

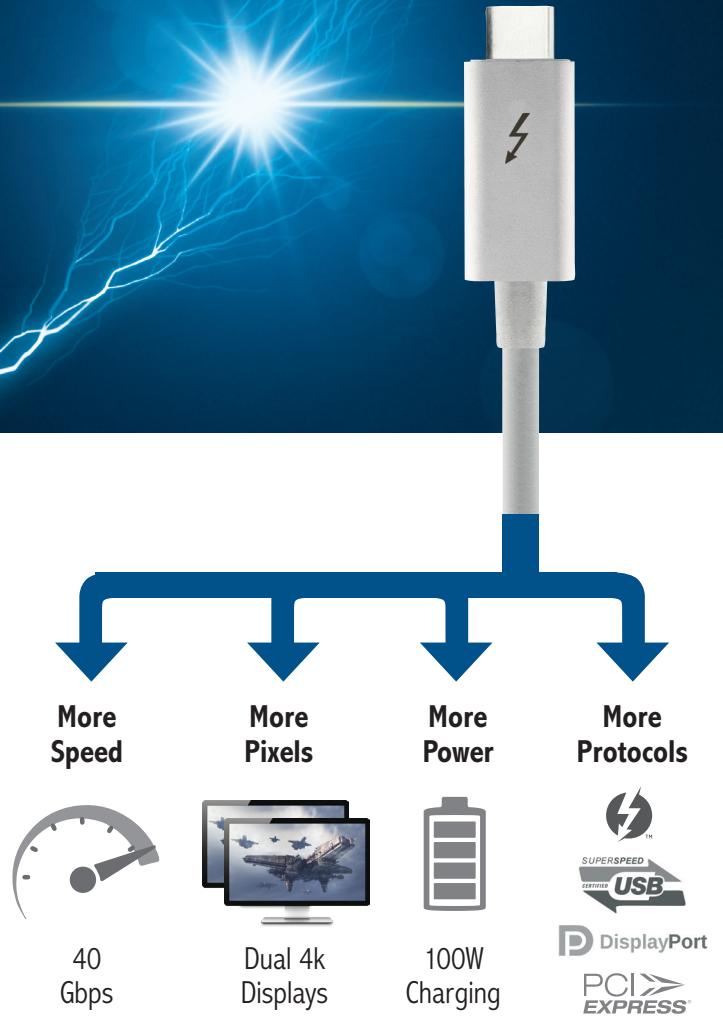


# Thunderbolt™ 3

More Speed. More Pixels. More Possibilities.

## The USB-C That Does It All

Thunderbolt™ 3 brings Thunderbolt to USB-C at speeds up to 40 Gbps, creating one compact port that does it all – delivering the fastest, most versatile connection to any dock, display, or data device. For the first time, one computer port connects to Thunderbolt devices, every display, and billions of USB devices. A single cable now provides four times the data and twice the video bandwidth of any other cable, while also supplying power. It's unrivaled for new uses, such as 4K video, single-cable docks with charging, external graphics, and built-in 10 GbE networking. Simply put, Thunderbolt 3 delivers the best USB-C.



## Full 4K Video Experience

Connect displays with astonishing resolution, contrast, and color depth to see your photos, videos, applications, and text with amazing detail.



## Best Single-Cable Docking

Now, one compact port provides Thunderbolt 3 data transfer, support for two 4K 60 Hz displays, and quick notebook charging with a single cable. It's the most advanced and versatile USB-C docking solution available.



## External Graphics

Gamers can now connect plug 'n' play external graphics to a notebook to enjoy the latest games at recommended or higher settings.



## Thunderbolt™ Networking

Provides a peer-to-peer connection at 10 GbE speeds to quickly transfer files between computers, perform PC migrations, or set up small workgroups with shared storage.

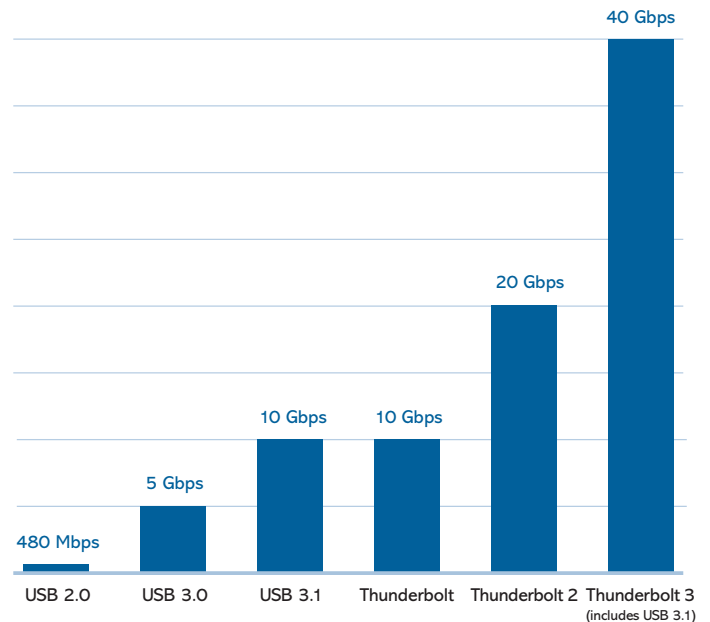




## Key Features

- Thunderbolt™, USB, DisplayPort, and power on USB-C
- USB-C connector and cables (small, reversible)
- 40 Gbps Thunderbolt™ 3 – double the speed of Thunderbolt™ 2
  - Bi-directional, dual-protocol (PCI Express and DisplayPort)
  - 4 lanes of PCI Express Gen 3
  - 8 lanes of DisplayPort 1.2 (HBR2 and MST) – supports two 4K displays (4096 x 2160 30bpp @ 60 Hz)
- USB 3.1 (10 Gbps) – compatible with existing USB devices and cables
- DisplayPort 1.2 – compatible with existing DisplayPort displays, devices, and cables
  - Connect DVI, HDMI, and VGA displays via adapters
- Power (based on USB power delivery)
  - Up to 100W system charging
  - 15W to bus-powered devices
- Thunderbolt™ Networking
  - 10Gb Ethernet connection between computers
- Daisy chaining (up to six devices)
- Lowest latency for PCI Express audio

Solutions and products built to Thunderbolt and Thunderbolt 2 specifications will work with Thunderbolt 3 via an adapter.



A single cable now provides four times the data and twice the video bandwidth of any other cable, while also supplying power



To learn more visit <https://thunderbolttechnology.net/>

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer or learn more at intel.com.

As compared to other PC I/O connection technologies including eSATA, USB, and IEEE 1394 Firewire\*. Performance will vary depending on the specific hardware and software used. Must use a Thunderbolt-enabled device.

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\* Other names and brands may be claimed as the property of others.