PCIe-to-PCIe Exansion chassis with 1U
1U 4 Slot x8 Gen2 PCI Express® Expansion

Model ExpressBox4-1U-x8G2

ExpressBox4-1U-x8G2-EXT

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
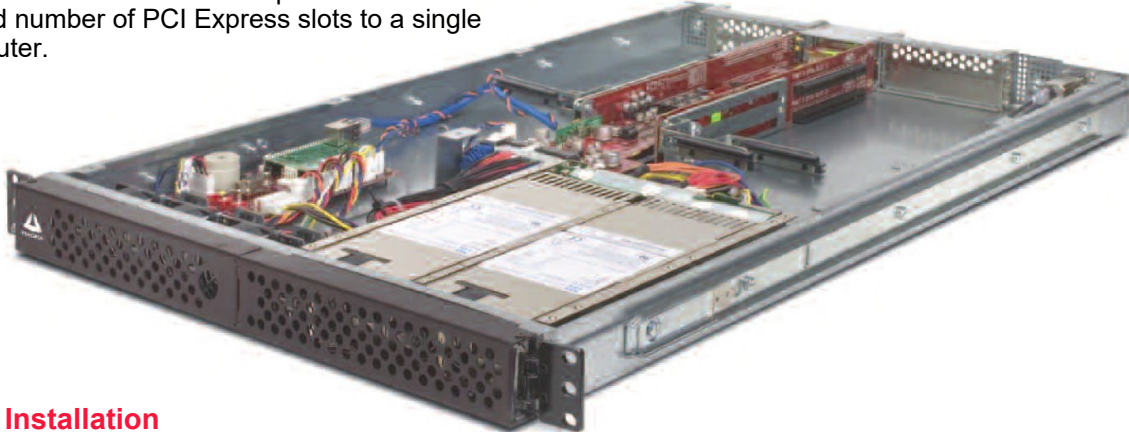- Compatible with the Simple Network Management Protocol (SNMP)

WUNTRONIC

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.

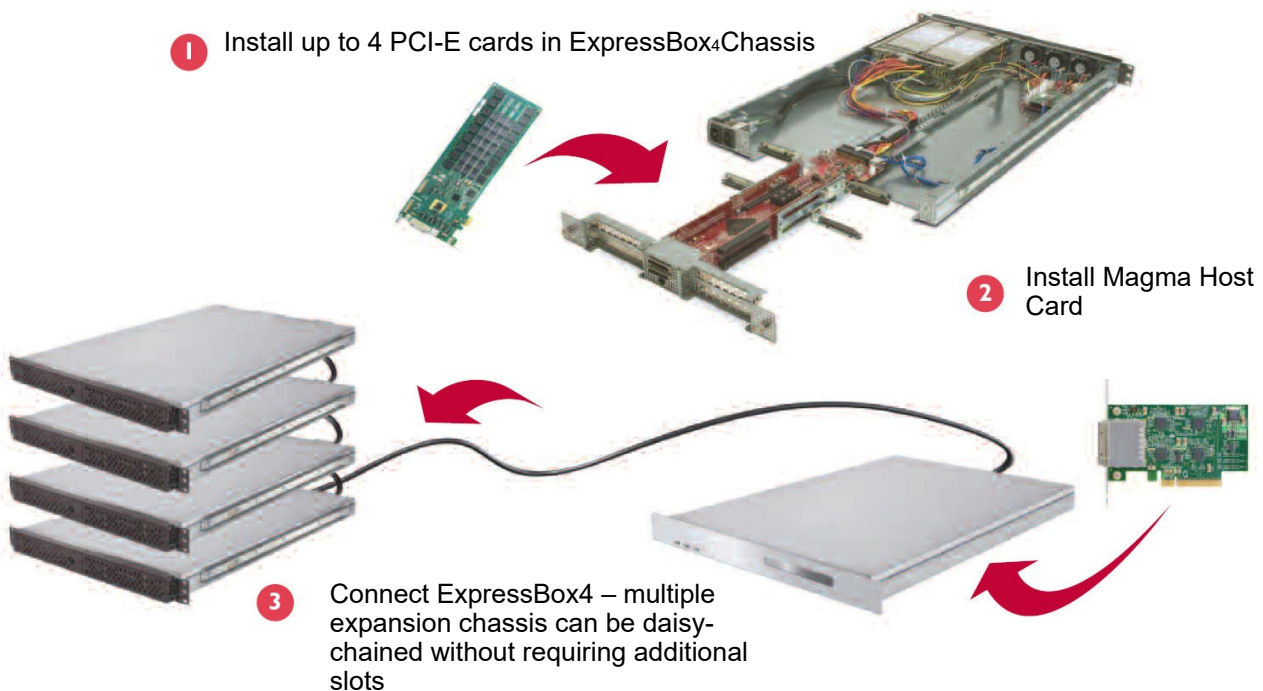## Maximize Rack Space,Minimize Power Use

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. ExpressBox[4] monitors temperature and power and provides alerts via SNMP and audible alarm. Mo ving 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-pos track cabinet. Card retainers inside the enclosure keep your cards securely inplace during transportation.

Easy Installation

Magma ExpressBox[4] consists of a PCI Express host card, a c able and r a ck-mount enclosure . Magma ExpressBox[4] is automatically configured by the system BIOS and all slots appear transparent to the host computer.

How it Works:

1 Install up to 4 PCI-E cards in ExpressBox4Chassis

2 Install Magma Host Card

3 Connect ExpressBox4 – multiple expansion chassis can be daisy-chained without requiring additional slots
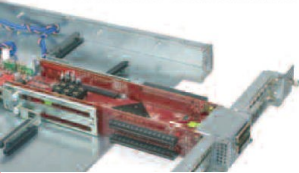
Rugged iPass cable is available in 1, 3 or 7-meter cable lengths.

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:

ExpressBox[4] 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 repor ting is accessible via a standard web browser or an equivalent SNMP-based agent, while the chassis can suppor t 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.
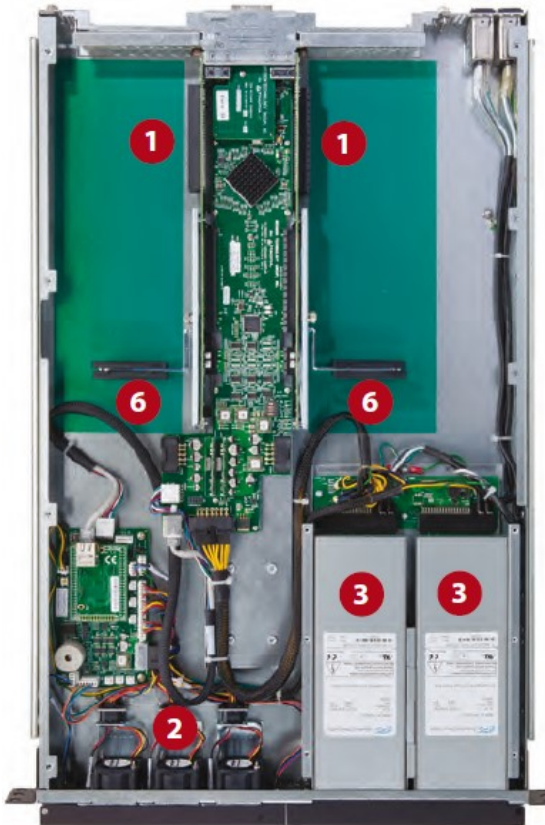
Benefits:

- 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
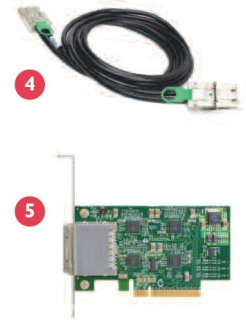- individual power budgets while expanding their overall system capabilities

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

WURTRONIC

ExpressBox4-1U –TopView

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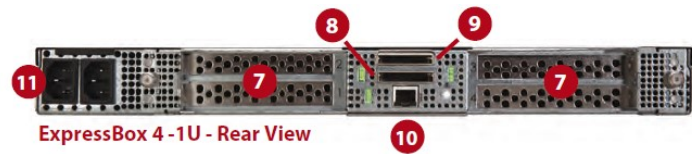5. PCI Express host card
6. Adjustable PCIe card retainers

ExpressBox4-1U – RearView

7. PCI Express slots
8. iPass connector to host computer
9. iPass connector to downstream expansion chassis
10. RJ45 Ethernet connection for SNMP
11. Power cord sockets

ExpressBox4 – Frontpanel

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

ExpressBox 4 -1U - Rear View

ExpressBox 4 -1U - Front Panel

Order informations:

Order number	Model	Description	Order number	Model	Description
WM1-090-250	EB4-1U-x8G2	EB4-1U: 4 Slot PCI Express Expansion System, 1U form factor	WM1-129-100	SUBCBL3IP	3 Meter Cable Option
WM1-090-255	EB4-1U-x8G2-EXT	EB4-1U-EXT: Additional expansion system for daisy-chaining	WM1-129-110	SUBCBL7IP	7 Meter Cable Option

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 A Verified CE Certified
Cable	**Rack Installation**	**Supported Operating Systems**
1-meter iPass Optional with3 or 7 meter length	Build-in Rack Slides	Windows MacOS Linux Solaris
Interconnect Bandwidth	**Chassis Power Supply**	
200 MB/s or 2 GBytes/sec or 2 Gbps	420W Redundant, Hot-Swappable AC Input 90 to 264 VAC, 50-60 Hz AC Input Current: 6.0 Amps 12V @ 35 Amps +5Vsb @ 3.0 Amps	
Enclosure	**Environmental**	**Warranty**
1U Rack-mount 19" W x 1,75" H x 28" D 27 lbs or 12.27 kg	Ambient Temperature: 0º to 70º C Storage Temperature: -55°C to +125°C Relative Humidity; 0% to 90%, non-condensing	1 year warranty
System Cooling	**MTBF**	**Host Connections and Power Consumption**
Three hot-swappable fans One fan included in each power supply module	100.00 hours	X8 PCI Express 1.2A @ +3.3 V maximum