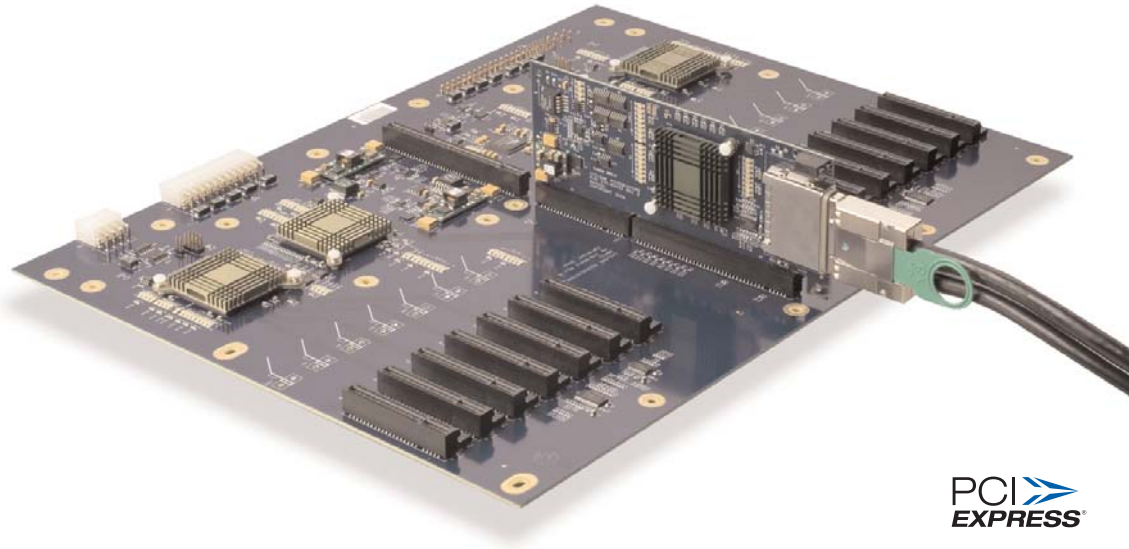


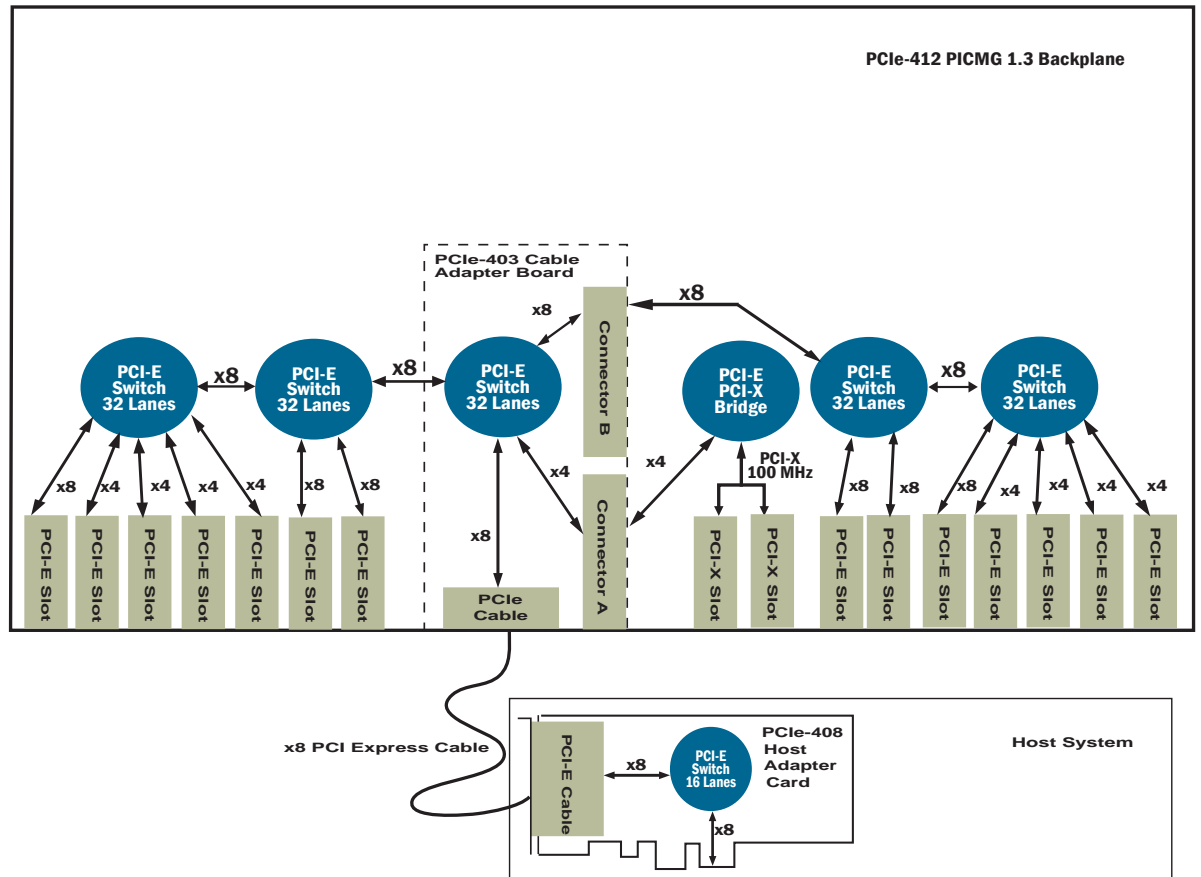
PCIe-412/403 Sixteen-Slot PCI Express Expansion Backplane



PCIe-412/403 Sixteen-Slot PCI Express Backplane

- Six x8 PCI Express Slots
- Eight x4 PCI Express Slots
- Two PCI-X Slots (64 bits, 100 MHz)
- 20 Gb/s x8 PCIe Cable Interface to Cyclone PCIe-408 Host Bus Cable Adapter
- PICMG 1.3 Physical Format
- BTX and 8 Pin +12V PC Power Connectors
- RoHS Compliant
- Designed to meet UL Safety, FCC, CE Regulatory Certifications

Block Diagram



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PCIe-412/403 Expansion System
Data Sheet July 2006

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PCIe-412/403 Sixteen-Slot PCI Express Expansion Backplane

Cyclone Microsystem's PCIe-412-403 is a PCI Express Expansion Backplane offering system developers the capability of expanding a single host PCI Express slot to six x8 PCI Express slots, eight x4 PCI Express slots, and two PCI-X slots. With the use of non-blocking PCI Express Switches and a 20 Gb/s host cable link, slot limited PCI Express host computers can be used for I/O intensive embedded systems.

Non-Blocking Switch Fabric

The PCIe-412/403's four 32-lane PCI Express Switches support a non-blocking switch fabric between the fourteen PCI Express slots and the host system. The non-blocking switch fabric supports complex peer-to-peer and host-to-peer data flows.

Quality of Service

QoS features allow different applications to route packets through the fabric with differentiated priorities and bandwidths, and with deterministic latencies. Two Virtual Channels per lane and eight traffic classes allows for different traffic priorities. Virtual Channel arbitration algorithms are user's selectable and allow the QoS to be optimized for different traffic requirements.

End-to-End Packet Integrity

PCI Express Expansion Series provides end-to-end CRC protection and Poison bit support to guarantee error free data transmission. Corrupted packets are automatically re-transmitted by the hardware with no software intervention or overhead.

Maximum Power to Each Slot

The PCIe-412/403 was designed to provide maximum PCI Express power consumption per slot to enable its deployment as a foundation for high-end embedded system requirements. BTX and 8 Pin +12V PC power supply connectors can supply a maximum of 25 W for each of the fourteen PCI Express Slots.



Environmental	PCIe-412	PCIe-403		PCIe-412	PCIe-403	
Physical Dimensions	16.4" x 11.9"	6.6" x 2.4"	Power Requirements (Watts)			
				+3.3V Typical	1.17 A	2.01 A
				Maximum	1.42 A	2.38 A
Operating Temperatures	0 to 55 Degrees Celsius	0 to 55 Degrees Celsius		+5V Typical	5.44 A	TBD
				Maximum	6.94 A	TBD
Relative Humidity	0 - 95%	0 - 95%		+12V Typical	0 A	5.21 A
				Maximum	-	6.88 A
Storage Temperatures	-55 to 125 Degree Celsius	-55 to 125 Degree Celsius		-12V Typical	-	-
				Maximum	-	-

Ordering Information

PCIe-412	16 Slot PCI Express Expansion Backplane
PCIe-403	PICMG 1.3 to PCI Express Expansion Cable Adapter

Related Products and System Configurations

PCIe-412/403	16 Slot PCI Express Expansion Backplane: PCIe-412 Sixteen-Slot PCI Express Backplane PCIe-403 PICMG 1.3 SHB Slot to PCI Express Cable Adapter
2602	PCIe-412 Mounted in PICMG 1.3 Chassis: PCIe-412 Sixteen-Slot PCI Express Backplane
2603	PCIe-412 Sixteen-Slot PCI Express Expansion Kit: PCIe-412 Sixteen-Slot PCI Express Backplane PCIe-403 PICMG 1.3 SHB Slot to PCI Express Cable Adapter
2703	PCIe-412 Sixteen Slot PCI Express Expansion System: PCIe-412 Sixteen-Slot PCI Express Backplane PCIe-403 PICMG 1.3 SHB Slot to PCI Express Cable Adapter PICMG 1.3 Rack Mount Chassis PCI Express Expansion Cable (1 or 3 Meters) PCIe-408 Host Bus to Cable Adapter