



Sonnet Echo III Rackmount

ProdCode: SONECHO3RTB3

3-slot rackmount Thunderbolt 3 to PCIe card expansion system



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Features

- 3-slot rackmount Thunderbolt 3 to PCIe card expansion system
- **Adds Connectivity & Capabilities**
Connects up to three high-performance non-GPU PCIe cards via a Thunderbolt 3 cable to your computer lacking expansion slots.
- **Pro Tools | HDX Compatible(1)**
HDX compatibility mode enables use of up to three Pro Tools | HDX PCIe cards with no additional parts needed.
- **Broad PCIe Card Compatibility**
Every Thunderbolt 3 compatible, non-GPU card supported regardless of length or height.
- **Three PCIe 3.0 Slots(1)**
One x16 plus two x8 slots support three full-height, single-width cards, or one double-width card plus one single-width card.
- **Pro Power**
Integrated 400W power supply with 75W auxiliary power. Saves energy by powering on/off automatically with the computer.
- **Remarkably Quiet**
Dual temperature-controlled, variable-speed Noctua fans rated at 17dBA automatically and quietly cool the cards.
- **40Gbps Thunderbolt 3 Interface**

Offers 2750 MB/s of PCIe bandwidth for the installed cards(1).

- **Two Thunderbolt 3 Ports**

One port connects to computer; second port supports daisy-chaining of up to five additional Thunderbolt peripheral devices.

- **Rugged 2U Steel Rackmount Housing + Optional Expansion Space**

Provides robust and secure protection in server and DIT racks; space for optional future expansion.

Technical Notes

1. When set to HDX compatibility mode, PCIe slots operate in PCIe 2.0 mode and the chassis' bandwidth is limited to 1750 MB/s.
2. ThunderLok 3 compatible specifically with Sonnet 0.5- and 0.7-meter Thunderbolt 3 cables; Sonnet 1- and 2-meter Thunderbolt 3 cables require ThunderLok 3L.
3. While the Echo III Desktop features a 40 Gbps Thunderbolt 3 interface, some computers equipped with Thunderbolt 3 use an x2 PCIe lane implementation of Thunderbolt 3 technology that limits PCIe performance to 20Gbps.
4. Full performance requires the use of the included Thunderbolt 3 (40Gbps) cable, or comparable Thunderbolt 3 (40Gbps) cables; look for the Thunderbolt icon AND the number 3 on the connector housings to identify these cables.
5. Second Thunderbolt 3 port supports Thunderbolt and Thunderbolt 2 peripheral devices on Macs used with the Apple Thunderbolt 3 (USB-C) to Thunderbolt 2 Adapter, sold separately.
6. Second Thunderbolt 3 port supports USB 3.2 Gen 1 (5Gb) or Gen 2 (10Gb) devices when connected with proper cable or adapter (sold separately).
7. Assuming that a 40Gbps Thunderbolt 3 connection is established, all Thunderbolt 3 computers support one 4K monitor directly attached to the pass-through Thunderbolt 3 port, without affecting PCIe bandwidth to the device. Using two 4K monitors or a single 5K monitor attached to the pass-through Thunderbolt 3 port reduces available PCIe bandwidth to the device. Two 4K monitors requires either: 1) for Thunderbolt 3 Macs or for Windows Thunderbolt 3 PCs that support two monitors—a Thunderbolt 3 to Dual DisplayPort adapter; or 2) for Windows Thunderbolt 3 PCs that support two monitors—a 4K monitor with multi-stream transport support (DP out).
8. Power supply will operate as low as 90VAC, with linear power derating from 400W @ 115VAC to 320W @ 90VAC.

Connect Three Full-length PCIe Cards to Computers with Thunderbolt 3 Ports

The best portable, mini desktop and all-in-one computers feature powerful CPUs and include high-performance Thunderbolt™ ports to support peripherals. But they lack the PCIe expansion slots creative pros need to install specialty adapter cards that enable their workflows by adding video and audio inputs, transcoding data, and connecting to high-speed shared storage and networks. Sonnet has a solution—the Echo™ III Rackmount—a professional Thunderbolt™ 3 to PCIe card expansion system that enables you to connect three (up to) full-length (12.28 inches long) PCIe cards to your computer at the same time, via a single cable.

The Thunderbolt 3 Link

Plugged into one of your computer's Thunderbolt 3 ports, the Echo III Rackmount system delivers 2750 MB/s of PCIe bandwidth and enables you to connect professional PCIe cards (three full-height, single-width cards, or one double-width card plus one single-width card).

Supports Every Thunderbolt 3 Compatible, Non-GPU PCIe Card

- Video
- Audio
- SAS/SATA
- Networking
- SSD

Echo III Rackmount supports every Thunderbolt 3 compatible, non-GPU PCIe 1.1/2.0/3.0 card available including video capture and transcoding; audio DSP; 6Gb or 12Gb SAS or SATA host bus adapter; 10Gb or 25Gb Ethernet; SSD storage; and other specialty types to your system.

Do you have a card in mind but aren't sure it's compatible? We've put together a compatibility list that identifies cards conforming to Thunderbolt technology requirements, and organized by fit and power compatibility with specific expansion systems.

[SEE A LIST OF SUPPORTED PCIE CARDS \(PDF\)](#)

Avid Pro Tools Qualified

Ready for up to three Pro Tools | HDX PCIe Cards – no extra parts required

At the flick of a switch, the Avid qualified Echo III Rackmount system is instantly optimized to support up to three Pro Tools | HDX PCIe cards, with no extra parts necessary! This chassis has been tested and is [qualified by Avid Audio group](#) for use with Avid Pro Tools HD 2020 software, and Avid Pro Tools HDX and HD Native systems.

Three PCIe 3.0 Slots and Power to Spare

The Echo III Rackmount features one x16 and two x8 PCIe 3.0 slots(1), enabling it to support a wide variety of cards at the same time. It integrates a universal 400W power supply, plus a 75W auxiliary power connector to support especially power-hungry non-GPU cards, including the Avid Pro Tools | HDX. The Echo III was designed without a power switch, because it powers on and off automatically with the connected computer, saving energy in the long run. With no power switch, you can't forget to turn off the system!

Built for Cool, Rackable Expansion

The Echo III Rackmount mounts in a rack space 2U tall, and is only 16.5 inches deep, making it ideal for use in a wide range of popular mobile racks, carts, and rack cases, and in server rooms as well. Its enclosure is formed of heavy-duty steel to provide secure mounting for the inner assembly and protection for the PCIe cards installed inside, and to support maximum airflow for cooling, regardless of where you install it in a rack.

Rack Ready

The Echo III Rackmount's included adjustable rackmount extension rails enable the 2U enclosure to be installed securely in a variety of racks from 16 to 24 inches deep.

Dual Fans. Ultra-quiet Operation

Featuring dual Noctua fans, the Echo III Rackmount is designed to deliver ultra-quiet operation so that it can be comfortably used in noise-sensitive environments. Rated at 17.1dBA—below the 20dBA ceiling prescribed for use in recording and broadcast studios—the fans spread their noise spectrum to minimize any single frequency's impact. To further ensure negligible noise levels, the fans are temperature-controlled, automatically speeding up and slowing down smoothly as needed, and the enclosure is engineered to optimize airflow over the installed cards to effectively and efficiently cool the system.

Included at No Extra Charge

Sonnet Thunderbolt 3 Cable & ThunderLok 3

Sonnet includes a 0.7-meter Thunderbolt 3 (40Gbps) cable that transfers data at Thunderbolt 3's full 2750 MB/s PCIe bandwidth. In addition, Sonnet provides a ThunderLok 3 Thunderbolt connector retainer clip(2) that prevents accidental cable disconnections—just slide it over one end of the cable, and then plug in the connector and secure it to the chassis by turning a thumbscrew. Because of its unique design, ThunderLok remains on the cable so it won't get lost when not in use.

ThunderLok Advantage

Sonnet Thunderbolt expansion systems are designed with Thunderbolt ports that include a threaded mounting holes for securing Sonnet's ThunderLok retainer clips that prevent accidental cable disconnections.

Get Full Thunderbolt Performance, at a Distance

Whether noisy PCIe card fans make it impractical to use the Echo III Rackmount in a noise-sensitive environment, or because securing it in another room is required, you may find it necessary to put some space between the chassis and computer. No problem! Thunderbolt 3 optical cables (sold separately), available in lengths from 5 to 50 meters, enable you to locate your equipment where you need and connect the pieces without loss of functionality. These thin, lightweight, and tough fiber optic cables are easy to route, and support high-speed data transmission equal to copper Thunderbolt cables.

Fastest External Interface Available. Thunderbolt 3 – the USB-C That Does It All

The Echo III Rackmount features a 40Gbps Thunderbolt 3 (USB-C®) interface that delivers up to 2750 MB/s of PCIe bandwidth(1), enabling it to support 4K video capture and processing cards at high frame rates, multiple audio DSPs, and 25GbE and dual-port 10GbE network cards at full performance.(3)(4)

- **Two Thunderbolt 3 Ports**

One port is reserved for the connection to your computer; the second port enables expansion of up to five additional Thunderbolt peripheral devices(5) in a daisy chain.

- **10Gbps USB 3.2 Gen 2 Support**

10Gbps USB 3.2 Gen 2 support allows you to connect a USB device(6) to the second port using the proper cable or adapter.

- **Supports One 5K or Two 4K Displays**

Supports connecting up to two 4K @ 60Hz displays or one 5K @ 60Hz display.(7)

- **Provides 15W of Power**

For connected peripherals requiring extra power, 15 watts is provided to bus-powered devices.

Backward Compatible with Older Macs

No Thunderbolt 3? No problem—the Echo III Rackmount is also compatible with Macs with Thunderbolt 2 ports when used with the bi-directional Apple Thunderbolt 3 (USB-C) to Thunderbolt 2 Adapter and a Thunderbolt cable (both sold separately).

Desktop Version Available

?Choose between the Echo III Rackmount and [Echo III Desktop](#) to suit your workflow needs. The Echo III Desktop is wrapped in a rugged, yet lightweight aluminum outer shell, resulting in a system light enough to carry without weighing you down, yet sturdy enough to securely protect the installed PCIe cards.

In the box:

- Echo Express III Rackmount chassis
- Power cord
- 0.7-meter Thunderbolt 3 (40Gbps) cable
- ThunderLok 3 Thunderbolt Connector Retainer Clip(2)
- Documentation

