



ExpressBox⁴ 1U

4 Slot PCI Express[®] Expansion System

Model EB4-1U



PCI EXPRESS[®]

Increase server I/O capacity and monitor critical components

- Add four PCI Express slots through a single slot
- Includes redundant power supply and hot-swappable fans
- Supports all PCI Express form factors
- Multiple systems can be daisy-chained to provide eight or more slots
- Designed for Reliability, Availability, and Serviceability
- Compatible with the Simple Network Management Protocol (SNMP)

Magma ExpressBox⁴ 1U is a reliable PCI Express expansion system designed for industrial environments where serviceability and availability features are required. ExpressBox⁴ provides a scalable method to increase the I/O capability of your server.

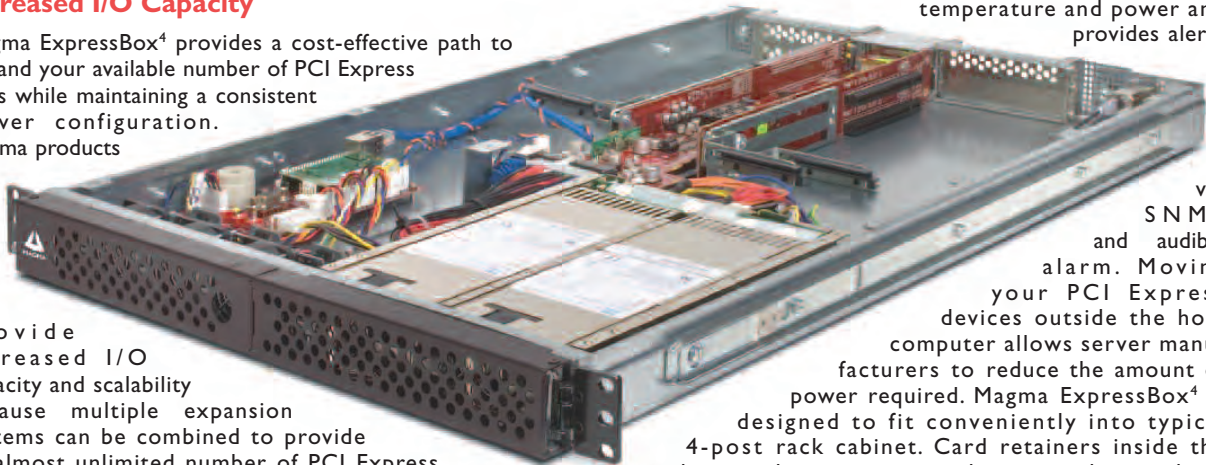
Cost-Effective Migration and Increased I/O Capacity

Magma ExpressBox⁴ provides a cost-effective path to expand your available number of PCI Express slots while maintaining a consistent server configuration. Magma products

provide increased I/O capacity and scalability because multiple expansion systems can be combined to provide an almost unlimited number of PCI Express slots to a single computer.

Maximize Rack Space, Minimize Power Use

ExpressBox⁴ is the only expansion solution that provides four full-length PCI Express slots in 1U rack-mount form factor. The enclosure includes a hot-swappable redundant power supply and hot-swappable cooling fans. The PCI Express slots are hot-swappable allowing you to replace a defective card without shutting down the system. ExpressBox⁴ monitors temperature and power and provides alerts

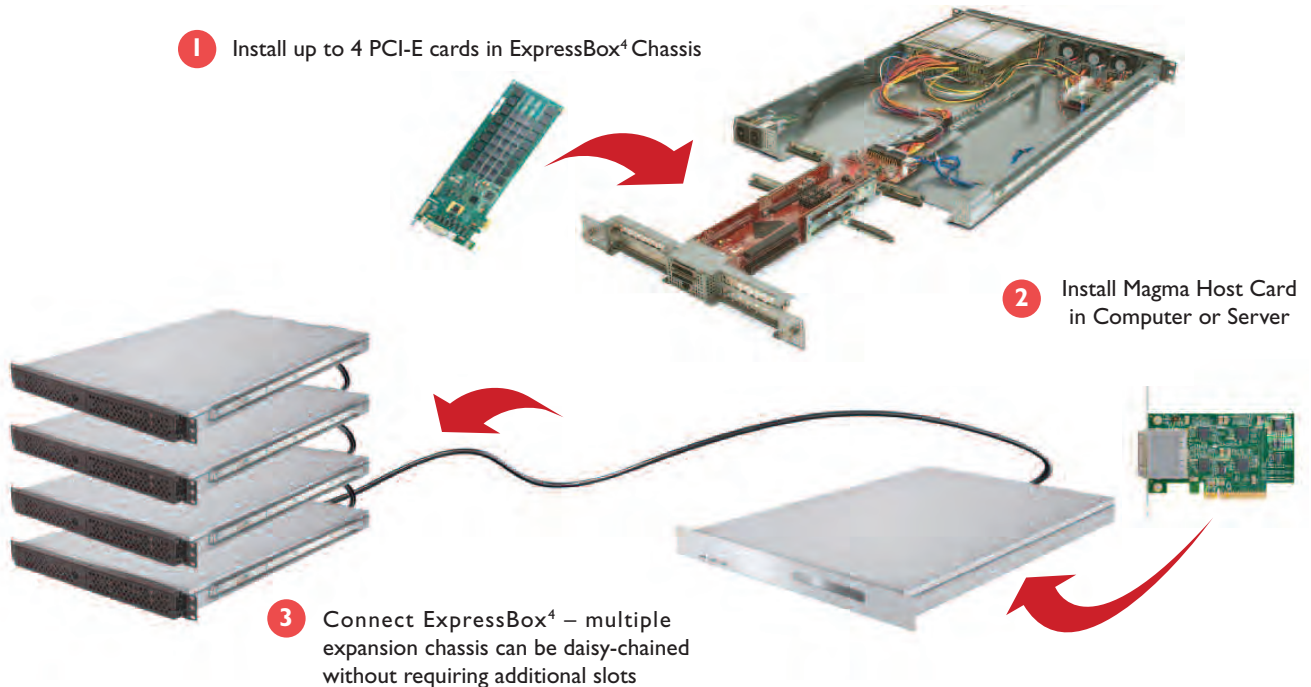


via SNMP and audible alarm. Moving your PCI Express devices outside the host computer allows server manufacturers to reduce the amount of power required. Magma ExpressBox⁴ is designed to fit conveniently into typical 4-post rack cabinet. Card retainers inside the enclosure keep your cards securely in place during transportation.

Easy Installation

Magma ExpressBox⁴ consists of a PCI Express host card, a cable and rack-mount enclosure. Magma ExpressBox⁴ is automatically configured by the system BIOS and all slots appear transparent to the host computer.

How it Works



Rugged iPass cable is available in 1, 3 or 7-meter cable lengths.



Hot-swappable, high-volume cooling fans keep cards cool. Fan performance is monitored and failures are reported.



Superior serviceability features eliminate downtime. Replace defective components or cards without system interruption.



SNMP protocol support:

ExpressBox⁴ utilizes the SNMP protocol to monitor and report normal operation parameters as well as alerts and failure events. It offers the following features:

- Support for SNMP v2.
- Real time, Ethernet-based system health reporting is accessible via a standard web browser or an equivalent SNMP-based agent, while the chassis can support both DHCP and static IP setups.
- Flexible SNMP trap management allows for early detection of chassis failures. Such events include: chassis overheating, swappable fan failure and swappable power supply failure.
- Real time reporting of chassis temperature as probed in two locations within the chassis is available via the same interface.
- The SNMP agent supports managers across multiple platforms (DOS, Linux, UNIX etc.)

In addition to SNMP monitoring and reporting, the chassis features an audible, alert for over-temperature, fan failure or power supply failure.

Hot-Plug support:

Removal and replacement of PCI Express peripheral cards is supported via an independent hot-plug mechanism as follows:

- User friendly interface allows initiating a hot-swap request without affecting the operation of the entire system.
- Any one of the four PCIe peripherals can be stopped and replaced with the same or equivalent peripheral.
- All four expansion slots are designed to protect a PCIe peripheral electrically in the event of its surprise removal.

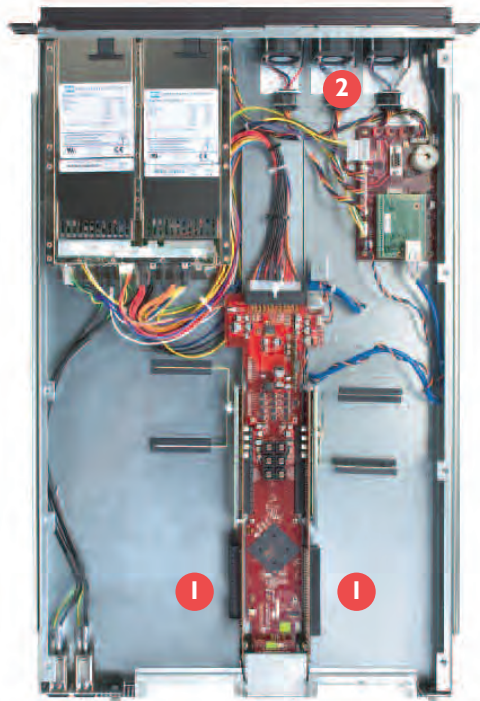


Benefits:

- Industrial solution for adding unlimited number of PCI Express cards to one computer
- Attach full-length PCI Express cards to computers with limited card space
- Individual PCI Express slots can be turned off without powering down entire system
- Power supply, fans and temperature constantly monitored for failure status
- Multiple expansion chassis can be daisy-chained without using an additional slot
- Enables migration path to new servers while maintaining consistent PCI Express configuration
- The ExpressBox⁴ with its own hot-swappable redundant power supply augments the server and workstation individual power budgets while expanding their overall system capabilities

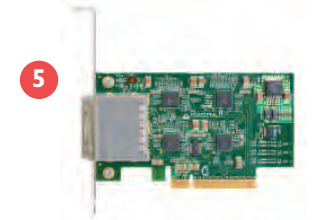
Features:

- Plug and Play installation. Expansion system is automatically configured by the system BIOS.
- Includes x8 PCI Express host card and 1 meter iPass cable
- High powered, hot-swappable cooling fans keep hot cards cool
- 4 slots supports x1, x4, x8 and x16 PCI Express cards
- Removable backplane carriage provides access to cards without removing enclosure from cabinet.
- All slots support full-length cards.
- Easily visible LEDs indicate correct installation.
- 1U, rack-mount enclosures with built-in slide rails
- Transparent extension of PCI Express signals outside the computer.
- Card retainer holds cards in place during transportation.
- CE certified and FCC Class A verified
- RoHS Compliant



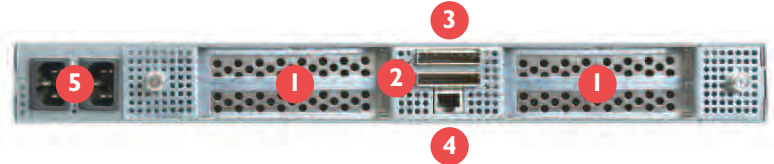
ExpressBox⁴-1U – Top View

1. Four PCI Express slots
2. Three hot-swappable cooling fans
3. Redundant power supply
4. iPass cable
5. PCI Express host card



ExpressBox⁴-1U – Rear View

1. PCI Express slots
2. iPass connector to host computer
3. iPass connector to downstream expansion chassis
4. RJ45 Ethernet connection for SNMP
5. Power cord sockets



How to Buy:

All MAGMA products can be purchased online

Model Names:

EB4-1U: 4 Slot PCI Express Expansion System, 1U form factor
EB4-1U-EXT: Additional expansion system for daisy-chaining

SUBCBL3IP: 3 meter cable option
SUBCBL7IP: 7 meter cable option
01-05990-00: Replacement hot-swappable fan module for EB4-1U
40-00024-01: Replacement redundant power supply module for EB4-1U

Specifications:

Backplane	Rack Installation	Regulatory Compliance
(4) PCI Express slots, expandable to 8, 12 or more x16 connectors, x4 slot speed Hot-pluggable slots PCI Express Specification: 1.1	Built-in Rack Slides	FCC Class B Verified CE Certified
Cable	Chassis Power Supply	Supported Operating Systems
1-meter iPass Optional 3 or 7 meter length	250W Redundant, Hot-Swappable AC Input 90 to 264 VAC Input Frequency 47 to 63 Hz Input Current 5 A max DC Output 250W Max +5V 25A maximum -5V 0.5A maximum +12V 14A maximum -12V 2A maximum +3.3V 22A maximum +5Vsb 2 maximum 130W maximum of +5V and +3.3V combined	Windows Enterprise Server 2000 Mac OS X Server
Interconnect Bandwidth	Environmental	
200MB/sec or 2GB/sec or 2Gbps	Ambient Temperature: 0° to 70° C , Storage Temperature: -55° to 125° C Relative Humidity: 0% to 90%, non-condensing	
Enclosure	MTBF	
1U Rack-mount 19"W x 1.75"H x 28"D 27 lbs or 12.27 Kgs	9.2M hours	
System Cooling		
Three hot-swappable fans One fan included in each power supply module		
Host Connections and Power Consumption		
x8 PCI Express 1.2A @ +3.3V maximum		