convertible-Review.323436.0.html) and [Dell XPS 15](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html).

Unlike some other 15.6-inch machines, the IdeaPad makes no room for a numeric keypad. The keys are evenly backlit with two stages of brightness (in addition to *off*).

### **Touchpad**

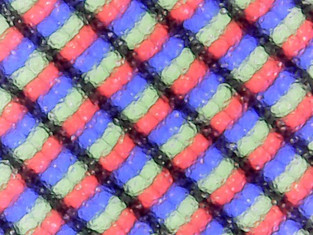
The sufficiently large 105 x 70 mm clickpad features a smooth, comfortable Mylar finish with fast response speeds, little to no cursor delay, and seamless gesture interpretation (the Precision drivers are largely to thank for this, of course). The integrated buttons are decent, with hardly any collateral pointer movement during clicks and good interpretation of left/right button operation, but like the keyboard, they’re a grade below those of the XPS and Spectre devices, and of course, nothing works quite as well as separate dedicated buttons.

[](https://www.notebookcheck.net/fileadmin/_processed_/a/a/csm_20180826_101218_watermarked_watermarked_d069364166.jpg)The keyboard is acceptable but falls short of the best Ultrabooks.

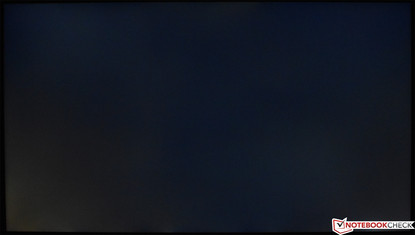
[](https://www.notebookcheck.net/fileadmin/_processed_/2/2/csm_20180826_101230_watermarked_d25217183a.jpg)The touchpad is comparably proficient.

## Display

Only a single display options exists on the 15.6-inch IdeaPad 530S, and it’s a typical FHD IPS panel—not that we’re complaining about that. It’s also fortunately anti-glare (though no touch options exist either), and although Lenovo quotes the brightness at 250 cd/m², our initial impressions were that it must be a bit higher than that. The contrast also subjectively appears to be good, and colors don’t have much pop to them, but they’re not wildly deviant to the eye, either. Unlike many matte displays, we don’t detect any untoward graininess resulting from the anti-glare finish on the 530S panel.

[](https://www.notebookcheck.net/fileadmin/Notebooks/Lenovo/Ideapad_530S-15IKB/Wed_Aug_08_12_00_31.jpg)

Subpixel array, IdeaPad 530S

[](https://www.notebookcheck.net/fileadmin/_processed_/b/7/csm_DSC_0016_watermarked_a968af2630.jpg)

Minor flashlighting mostly in bottom-right corner

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | | | | | |  | 284.5 cd/m² | 276.8 cd/m² | 265.5 cd/m² |  | |  | 272.4 cd/m² | 285.1 cd/m² | 258.8 cd/m² |  | |  | 260.2 cd/m² | 282.4 cd/m² | 251.3 cd/m² |  | |  | | | | | |

*Distribution of brightness*

N156HCA-EAB

X-Rite i1Pro Basic 2

Maximum: 285.1 cd/m² Average: 270.8 cd/m² Minimum: 0.1 cd/m²  
Brightness Distribution: 88 %  
Center on Battery: 285.1 cd/m²  
Contrast: 1018:1 (Black: 0.28 cd/m²)  
ΔE Color 4.38 | 0.6-29.43 Ø6.1, calibrated: 3.95  
ΔE Greyscale 3.1 | 0.64-98 Ø6.3  
62% sRGB (Argyll 3D) 40% AdobeRGB 1998 (Argyll 3D)   
Gamma: 2.24

[ICC File (X-Rite i1Pro 2)](https://www.notebookcheck.net/uploads/tx_nbc2/N156HCA_EAB__CMN__________N156HCA_EAB.icm)

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| [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html)N156HCA-EAB, IPS, 15.6, 1920x1080 | [**HP Pavilion 15-cs0053cl**](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html)AU Optronics B156XW02 V0, TN LED, 15.6, 1366x768 | [**Asus VivoBook 15 X570UD**](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html)AU Optronics B156HAN06.1, IPS, 15.6, 1920x1080 | [**Dell Inspiron 15 5579-9672**](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html)AUO, B156HW01, IPS, 15.6, 1920x1080 | [**Acer Aspire 3 A315-41-R7BM**](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html)Chi Mei CMN15D5, TN LED, 15.6, 1920x1080 | [**Dell XPS 15 2018 i5 FHD 97Wh**](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html)Sharp SHP149A LQ156M1, LED IGZO IPS InfinityEdge, 15.6, 1920x1080 |
| **Response Times** |  | **18%** | **12%** | **0%** | **12%** | **-40%** |
| Response Time Grey 50% / Grey 80% \* | 37.2 (19.6, 17.6) | 43.6 (20, 23.6)  -17% | 32 (19.2, 12.8)  14% | 41 (19, 22)  -10% | 44 (23, 21)  -18% | 49 (25, 40)  -32% |
| Response Time Black / White \* | 32.4 (18.4, 14) | 15.2 (10, 5.2)  53% | 29.2 (17.2, 12)  10% | 29 (17, 12)  10% | 14 (10, 4)  57% | 30 (16, 14)  7% |
| PWM Frequency | 25770 (67) |  |  |  | 25000 (10)  -3% | 961 (10)  -96% |
| **Screen** |  | **-49%** | **2%** | **3%** | **-56%** | **37%** |
| Brightness middle | 285.1 | 220.1  -23% | 240.1  -16% | 251  -12% | 234  -18% | 413  45% |
| Brightness | 271 | 210  -23% | 233  -14% | 240  -11% | 211  -22% | 378  39% |
| Brightness Distribution | 88 | 93  6% | 91  3% | 84  -5% | 83  -6% | 86  -2% |
| Black Level \* | 0.28 | 0.29  -4% | 0.23  18% | 0.2  29% | 0.43  -54% | 0.29  -4% |
| Contrast | 1018 | 759  -25% | 1044  3% | 1255  23% | 544  -47% | 1424  40% |
| Colorchecker DeltaE2000 \* | 4.38 | 11.4  -160% | 4.25  3% | 5.25  -20% | 11.27  -157% | 2.44  44% |
| Colorchecker DeltaE2000 max. \* | 24.07 | 25.96  -8% | 17.84  26% | 10.04  58% | 18.03  25% | 4.46  81% |
| Colorchecker DeltaE2000 calibrated \* | 3.95 | 4.09  -4% | 4  -1% |  |  | 2.48  37% |
| Greyscale DeltaE2000 \* | 3.1 | 12  -287% | 2.8  10% | 3.28  -6% | 11.54  -272% | 2.48  20% |
| Gamma | 2.24 98% | 2.09 105% | 2.3 96% | 2.15 102% | 2.09 105% | 2.43 91% |
| CCT | 6705 97% | 12625 51% | 6503 100% | 6502 100% | 11607 56% | 7006 93% |
| Color Space (Percent of AdobeRGB 1998) | 40 | 36.5  -9% | 36.8  -8% | 35  -12% | 38  -5% | 62  55% |
| Color Space (Percent of sRGB) | 62 | 57.5  -7% | 57.8  -7% | 55  -11% | 60  -3% | 96  55% |
| **Total Average (Program / Settings)** |  | **-16% / -39%** | **7% / 3%** | **2% / 3%** | **-22% / -40%** | **-2% / 21%** |

\* ... smaller is better

Sure enough, we measure an average brightness of 271 cd/m² with a contrast ratio of 1018:1 (against a black value of 0.28 cd/m²). Distribution is reasonably good at 88%, which represents fairly uniform luminosity across the panel.

Color coverage is decent, but not far above the rest of the pack: we record 62% of sRGB and 40% of AdobeRGB. When compared to nicer panels such as the [XPS 15](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html)’s FHD display (96% / 62%), these values pale in comparison—but in context with the price point and immediate competitors within that range it’s actually not a bad result. Just don’t expect color-accurate graphic design or ideal photo editing capabilities and you aren’t likely to be terribly disappointed. There’s a bit of a washed-out appearance to the color, but it’s nothing quite as dreary as what we noted with the [ThinkPad T480](https://www.notebookcheck.net/Lenovo-ThinkPad-T480-Core-i7-8650U-FHD-Laptop-Review.315574.0.html), for instance.

As for color rendering accuracy, the IdeaPad once again manages a decent showing. The [HP Pavilion 15](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html) and [Acer Aspire 3](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html) are the clear laggards here, but the rest of the pack (including the IdeaPad) fares much better; the 530S manages 4.38 / 3.1 out of the box (uncalibrated) in these same two measurements, though Blue is heavily deviant at 24.07. Elsewhere, the Total Gamma of 2.24 and CCT Average of 6705 are not far from their ideal values.

## Performance

The IdeaPad 530S is configurable with three different Intel CPU options: [Core i3-8130U](https://www.notebookcheck.net/Intel-Core-i3-8130U-SoC.273688.0.html), [Core i5-8250U](https://www.notebookcheck.net/Intel-Core-i5-8250U-SoC-Benchmarks-and-Specs.242172.0.html), and [Core i7-8550U](https://www.notebookcheck.net/Intel-Core-i7-8550U-SoC-Benchmarks-and-Specs.242108.0.html). It supports RAM up to 16 GB max (one total socket), and graphics options range from the [Intel UHD Graphics](https://www.notebookcheck.net/Intel-UHD-Graphics-620-GPU-Review-Benchmarks-and-Specs.239936.0.html) (integrated) up to [NVIDIA GeForce MX130](https://www.notebookcheck.net/NVIDIA-GeForce-MX130-GPU-Benchmarks-and-Specs.258054.0.html) and [GeForce MX150](https://www.notebookcheck.net/NVIDIA-GeForce-MX150-Benchmark-and-Specs-of-the-GT-1030-for-Laptops.223530.0.html) configurations. Our review unit arrived with the i5-8250U CPU, 8 GB RAM, and integrated graphics. Again, for under $700, this is hardly a bad setup.

Operating unplugged inflicts no performance constraints on the machine; we record a 3DMark 11 score of 1787, which is actually *above*the original score we received (on AC power).

### **Processor**

[](https://www.notebookcheck.net/fileadmin/Notebooks/Lenovo/Ideapad_530S-15IKB/cbr15.png)

Cinebench R15

The [Intel Core i5-8250U](https://www.notebookcheck.net/Intel-Core-i5-8250U-SoC-Benchmarks-and-Specs.242172.0.html) has been extensively covered in the past here at Notebookcheck; visit our dedicated page for an exhaustive look at it and its performance across a variety of machines. As for the IdeaPad 530S, its multi-core performance disappoints in comparison to the Core i5-8250U average of 570; with a score of just 490 in Cinebench R15 multi-CPU, it’s some 14% below the mark. Nevertheless, that’s still 12% above the Multimedia class average, and single-core performance isn’t affected (we received a score of 144 there versus 141 for the CPU average).

Unsurprisingly, the [XPS 15](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) runs away with the crown here in the multi-core test (thanks to its much more power-hungry 45 W TDP [Core i5-8300H](https://www.notebookcheck.net/Intel-Core-i5-8300H-SoC.275950.0.html)). The IdeaPad, however, is in a distant fifth place. Only the [Acer Aspire](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html) scores lower, with its [AMD Ryzen 3 2200U](https://www.notebookcheck.net/AMD-Ryzen-3-2200U-SoC.277344.0.html) CPU managing just 318 points.

In our Cinebench R15 multi-CPU sustained performance loop test, we see an initial score of 523 followed by an immediate drop down to the 490 range for the remainder of the test runs. That’s a retreat of around 6%, which isn’t bad at all considering that many machines suffer drops of 15% or 20% instead… though, to be fair, the initial score in this case wasn’t quite as impressive as that of many identically-equipped competitors.

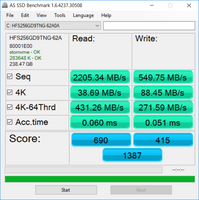
|  |  |
| --- | --- |
| **Cinebench R15** | |
| **CPU Single 64Bit** | |
| [Asus VivoBook 15 X570UD](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html) Intel Core i7-8550U | 172 Points ∼79%+35% |
| [Dell XPS 15 2018 i5 FHD 97Wh](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) Intel Core i5-8300H | 167 Points ∼77%+31% |
| [HP Pavilion 15-cs0053cl](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html) Intel Core i5-8250U | 144 Points ∼66%+13% |
| [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html) **Intel Core i5-8250U** | **144 Points ∼66%+13%** |
| Average Intel Core i5-8250U   (81 - 147, n=94) | 141 Points ∼65%+11% |
| [Dell Inspiron 15 5579-9672](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html) Intel Core i5-8250U | 140 Points ∼64%+10% |
| [Acer Aspire 3 A315-41-R7BM](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html) AMD Ryzen 3 2200U | 128 Points ∼59%+1% |
| Average of class Multimedia   (36 - 201, n=363) | 127 Points ∼58%0% |
| **CPU Multi 64Bit** | |
| [Dell XPS 15 2018 i5 FHD 97Wh](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) Intel Core i5-8300H | 840 Points ∼19%+48% |
| [Asus VivoBook 15 X570UD](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html) Intel Core i7-8550U | 663 Points ∼15%+17% |
| Average Intel Core i5-8250U   (320 - 730, n=98) | 568 Points ∼13%0% |
| [Dell Inspiron 15 5579-9672](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html) Intel Core i5-8250U | 557 Points ∼13%-2% |
| [HP Pavilion 15-cs0053cl](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html) Intel Core i5-8250U | 536 Points ∼12%-6% |
| [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html) **Intel Core i5-8250U** | **490 Points ∼11%-14%** |
| Average of class Multimedia   (73 - 1550, n=379) | 485 Points ∼11%-15% |
| [Acer Aspire 3 A315-41-R7BM](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html) AMD Ryzen 3 2200U |  |

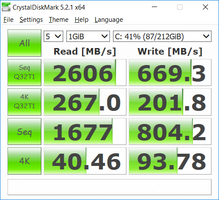
### **System Performance**

We experienced no troubling hiccups or slowdowns during our time with the IdeaPad 530S; the NVMe SSD and CPU seem quick enough to handle most tasks without any issues. Our synthetic scores offer further reassurance, landing within a couple of percentage points of the average for similarly-equipped machines—and while they’re obviously below the scores of the better-equipped [XPS](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) and VivoBook, it’s only by margins of 11% to 17%. For most users, the IdeaPad’s performance should not be an issue at all.

### **Storage Devices**

Our storage benchmarks clearly separate the NVMe from the SATA drives. Within that category, of course, further discrepancies exist; the XPS 15, for instance, only managed a Total Score of 750 in AS SSD versus 1387 from today’s 530S review unit. The [Asus VivoBook](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html) actually takes top spot here with a Total Score of 2249 (thanks primarily to much faster 4K-64 read/write speeds than the IdeaPad), but in truth, the subjective difference is small indeed.

[](https://www.notebookcheck.net/fileadmin/Notebooks/Lenovo/Ideapad_530S-15IKB/as_ssd.png)AS SSD

[](https://www.notebookcheck.net/fileadmin/Notebooks/Lenovo/Ideapad_530S-15IKB/cdm.png)CrystalDiskMark

[](https://www.notebookcheck.net/fileadmin/_processed_/d/3/csm_DSC_1086_watermarked_61d52a0904.jpg)The M.2 NVMe SSD (covered by heat spreader)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html)SK hynix PC401 HFS256GD9TNG | [**Asus VivoBook 15 X570UD**](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html)SK hynix PC300 HFS512GD9MND | [**Dell Inspiron 15 5579-9672**](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html)SK hynix SC311 SATA | [**Acer Aspire 3 A315-41-R7BM**](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html)SK Hynix HFS256G39TND-N210A | [**Dell XPS 15 2018 i5 FHD 97Wh**](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html)Lite-On CA3-8D256-Q11 | **Average SK hynix PC401 HFS256GD9TNG** |
| **AS SSD** |  | **38%** | **-45%** | **-83%** | **-155%** | **-7%** |
| Copy Game MB/s | 301.11 | 791.97  163% | 231.61  -23% | 145.42  -52% | 465.85  55% | 423 (296 - 618, n=6)  40% |
| Copy Program MB/s | 233.52 | 334.26  43% | 166.43  -29% | 93.97  -60% | 117.21  -50% | 357 (210 - 540, n=6)  53% |
| Copy ISO MB/s | 868.11 | 1265.27  46% | 301.27  -65% | 199.76  -77% | 632.4  -27% | 748 (539 - 893, n=6)  -14% |
| Score Total | 1387 | 2249  62% | 910  -34% | 594  -57% | 750  -46% | 1423 (1373 - 1479, n=8)  3% |
| Score Write | 415 | 836  101% | 330  -20% | 210  -49% | 58  -86% | 450 (415 - 516, n=8)  8% |
| Score Read | 690 | 968  40% | 383  -44% | 256  -63% | 492  -29% | 679 (628 - 717, n=8)  -2% |
| Access Time Write \* | 0.051 | 0.127  -149% | 0.075  -47% | 0.225  -341% | 0.889  -1643% | 0.1111 (0.051 - 0.51, n=8)  -118% |
| Access Time Read \* | 0.06 | 0.059  2% | 0.142  -137% | 0.136  -127% | 0.086  -43% | 0.1118 (0.04 - 0.46, n=8)  -86% |
| 4K-64 Write | 271.59 | 676.75  149% | 246.99  -9% | 145.01  -47% | 19.19  -93% | 290 (266 - 350, n=8)  7% |
| 4K-64 Read | 431.26 | 755.54  75% | 309.7  -28% | 187.89  -56% | 301.79  -30% | 452 (431 - 474, n=8)  5% |
| 4K Write | 88.45 | 85.79  -3% | 47.64  -46% | 40.46  -54% | 5.12  -94% | 100 (88.5 - 116, n=8)  13% |
| 4K Read | 38.69 | 30.78  -20% | 23.71  -39% | 22.24  -43% | 32.5  -16% | 38.9 (34.4 - 42.2, n=8)  1% |
| Seq Write | 549.75 | 734.97  34% | 356.2  -35% | 241.77  -56% | 340.31  -38% | 593 (500 - 721, n=8)  8% |
| Seq Read | 2205.34 | 1816.52  -18% | 497.48  -77% | 457.6  -79% | 1573.62  -29% | 1882 (1228 - 2224, n=8)  -15% |

\* ... smaller is better

### **GPU Performance**

To reiterate what we said in our Performance overview above, 530S configurations featuring NVIDIA dedicated [MX130](https://www.notebookcheck.net/NVIDIA-GeForce-MX130-GPU-Benchmarks-and-Specs.258054.0.html) and [MX150](https://www.notebookcheck.net/NVIDIA-GeForce-MX150-Benchmark-and-Specs-of-the-GT-1030-for-Laptops.223530.0.html) options do exist. However, our review unit is powered by the integrated [Intel UHD Graphics 620](https://www.notebookcheck.net/Intel-UHD-Graphics-620-GPU-Review-Benchmarks-and-Specs.239936.0.html) adapter instead, so obviously we should not expect strong graphical benchmarks. Indeed, the results we receive are actually roughly 7% to 14% below the averages for this adapter (and behind the identically-equipped [HP Pavilion 15](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html) by similar margins). An overall 3DMark 11 score of 1690 isn’t terrible by any means, but it’ll hardly play any modern games even at low settings—so if gaming has even a remote chance of appearing on the agenda, consider springing for one of the two dedicated graphics configurations instead.

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| **1280x720 Performance Combined** | |
| [Dell XPS 15 2018 i5 FHD 97Wh](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html) NVIDIA GeForce GTX 1050 (Laptop), 8300H | 7607 Points ∼34%+509% |
| [Asus VivoBook 15 X570UD](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html) NVIDIA GeForce GTX 1050 (Laptop), 8550U | 7414 Points ∼33%+494% |
| Average of class Multimedia   (375 - 15962, n=629) | 2474 Points ∼11%+98% |
| [Acer Aspire 3 A315-41-R7BM](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html) AMD Radeon RX Vega 3, 2200U | 1940 Points ∼9%+55% |
| Average Intel UHD Graphics 620   (959 - 2084, n=158) | 1536 Points ∼7%+23% |
| [HP Pavilion 15-cs0053cl](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html) Intel UHD Graphics 620, 8250U | 1501 Points ∼7%+20% |
| [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html) **Intel UHD Graphics 620, 8250U** | **1272 Points ∼6%+2%** |
| [Dell Inspiron 15 5579-9672](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html) Intel UHD Graphics 620, 8250U | 1249 Points ∼6% |

## Emissions

### **System Noise**

Clearly favoring low noise levels over top-end performance, the IdeaPad 530S is invariably unobtrusive. While idling, the fan doesn’t run at all except under rare circumstances where it’s barely audible (we measure 2 dB(A) above ambient levels). Even under load, however, the notebook is the quietest of the bunch, maxing out at just 33.2 dB(A) and averaging a trivial 30.2 dB(A). We noticed no coil whine during our time with the machine regardless of power state.

### **Temperature**

Despite the low noise levels, system temperatures are not problematic under load. Against a room temperature of 20 °C, we calculate averages on top/bottom of 29.5 °C / 34.6 °C, neither of which are worrisome; these values indicate lower heat development than most every other machine against which we’re comparing today.

Idle temperatures are a slightly different story however. Thanks to the delayed fan invocation, average temperatures reach 26.1 °C / 29.2 °C on top/bottom while idling, which is 6.1 °C / 9.2 °C above room temperatures. That’s a fair bit of separation between ambient and surface temperatures while idling, and it’s likely to bother some who prefer lap-based use.

## Energy Management

### **Power Consumption**

Our power consumption measurements show that the IdeaPad 530S is the least power-hungry of all the machines in today’s comparison field, with an idle average of just 5.6 W (max: 10.3 W) versus values in the 6.3 W – 8.5 W range from competitors. Only the [XPS 15](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html)comes close, with an impressive idle average (given its specifications) of just 5.8 W.

Under load, the maximum we measure is just 33.8 W. More realistic load conditions provoke a slightly lower measurement still of only 30.5 W. That’s essentially equivalent with the other two machines packing the same CPU (the [HP Pavilion 15](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html) and [Dell Inspiron 15](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html)), and it’s predictably far below all devices featuring dedicated graphics.

### **Battery Life**

[](https://www.notebookcheck.net/fileadmin/_processed_/4/4/csm_DSC_1083_watermarked_75bafe7f2a.jpg)

The internal 45 Wh battery produces decent runtimes.

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|  | | | | | | | | | |
| NBC WiFi Websurfing Battery Test 1.3 | | | |  | | | | | 6h 31min |
|  | [**Lenovo Ideapad 530S-15IKB**](https://www.notebookcheck.net/Lenovo-Ideapad-530S-15IKB-i5-8250U-FHD-Laptop-Review.324040.0.html)8250U, UHD Graphics 620, 45 Wh | [**HP Pavilion 15-cs0053cl**](https://www.notebookcheck.net/HP-Pavilion-15-cs0053cl-i5-8250U-HD-Laptop-Review.320248.0.html)8250U, UHD Graphics 620, 41 Wh | [**Asus VivoBook 15 X570UD**](https://www.notebookcheck.net/Asus-VivoBook-15-K570UD-i7-8550U-GTX-1050-Laptop-Review.317392.0.html)8550U, GeForce GTX 1050 (Laptop), 48 Wh | | [**Dell Inspiron 15 5579-9672**](https://www.notebookcheck.net/Dell-Inspiron-15-5579-i5-8250U-SSD-IPS-Touch-Convertible-Review.308480.0.html)8250U, UHD Graphics 620, 42 Wh | [**Acer Aspire 3 A315-41-R7BM**](https://www.notebookcheck.net/Acer-Aspire-3-A315-41-Ryzen-3-2200U-Vega-3-SSD-FHD-Laptop-Review.306442.0.html)2200U, Vega 3, 37 Wh | [**Dell XPS 15 2018 i5 FHD 97Wh**](https://www.notebookcheck.net/Dell-XPS-15-2018-9570-8300H-GTX-1050-97Wh-Laptop-Review.308420.0.html)8300H, GeForce GTX 1050 (Laptop), 97 Wh |
| **Battery Runtime** |  | **7%** | **-19%** | | **11%** | **-12%** | **141%** |
| Reader / Idle |  | 722 |  | | 671 | 536 |  |
| WiFi v1.3 | 391 | 419  7% | 318  -19% | | 435  11% | 344  -12% | 942  141% |
| Load |  | 134 |  | | 110 | 83 | 114 |
| Witcher 3 ultra |  |  |  | |  |  | 62 |

With a runtime of just 6 hours and 31 minutes in our standardized Wi-Fi web surfing battery benchmark, the IdeaPad 530S is a bit disappointing, but not terribly divergent from the field of competitors (whose results are contingent upon the typical delimiting factors such as battery size and CPU/GPU type). Considering its battery size of just 45 Wh, we could have feared worse we suppose.

**Battery Runtime**

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| --- |
| **Lenovo IdeaPad 530S Full Specifications** |
| **General** |
| |  |  | | --- | --- | | Brand | Lenovo | | Model | IdeaPad 530S | | Model Number | 530S | | Series | IdeaPad | | Colours | Platinum Grey | | Operating system | Windows 10 | | Battery Capacity (up to hours) | 8 |   **Display** |
| |  |  | | --- | --- | | Size | 14.00-inch | | Resolution | 1920x1080 pixels |   **Processor** |
| |  |  | | --- | --- | | Processor | Intel Core i5 | | Base Clock Speed | 3.4 GHz | | Cache | 6MB |   **Memory** |
| |  |  | | --- | --- | | RAM | 8GB |   **Storage** |
| |  |  | | --- | --- | | Hard disk | 256GB | | SSD | No |   **Connectivity** |
| |  |  | | --- | --- | | Wi-Fi standards supported | 802.11 ac | | Bluetooth version | 4.1 |   **Inputs** |
| |  |  | | --- | --- | | Touchpad | Yes | | Internal Mic | Yes | | Finger Print Sensor | No |   **Ports and slots** |
| |  |  | | --- | --- | | Number of USB Ports | 2 | | HDMI Port | Standard | | Multi Card Slot | SD Card Reader | | VGA Port | Yes | | Mic In | Yes | | RJ45 (LAN) | Yes | | RJ11 | Yes | |