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Manufacturer	Laptops With Thunderbolt 3	Specification			Price and Reviews			Compatibility					
		Connector [1] (Mobile unless stated) [2]	Graphics Card (Mobile unless stated) [2]	Type	Screen Size [3] (M, Y, U, HD, H, HK, Desktop)	CPU Brand (M, Y, U, Size [3])	Price - Amazon or Manufacturer	Review Link (notebookcheck)	Alleged Support	Asus XG Station 2	Razer Core	Akitio Node	HP Omen Accelerator
Acer													
MSI	GT73VR 7RF	TB3	GTX 1080	Gaming		KBY-HK							
MSI	P960	TB3											
Razer	Blade Pro	TB3	GTX 1080(Full) [60]	Gaming	17.3								
Samsung	Odyssey 17	TB3			17.3	KBY-HQ							
Samsung	Notebook 9 15" EXT	TB3	GTX 940MX		15	KBY-U							
Toshiba	Portégé X20W	TB3											
Valio	S11	TB3			11.6	U							





Thunderbolt 3 is a new connection standard developed by Intel. The new connection standard possesses many different advantages, such as:

Uses USB Type-C, the new connection port developed by USB-IF.  
Supports USB 3.1

Supports USB Alternative Mode for Display Modes (HDMI 2.0 and DisplayPort 1.2)

Supports USB Power Delivery (up to 100W as client, 15W to give to other devices)

A major simplification of USB standards, as non-Thunderbolt ports can take a mix of USB 3.1, Power Delivery, Alternative Modes (as shown on right) [75]

However, there is also one more very advantageous use of Thunderbolt 3. Its ability to host PCIe devices allows it to be used as a connection between laptops with Thunderbolt 3 and external Graphics.

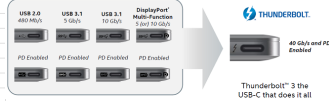
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All TB3 laptops have Skylake 6th-gen CPUs or newer

**ATTENTION ALL:** To find out if your Thunderbolt Laptop officially supports External GPUs, go to All Programs and find Thunderbolt Software (if it's not there, install Thunderbolt drivers), go to the Settings page and Details. The last item in the list should tell you if eGPU is supported on the laptop (if no, it still might work "cry of rage" (the cry of rage was not aimed at those who have a laptop that "doesn't" support eGPUs, but its a pain for documentation)).

Feel Free to comment some in (click the box you want to add a comment to, and click comments in the top right and click comment) Beware, however, I do not know if they will support eGPUs, so I would wait for this to be confirmed.

#### Not all USB-C Computer Ports Will be Equal



✓ = eGPU certification (not necessarily TB3, but also custom ports, like on Alienwares), only if confirmed by GetThunderbolt@Twitter (though trying to get information out of them is just as hard as... thinking about something which is just as hard as this :)) or the manufacturer.

Thunderbolt 3 external GPU enclosure

[Gigabyte eGPU dock \(Crazy amount of ports, look in comment for overview\)](#)

Boxes that are commented will look like this one. Administrators (people who can edit) will resolve and add to the list

HQ/HK - can power even the most demanding applications/games  
U - Likely to be bottleneck in more powerful applications  
M - ...maybe think about a better CPU.

Please check if the model you are buying has TB3

	Dell XPS 15 (9550)	Dell XPS 15 (9560)	Alienware 15 R2	Alienware 17 R3	Acer Predator 15	MSI GT72 Dominator	Acer Nitro Black Edition V15	Acer Nitro Black Edition V17	Asus Zenbook UX501VW	HP Elitebook 1040 G4
Processor	i5-8300HQ / i7-8700HQ	i5-7300HQ / i7-7700HQ	i7 6700HQ/i6820HK	i7 6700HQ/i6820HK	i7 6700HQ	i7 6820HK	i7 6700HQ	i7 6700HQ	i7 6700HQ	i7 7820HQ
Price (E/S)	£1,149   \$1450 [76]	\$1371 (7)	£1,299   \$1400	\$1500	£1200   \$1450	£1,300   \$1600			£1,400   \$1500	\$1999
Advantages	-Thin -Light -Consumer	-Thin -Light -Consumer	-970M vs 980M		-No Throttling -Cool -Speakers	-Replaceable GPU				-Thin -Light -Consumer
Storage	m.2 NVMe SSD	m.2 NVMe SSD or 2.5" (smaller batt)	M.2 x 2 / 2.5"	M.2 x 2 / 2.5"	Raid(4xNVMeM.2)   2.5"	Raid(4xNVMeM.2)   2 x 2.5"	2 x M.2   2.5"	M.2   2.5"	M.2 NVMe 512GB SSD	m.2 NVMe SSD
Max RAM/Slots	32G slots	32G slots	32G	32G	64G	64G	32G	32G	16 / 1 + 8GB integrated	16 / 0
Thickness	11(front)-17(back)/mm	11(front)-17(back)/mm	34mm	34mm	38.5mm	48mm	23mm	25mm		15.9mm
Weight	2kg	~2 kg	3.2kg	3.7kg	3.6kg	3.8kg	2.3kg	3kg		1.6kg
Where possible, 1920 x 1080 will be used for battery, mobile gaming on 4K is rare, and I'm sure you have a bigger WQHD/4K monitor to play on at home.										
Battery Life (mins) From Laptop/media	270   482 56Whr   84Whr	??   ?? 56Whr   87Whr	375 62Whr	312 (with UHD) I'm guessing around 400 (FHD) 62Whr	464 88Whr	83Whr	324 56Whr	290 52Whr		269 67Whr
From Notebookcheck (to fill in blanks)	554 (i7/FHD) 84Whr		446 62Whr	62Whr	400 (based on Video Playback) 88Whr	unknown with iGPU 150 with dGPU 83Whr	255 56Whr	254 52Whr	379 96Whr	
						GPU Switching requires reboot			QHD+ Display for Review [77]	

[1] Thunderbolt 3 Spec:

Can run on PCIe x4 3.0 or x2 3.0 (Low Power Edition).

If a laptop has two TB3 ports, it is 100% 40Gbps. LP TB3 cannot power two ports.

If it only has one TB3 port, then it may or may not have the full x4 speeds.

HPTB3 - Thunderbolt 3 with Full Speeds

[2] if M on 1XXX gpu, then it is a Max-Q design

[3] HAS - Haswell (4th Gen)

SKY - Sky Lake (6th Gen)

KBY - Kaby Lake (7th Gen)

KBY-R - Kaby Lake Refresh (8th Gen)

[4] Bandwidth is shared

[5] Specific Configurations

[6] After TB3 firmware update

[7] same model number as 2016 XPS 13

[8] Officially runs on a LP (Low Power) version of the TB3 controller. This limits the speed of the connection to TB2 speeds (20Gbps)

[9] Same as HD 620.

[10] Bandwidth is shared

[11] Bandwidth is shared

[12] Bandwidth is shared

[13] GA = Graphics Amplifier

[14] Bandwidth is shared

[15] Seems the Chinese variant is called the Miix 5 Pro

[16] GA = Graphics Amplifier

[17] Bandwidth is shared

[18] Officially runs on a LP (Low Power) version of the TB3 controller. This limits the speed of the connection to TB2 speeds (20Gbps)

[19] GA = Graphics Amplifier

[20] Bandwidth is shared

[21] TB 3.0 x2 Low Power. Charging input max 10W.

LPTB3: about 25%-35% performance hit, even after tweaking the CPU TDP to 9W.

[22] Battery Life with the 97Wh, FHD variant seems to be around 600 minutes (56whr time / 56 \* 97) of WiFi v1.3 on notebookcheck.

How it compares:

<http://www.notebookcheck.net/Benchmarks-and-Test-Results.142793.0.html>

[23] Officially runs on a LP (Low Power) version of the TB3 controller. This limits the speed of the connection to TB2 speeds (20Gbps)

[24] Two Thunderbolt controllers, one TB3 controller for each side. Both sides are connected directly to the CPU. Bandwidth is shared by ports on each side. AFAIK this is the only notebook connecting TB3 controllers directly to the CPU. Every other one goes via PCH which shares bandwidth with other devices and bottlenecks the TB3 link.

[25] Radeon Pro 450 or Radeon Pro 455

[26] No Optimus

[27] No Optimus

[28] No Optimus

[29] No Optimus

[30] No Optimus

[31] No Optimus

[32] Try to see if you can get it cheaper by using Dell's Price Match. I know the US and UK have one, but not sure about other markets.

Price Match - find any similarly specced laptop.

[33] Officially runs on a LP (Low Power) version of the TB3 controller. This limits the speed of the connection to TB2 speeds (20Gbps)

[34] Specific Configurations

[35] Officially runs on a LP (Low Power) version of the TB3 controller. This limits the speed of the connection to TB2 speeds (20Gbps)

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[37] GA = Graphics Amplifier

[38] GA = Graphics Amplifier

[39] GA = Graphics Amplifier

[40] GA = Graphics Amplifier

[41] Seems Dell has changed the naming scheme, judging from the URL of the Alienware 15 on the website. TB3 is connected to CPU port as per <https://egpu.io/forums/implementation-guides/alienware-15-r3-gtx1070-gtx107032gbps-tb3-aorus-gaming-box-win10-theitsage/>

[42] GA = Graphics Amplifier



[43] No Optimus on some models (G-Sync Models)

[44] Seems Dell has changed the naming scheme, judging from the URL of the Alienware 15 on the website

[45] GA = Graphics Amplifier

Controller Connected to CPU directly. (Can thus use full bandwidth and has low latency)

[46] No Optimus on some models (G-Sync Models)

[47] Only some configurations have a Thunderbolt Port

[48] Bandwidth is shared

[49] Site says "optional" Thunderbolt 3, so not sure what that means

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[52] Bandwidth is shared

[53] Using HWiNFO64, all PCIe devices on P50 except dGPU are connected to PCH; and PCH connects to CPU with DMI 3.0 x4 (which pretty much is PCIe 3.0 x4??). This means that the this 32GT/s link to CPU is shared among 1 TB3 port, 2 M.2 PCIe 3.0 x4 (NVMe) ports, SATAs, Ethernet and WiFi.

Credit: Feiyeung Sit

[54] Samsung Notebook 9 15

[55] Bandwidth is shared

[56] I'll only highlight the ones that evidently work.

[57] Literally an full size PCIe (x16) slot is stuck on the back of the laptop. Guess that's one way to point out its function

[58] Broadwell (5th Gen) HQ

So rare (especially for TB3) I'm not going to include it in my little glossary at the top of the page

[59] Seems to be Full Speed (x4) TB3.

Checked with HWiNFO64, 3 PCIe express ports, x1 x4 x4

[60] No Optimus

[61] The normal ones you find on any computer (at the moment)

[62] Alternatively known as a Headphone Jack.

[63] \$399 if bought with Razer Laptop

[64] GPU provided

GPU is GTX 960M

[65] Official: Faster with TB3+USB.

Most notably, can optionally operate with either TB3 or TB3+USB3 configuration for increased bandwidth. This is especially useful for the internal 2.5" disk bay and attached USB peripherals.

"When connected with both a Thunderbolt™ 3 and USB Type-B cable, ROG XG Station 2 uses an additional USB signal channel to deliver 2X faster random read speeds and 1.8X faster write speeds than with a Thunderbolt™ 3 connection alone."

[66] 310 × 152 × 44 mm

[67] SATA III x1 (internal for 2.5" HDD/SSD)  
Type C is at USB 3.0 speeds (USB3.1 Gen1 is the same as USB3.0)

[68] 9 USB 3.0  
1 USB 3.1

[69] 1 x USB 3.0 Type-C  
1 x USB 3.1 Gen.2 Type-C

1 x SD Card reader  
1 x MicroSD reader  
1 x PS/2 Port  
1 x PCIe x4 M.2 SSD Slot  
1 x PCIe x1 M.2 SSD Slot  
1 x M.2 Slot 2230 for Wifi

[70] May 2017 release

[71] All USB 3.0

[72] May 2017 release

[73] All USB 3.0

[74] 1 is Quick Charge 3 enabled (Fast Charges your Phone if it has a Snapdragon 835). Is backwards compatible with Quick Charge 2.0 and 1.0, but at slower charging speeds

[75] Key examples being:  
Smartphones with Type-C usually don't have USB 3.1 or Alternative Modes. Power Delivery not technically supported anyway

[76] Resellers only now, refurbished versions available starting at \$1150

[77] FHD variant is available in select regions