

# ExpressBox 4 (1U)

4 Slot PCI Express® Expansion System



## Install and remove PCIe cards without shutting down your server

- Add (4) PCIe slots through a single host slot
- Works with any combination of x1, x4, x8 and x16 cards
- Hot- pluggable PCIe slots
- Redundant power supply and hot-swappable fans
- Works with SNMP
- Designed for Reliability, Availability and Serviceability

PCI EXPRESS®

# Magma ExpressBox 4-1U

*A powerful and scalable expansion solution built for industrial environments.*

## Increase server I/O capacity and monitor critical components

Magma ExpressBox 4-1U provides a rock-solid upgrade path to increase the number of PCI Express slots available to your server. You can maintain a consistent server configuration, while adding more I/O capacity and scalability with a Magma expansion chassis like ExpressBox 4-1U. Now, an almost unlimited number of PCIe cards can be attached to a single server.

Moving PCIe cards outside the host computer to an expansion chassis allows server manufacturers to reduce the amount of power required in the server. And, because ExpressBox 4-1U monitors temperature, power, and fans with alerts using SNMP and audible alarms, you can feel confident that your entire systems remains reliable, available and serviceable.

## Maximize Limited Rack Space

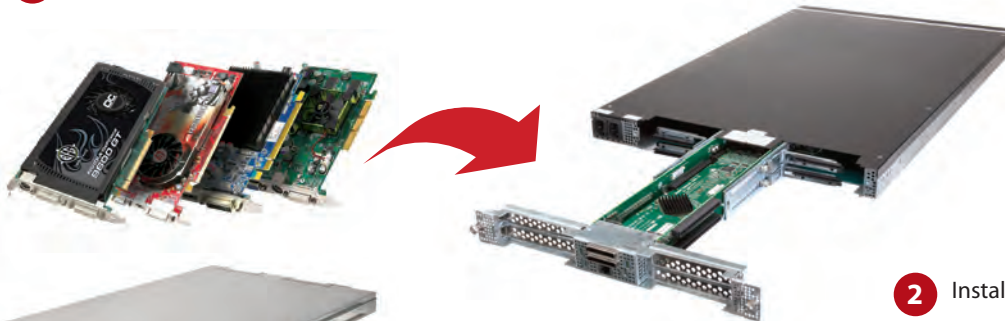
ExpressBox 4-1U is the only expansion solution that provides four full-length PCI Express slots in a 1U rack-mount chassis and includes a hot-swappable redundant power supply and hot-swappable cooling fans. Additionally, the PCIe slots are hot-pluggable so you can replace a defective card without shutting down the system.

## Easy Installation

ExpressBox 4-1U consists of a PCIe host card, a cable and 1U rack-mount enclosure. It is automatically configured by the system BIOS and all slots appear transparent to the host computer. ExpressBox 4-1U is designed to fit conveniently into a typical 4-post rack cabinet. Card retainers inside the enclosure keep your cards securely in place during transportation.

## How it Works

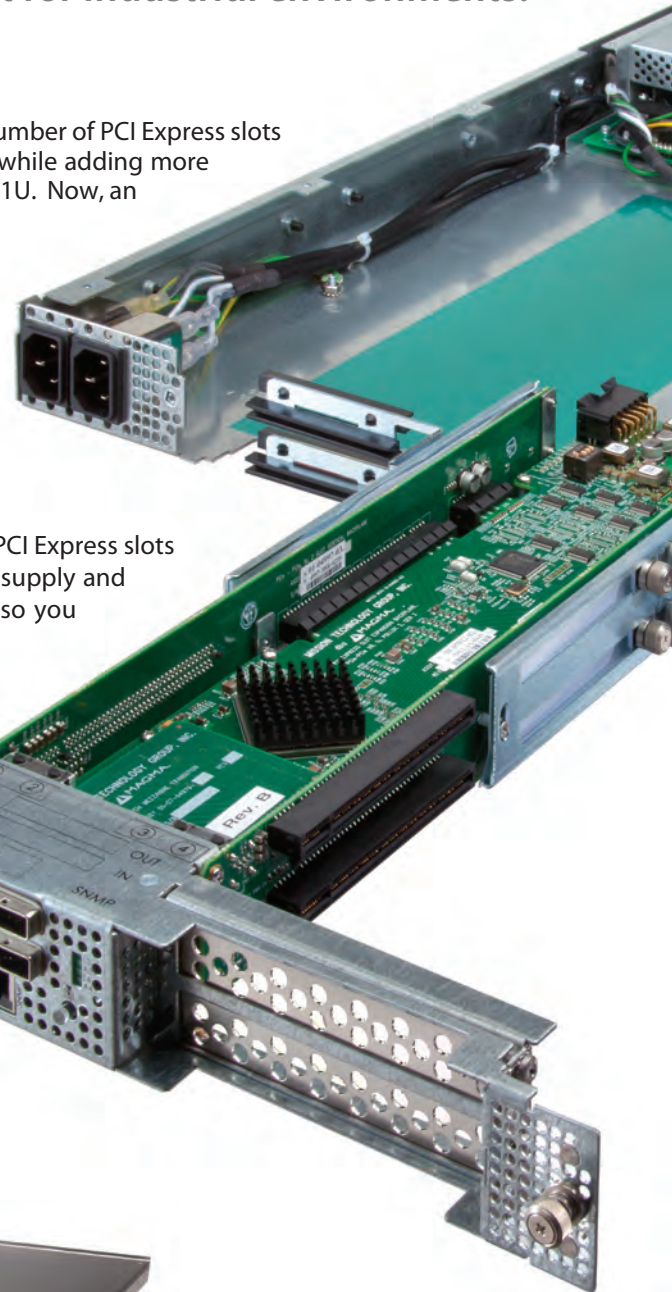
- 1 Install four PCIe cards in Magma expansion chassis

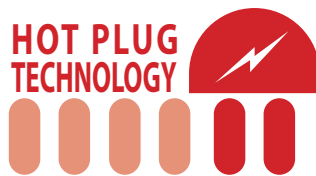
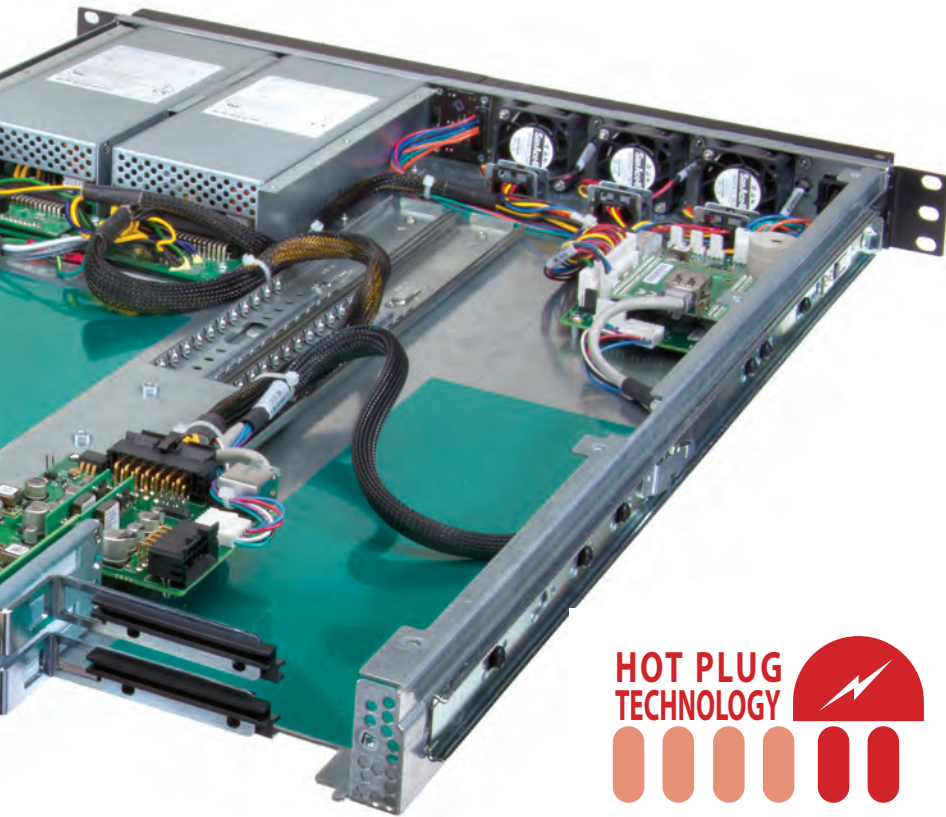


- 2 Install Magma PCIe host card in server



- 3 Multiple expansion chassis can be daisy-chained without taking up an additional slot





### PCI Express Hot-Plug Support:

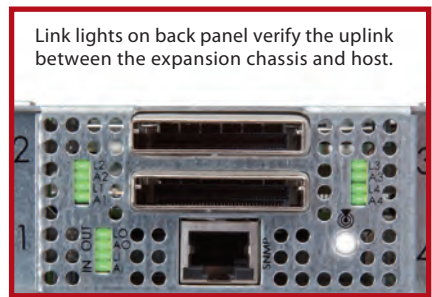
Easily remove and replace PCIe cards without powering down the server

- Initiate a hot-swap request without affecting the operation of the entire system
- Any of the PCIe cards can be stopped and replaced with a replacement card
- All slots designed to protect the PCIe card electrically in the event of its surprise removal

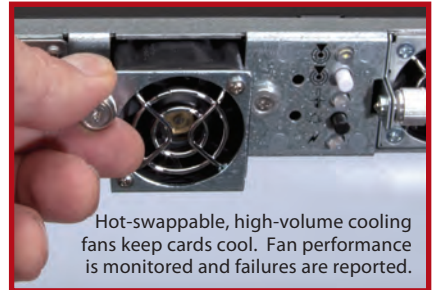
### Monitoring Features:

Utilizes the SNMP protocol to monitor and report normal operation parameters as well as alerts and failure events.

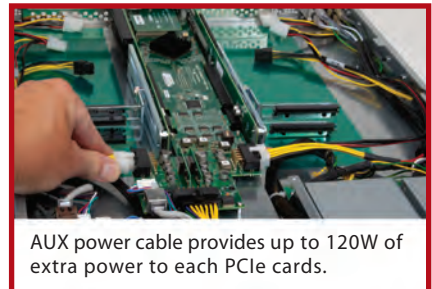
Audible alert for over temperature, fan failure or power supply failure.



Link lights on back panel verify the uplink between the expansion chassis and host.



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



AUX power cable provides up to 120W of extra power to each PCIe cards.



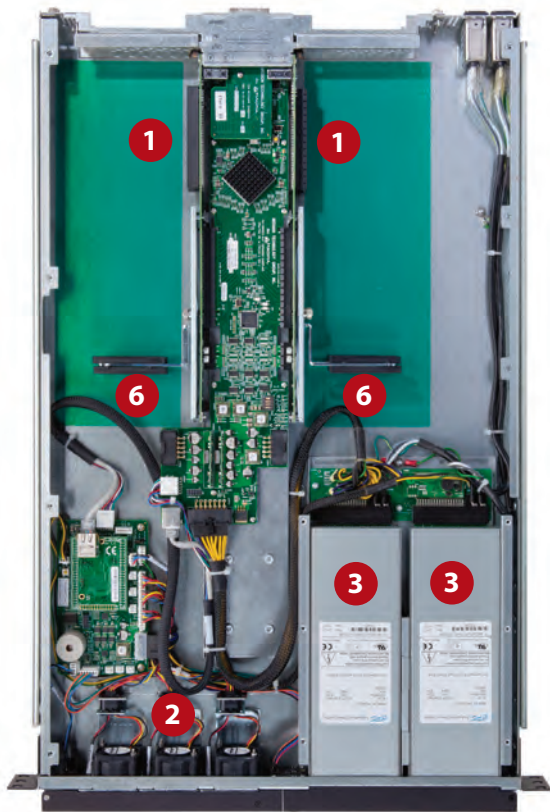
Patented sliding card carriage provides easy access to expansion slots

## Benefits:

- Add four PCIe slots in only 1U of rack space
- Attach full-length PCIe cards to servers with limited card space
- Multiple expansion chassis can be daisy-chained
- Keeps your I/O configuration consistent from server to server
- Protects your investment in expensive I/O cards during server migrations and upgrades
- Mission critical solution provides notifications of failures with SNMP trap and audible alarm
- Minimize downtime by servicing problems immediately
- PCIe Slots can be turned off without powering down system
- Reduce power consumption and rack space

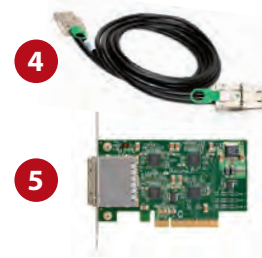
## Features:

- Automatically configured by the system BIOS
- Automatic power-up control by computer
- Easily visible LEDs indicate correct installation
- High-speed x8 PCIe connection to server
- Hot-pluggable PCIe slots support full-length cards
- Slots support any combination of x1, x4, x8 and x16 PCIe cards
- Sliding card carriage provides access to PCIe cards without removing enclosure from cabinet
- Adjustable card retainers hold cards in place
- SNMP agent monitors critical components and slots for power condition
- Includes auxiliary power cables for high wattage cards
- Hot-swappable fans and power supplies



### ExpressBox 4-1U - Top View

1. Four PCI Express slots
2. Cooling fans (Hot-Swappable)
3. Power supplies
4. iPass cable
5. PCIe host card
6. Adjustable PCIe card retainers

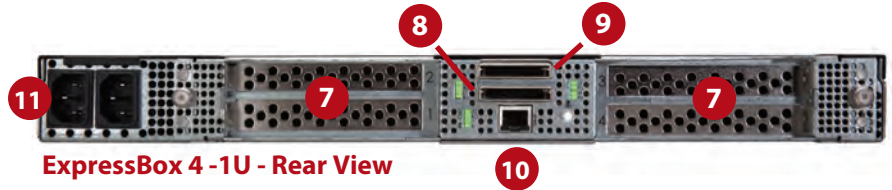


### ExpressBox 4-1U - Rear View

7. PCI Express card slot opening
8. iPass connector to host computer
9. iPass connector to daisy-chain expansion chassis
10. RJ45 Ethernet connection for SNMP
11. Power cord sockets

### ExpressBox 4-1U - Front Panel

12. Hot-swappable fans
13. Status Indicators
14. Hot-swappable power supplies



ExpressBox 4-1U - Rear View



ExpressBox 4-1U - Front Panel

## How to Buy:

All Magma products can be purchased online at [www.magma.com](http://www.magma.com) or through a reseller.



#### Model Names:

EB4-1U-x8G2: 4 Slot PCI Express Expansion System, 1U form factor  
EB4-1U-x8G2-EXT: Additional ExpressBox 4-1U for daisy-chaining

#### Options:

SUBCBL3IP: Substitute 3m iPass cable  
SUBCBL7IP: Substitute 7m iPass cable  
60-00038-01: Replacement 1m iPass cable  
01-05990-00: Replacement hot-swappable fan module  
40-00024-01: Replacement redundant power supply module  
01-05996-03: Replacement auxiliary power cable  
01-04978-03: Replacement host card (x8 PCIe Gen2)

## Specifications:

Technology	System Cooling	Regulatory Compliance
PCI Express Bus Specification Revision 2.0 PCI Hot-Plug Specification 1.1	Three Hot-Swappable fans One fan in each power supply module	FCC Class A Verified CE Certified RoHS Compliant
Backplane	Monitoring Features	Supported Operating Systems
4 PCIe slots (two on each side of backplane) x8 PCIe Gen 2 slot speeds (x16 connectors) Hot-Pluggable slots (75W per slot) Use AUX power cable for higher wattage cards	SNMP Version 1 Audible Alarm for temperature, fan, power failure	Windows MacOS Linux Solaris
Host Card	Power Supply	Warranty
Low profile - x8 PCIe 1.25A @ +3.3V maximum	420 Watt Redundant, Hot-swappable AC Input: 100-240 VAC, 50-60 Hz AC Input Current: 6.0 Amps 12V @ 35 Amps +5Vsb @ 3.0 Amps	30 day money back guarantee 1 year return to factory
Cable	Environmental	 <b>Rock Solid Innovation</b>  9918 Via Pasar, San Diego California 92126 Toll Free: 1.800.285.8990 Telephone: 1.858.530.2511 Fax: 1.858.530.2733 E-mail: <a href="mailto:sales@magma.com">sales@magma.com</a>
1-meter iPass included (3m or 7m optional)	Ambient Temperature 0° to 70° C Storage Temperature -55° to 125° C Relative Humidity: 0% to 90% non-condensing	
Interconnect Bandwidth	MTBF	
40Gbps (PCIe x8 Gen 2)	100,000 Hours	<a href="http://www.magma.com">www.magma.com</a> 
Enclosure		<small>©2012 Magma. Magma is a trademark of Mission Technology Group, Inc. All trademarks are the property of the respective trademark owners. Specifications are subject to change without notice.</small>
1U Rack-mount 19"W x 1.75"H x 28"D 27 lbs or 12.27 kg 24" pre-installed rack-slides		70-02360-47-B