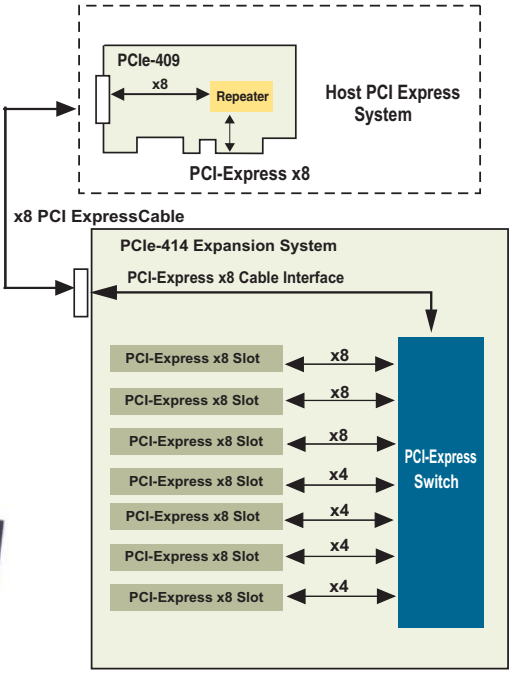
CYCLONE Microsystems
Intelligent I/O Controllers

2705 - Seven Slot PCI Express Expansion System

PCIe-409 PCIe Host Bus to PCIe x8 Expansion Cable Adapter
PCIe-414 Seven Slot PCI Express Expansion Backplane
600-2060 PCI Express Expansion Chassis

- Seven PCI Express Slots (Three x8, Four x4)
- 20 Gb/s Expansion Cable
- Low Latency, Repeater based
- x8 PCI Express Host Bus to Cable Adapter
- 650 Watt Power Supply
- Rack Mount Chassis
- Full Length PCIe Slots
- High Capacity Cooling



PCI EXPRESS

RoHS Compliant

The Cyclone Microsystems' 2705 PCI Express Expansion System is a PCI Express (PCIe) expansion system that allows the user to add up to seven PCI Express add-in cards. Most PCs contain few PCI Express slots making them poorly suited for embedded systems requiring a wealth of different I/O boards and co-processor resources.

The 2705 PCI Express Expansion Systems permits system developers to use powerful and cost-effective PCs as a foundation for a robust embedded system. All seven expansion slots accommodate full length and full height cards and are cooled by three fans. A 650 watt supply powers the rack-mounted expansion chassis.

The Expansion System's x8 PCI Express Expansion Cable supports 20 Gb/s bi-directional traffic to and from the host system and utilizes PCI Express x8 bus repeaters for low latency bus throughput. For PCs with modern BIOSs, the 2705 Expansion System is recognized by the host system upon boot-up, requires no hardware specific drivers, and is entirely host operating system agnostic.

The 600-2705 system is composed from three elements: a PCI Express Host Bus Cable Adapter, an Expansion System Cable and an Expansion Chassis. Our PCIe-409 Host Cable Bus Cable Adapter card is inserted into a host computer's PCIe slot. The PCIe-409 does not support down-shifting and must be plugged in a x8 PCIe slot that is fully routed with x8 PCIe lanes. PCIe expansion cable links the PCI host with the PCIe-414 expansion backplane.

The 600-2705 was specifically develop to satisfy low latency system requirements as advanced audio processing and digital audio workstations.

PCI Express is a high performance, general purpose I/O inter-connect defined for a wide variety of computing and communication platforms. Key PCI attributes, such as its usage model, load-store architecture, and software interfaces are maintained, whereas its parallel bus implementation is replaced by a serial interface. PCI Express take advantage of recent advances in point-to-point inter-connects, switch-based technology, and packetized protocol to deliver new levels of performance.

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PCIe-409 Host Bus to PCI-E Expansion Cable Adapter Specifications

- PCI Express x8 Host Interface
- Low Latency PCI Express Bus Repeaters to x8 Expansion Cable
- Host Processor and Operating System Independent
- Standard Height Face Panel
- RoHS Compliant

PCIe-414 PCI Express Expansion Backplane

- x8 Upstream Port
  - x8 PCI-Express Cable Interface from Host
  - One or Three Meter Expansion Cable Option
- Seven PCI Express Downstream Ports
  - Three x8 PCI-Express Slots
  - Four x4 PCI-Express Slots using x8 Connectors
- 48 Lane PCI Express Switch supporting:
  - Non-Transparent Bridging for Peer-to-Peer Communications
  - Non-Blocking Switch Fabric
  - Data Integrity
  - Quality of Service
- RoHS Compliant
- ATX Form Factor

600-2060 Expansion Chassis Specifications

Physical 19 Inch Rack Mount Enclosure
4U Height and 22 Inch Depth
Black Color
Rack Mount Flanges and Handles

Board Slots Seven Full Length PCI Express Slots

Drive Bays Three 5.25 Inch External
Three/two 3.5 Inch External
Locked Drive Bay Door

Cooling 180 CFM Fans with Filter

Power 650 Watt Power Supply
100-240 VAC, 47-63 Hz Power Input

+5V	30 A		
+12V	32 A	-12V	0.3 A
+3.3V	32 A	+5VSB	2 A

Environmental	PCIe-409	PCIe-414
Physical Dimensions	PCI-Express Card	Mini ATX 11.2" x 8.2" (284mm x 208mm) ATX 20 pin Power Supply Connector (Molex 39-29-9202 or equivalent) or BTX (24 pin) Power Supply Connector
Operating Temperatures	0 to 55 Degrees Celsius	0 to 55 Degrees Celsius
Relative Humidity	0 – 95%	0 – 95%
Storage Temperatures	-55 to 125 Degree Celsius	-55 to 125 Degree Celsius
Power Requirements (Watts)		
+3.3V Typical	1.06	1.68
Maximum	1.22	1.91
+5V Typical	–	12.55
Maximum	–	16.65
+12V Typical	2.93	0
Maximum	4.16	0
-12V Typical	–	–
Maximum	–	–

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All specifications subject to change without prior notice.

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PCIe-409 PCIe Host Bus to PCIe x8 Expansion Cable Adapter
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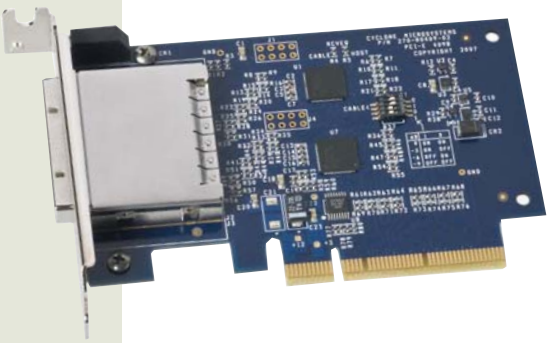
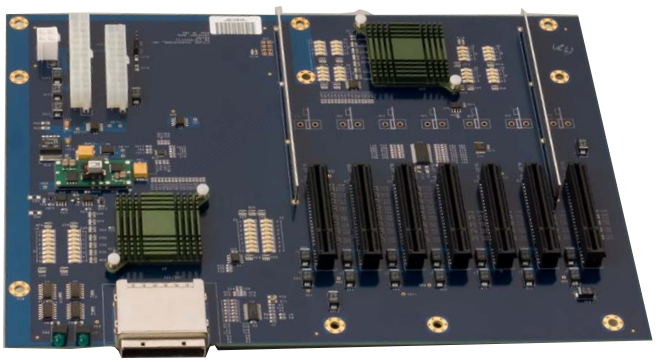
600-2060 PCI Express Expansion Chassis

Component Boards

PCIe-409
Host Bus to x8 PCIe Expansion Cable Adapter





PCIe-414
Seven Slot Expansion Backplane

PCI Express Expansion Chassis

Seven Slot PCI Express Expansion System Ordering Information

600-2705-1	Seven Slot PCI Express Expansion System, One Meter Cable Including:	
	PCIe-409	PCI Express Host Bus to Expansion Cable Adapter
	530-2030	One Meter x8 PCIe Expansion Cable
	PCIe-414	PCI Express Expansion Backplane
	600-2060	Expansion Chassis
600-2705-3	Seven Slot PCI Express Expansion System, Three Meter Cable Including:	
	PCIe-409	PCI Express Host Bus to Expansion Cable Adapter
	530-2031	Three Meter x8 PCIe Expansion Cable
	PCIe-414	PCI Express Expansion Backplane
	600-2060	Expansion Chassis
800-2705	600-2705 User's Manual	
800-0409	PCIe-409 User's Manual	
800-0414	PCIe-414 User's Manual	

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