



Connectivity & Capability Expander

Echo™ Express III-D

THUNDERBOLT™ 2 EXPANSION CHASSIS FOR PCIe CARDS



Use PCIe Expansion Cards with Computers Lacking Slots

Today's ultra-light notebooks, mini, and all-in-one desktop computers now have tremendous processing power—power that many thought would only be possible in full-size workstation or large desktop computers. Smaller in size and more portable, they're very desirable. For pros in the creative fields, processing power alone is not enough. A prime example is the new Mac Pro®. Proven to be a processing powerhouse and packed with Thunderbolt 2 and USB 3.0 ports, it lacks the PCIe expansion slots necessary to install specialty cards to connect various video and audio inputs, for transcoding data, and to connect to high-speed storage and networks. With the Echo Express III-D, Sonnet has created a solution that leverages the paradigm shift enabled by Thunderbolt technology, allowing PCIe expansion slots to be connected outside a computer. This desktop Thunderbolt-to-PCIe card expansion chassis makes it possible for you to connect three professional video capture, audio interface, SAS or SATA HBA, 16Gb or 8Gb Fibre Channel, 10Gigabit Ethernet, and RAID controller PCIe cards to any Mac® with a Thunderbolt port.



Featuring 20Gbps Thunderbolt 2 technology that provides sufficient bandwidth to support many of the highest performance and most demanding PCIe cards, the Echo Express III-D delivers maximum performance when connected to a computer with Thunderbolt 2. The III-D is also fully compatible with computers with 10Gbps Thunderbolt technology, supporting the majority of cards at full-performance.

Thunderbolt 2 Upgrade Customers
Process Your Upgrade Here



Key Features

- **Use PCIe Expansion Cards with Computers Lacking Slots**—Use high-performance PCIe cards with any Mac with a Thunderbolt port
- **Thunderbolt 2 Interface**—Maximum performance with computers with Thunderbolt 2 technology, backward compatible with host computers and other devices equipped with 10Gbps Thunderbolt technology.
- **Three PCIe Slots**—Supports three full-length, full-height, single-width cards, or one double-width card plus one single-width card
- **Remarkably Quiet**—Large, temperature-controlled, variable-speed fans that automatically cool the cards, plus computer-modeled design that reduces airflow turbulence and velocity, combine to provide quieter cooling for all cards
- **Integrated Universal Power Supply**—Built-in 300W power supply with 75W auxiliary power connector
- **Rugged Aluminum Housing**—Provides robust and secure protection for any environment
- **Every Thunderbolt-Compatible Card Supported**—Works with every Thunderbolt-compatible PCIe card, regardless of length or height.
- **5-Year Warranty Included at No Extra Cost**—No extra charge for a 5-year warranty

Three Slots, No Compromise

Sonnet's Echo Express III-D supports three full-size PCIe cards, up to 12.28" (full-length). The III-D integrates a universal 300W power supply and includes a 75W PCIe power connector for cards that require supplementary power, such as the Avid® Pro Tools|HDX or the new RED® ROCKET-X. Even with all that power, the III-D is enviro-friendly; it automatically powers on or off whenever the connected computer powers on or wakes, or powers off or sleeps, respectively. The use of large, slow-spinning fans in the Echo Express III-D makes it a remarkably quiet operator. Two Thunderbolt ports support daisy chaining of up to six devices to a single port on your computer.





Built for Speed

20Gbps Thunderbolt 2 technology-equipped computers are here. The original 10Gbps Thunderbolt interface provided breakthrough bandwidth for external expansion, more than sufficient to support the maximum performance of most PCIe cards. However, some high bandwidth cards such as the RED ROCKETS, 16Gb Fibre Channel, multi-port 10Gigabit Ethernet cards, or the use of other bandwidth-hungry cards require more than 10Gbps. Thunderbolt 2 removes this barrier by providing more bandwidth for demanding applications. The Echo Express III-D's



Thunderbolt 2 interface takes full advantage of this increased bandwidth to ensure optimum performance from installed cards when the chassis is connected to a Thunderbolt 2-equipped computer. Need to connect to a computer equipped with 10Gbps Thunderbolt? No problem, the Echo Express III-D is fully compatible with earlier generation Thunderbolt computers as well.



(PCIe cards sold separately)

Quiet Cooling

Smart Design Inside and Out



Constructed of rugged and lightweight aluminum, the outer shell of the Echo Express III-D securely protects the PCIe cards installed inside, yet the chassis is light enough to carry without weighing you down. The fans are variable-speed and temperature-controlled, and the computer-

modeled airflow management ensures that even hot-running cards remain reliably cool without the need to install an extra PCIe blower card that would prevent the use of one of the three slots. Because the fans automatically speed up and slow down as needed, there is no guesswork in setting a switch position, and no need for tools to change settings. Since Echo Express products automatically power on and off with your computer, there is no power switch needed on the chassis.

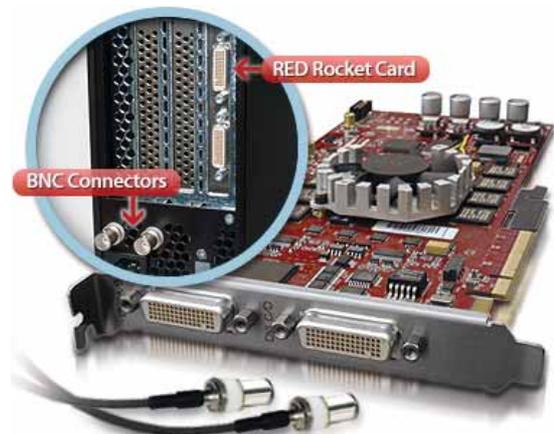


Quiet, Please

The Echo Express III-D was designed to be remarkably quiet so that it can be comfortably used in noise-sensitive environments, and it is indeed the quietest Echo chassis yet. Its dual, top-mounted, ultra-quiet, temperature-controlled fans assist the natural convection of warm air through the PCIe cards, and vents it out the top of the chassis through custom Venturi openings with low form-drag grills, resulting in reduced air velocity, turbulence, and consequently, fan noise.

RED ROCKET Supporter

If you're a RED ROCKET user, you already know that the card normally takes two PCIe slots—one for the card itself and another for the BNC connector bracket (for HD-SDI output). Sonnet designed the Echo Express III-D to accommodate the card/bracket pair in a single slot. This Echo chassis includes mounting holes designed specifically for the installation of two BNC connectors, enabling you to install the ROCKET card in one slot and its BNC connectors in the Echo chassis' mounting holes, leaving the two remaining slots open. The extra bandwidth afforded by the Thunderbolt 2 interface doubles ROCKET's throughput, too.



Designed for BNC Connector Cables—Echo Express III-D's back panel has two mounting holes for BNC connectors, allowing the use of a RED ROCKET card without the need for the BNC connector bracket that would normally occupy a valuable PCIe slot.



Thunderbolt Cable Lock Included

Sonnet includes a lock that secures Thunderbolt connectors⁽³⁾ plugged into the Echo chassis. It is easy to install and prevents accidental cable disconnections.



Rackmount Version Available

The Echo Express III is available in two versions, the Echo Express III-D (desktop) and **Echo Express III-R** (rackmount), to suit your workflow needs. The III-D's form factor makes it easy to transport. The III-R mounts in a rack space 2U tall, and is just 16" deep, making it perfect for use in a wide range of popular mobile racks, carts, and rack cases, and server rooms as well. The III-R even saves space for other equipment—with the optional Echo Express III-R Mobile Rack Kit, you can install one or two mobile rack devices in the III-R's rack enclosure.



PCIe Card Thunderbolt Compatibility Chart ▶

Product	Mac	Windows	Echo Express		Echo Express Pro		iMac mini Server	
			Full Height 3/8 Length	Full Height Full Length	Low Profile Half Length	Full Height Full Length		
Pro Audio								
Lynx H2Lite	✓		✓	✓			✓	
Lynx AES 150-DIC	✓		✓	✓			✓	

5-Year Warranty Included at No Extra Cost

There's no need for you to pay an additional 10-15% on top of the purchase price to extend the warranty period beyond one year—Sonnet backs the Echo Express III-D with its Pro 5-year warranty.



Every Thunderbolt-Compatible Card Supported

The Echo Express III-D supports three single-width, full-length PCIe cards, or one double-width, full-length card plus one single-width card, enabling it to support every Thunderbolt-compatible card available. PCIe 1.1, PCIe 2.0, and PCIe 3.0 cards are supported. Do you have a card in mind but aren't sure it's compatible? We've worked closely with PCIe card manufacturers to provide a list of compatible cards on our supporting [PCIe Card Thunderbolt Compatibility Chart](#). The chart provides an up-to-date list of cards that have been tested to be recognized over a Thunderbolt connection and compatible with Thunderbolt technology requirements.

Sonnet Thunderbolt Expansion Partners

Sonnet works closely with the following partners to ensure Thunderbolt compatibility for their products. See the [PCIe Card Thunderbolt Compatibility Chart](#) for an up-to-date list of products that have passed Thunderbolt compatibility testing with Sonnet products.



PCIe cards and computer hardware shown in photos for illustration purposes; items sold separately.

Technical Specifications

Part No.	
ECHO-EXP3FD	Echo Express III-D Rackmount Thunderbolt 2 Expansion Chassis for PCIe Cards ⁽¹⁾
Hardware	
Warranty	5-year
Dimensions WxDxH:	3.8 x 16 x 10.2 in. (9.7 x 40.5 x 25.9 cm)
Weight	7.5 lbs (3.4 kg)
Form Factor	Desktop
External Connectors	Two Thunderbolt
Internal Connector	6-pin Mini-Fit Jr (same type as on legacy Mac Pro motherboard; provides up to 75W of power for PCIe cards that require supplemental power)
Expansion Slots	<ul style="list-style-type: none">One x8 mechanical (x8 electrical) PCIe 2.0One x16 mechanical (x8 electrical) PCIe 2.0One x8 mechanical (x4 electrical) PCIe 2.0
PCIe Cards Supported ⁽¹⁾	<ul style="list-style-type: none">One full length, full-height, double-width PCIe card, plus one single-width card or <ul style="list-style-type: none">Three full length, full-height, single-width PCIe cards
Compatible PCIe Cards ⁽²⁾	Up-to-date PCIe cards listed on our supporting PCIe Card Thunderbolt Compatibility Chart
Power Supply	Universal 300W, 115-230V AC, 50-60 Hz
Operating Temperature	0° C to 35° C (32° F to 95° F)
RoHS Compliant	Yes
Package Contents	<ul style="list-style-type: none">Echo Express III-D chassis⁽¹⁾Power cordThunderbolt cable lock⁽³⁾Documentation <p>Note: PCIe cards and Thunderbolt cable sold separately</p>

Compatibility

- Any Mac with a Thunderbolt or Thunderbolt 2 port
- Any Windows® 8 or 7 computer with a Thunderbolt or Thunderbolt 2 port⁽⁴⁾

PCIe Card Compatibility

- For up-to-date PCIe card compatibility see our [PCIe Card Thunderbolt Compatibility Chart](#)

Technical Notes

- PCIe cards sold separately; requires Thunderbolt cable, available at the [Sonnet Online Store](#) or the [Apple Store](#).
- Compatibility requires the installation of Thunderbolt technology-aware drivers, available from the manufacturer. See our supporting [PCIe Card Thunderbolt Compatibility Chart](#) for a list of up-to-date compatible PCIe cards.
- Thunderbolt cable lock not compatible with optical Thunderbolt cables.
- Windows requires a Thunderbolt 2 interface in the computer and in the expansion chassis to support more than two PCIe controllers. Note that some PCIe cards have a bridge to multiple controllers, so it is possible for a single dual-controller PCIe card to reach the limit if not connected via Thunderbolt 2. Not all Mac-compatible PCIe cards are also compatible with Windows. See the [PCIe Card Thunderbolt Compatibility Chart](#) for details.

Specifications subject to change without notice.



For
Windows



RoHS
COMPLIANT