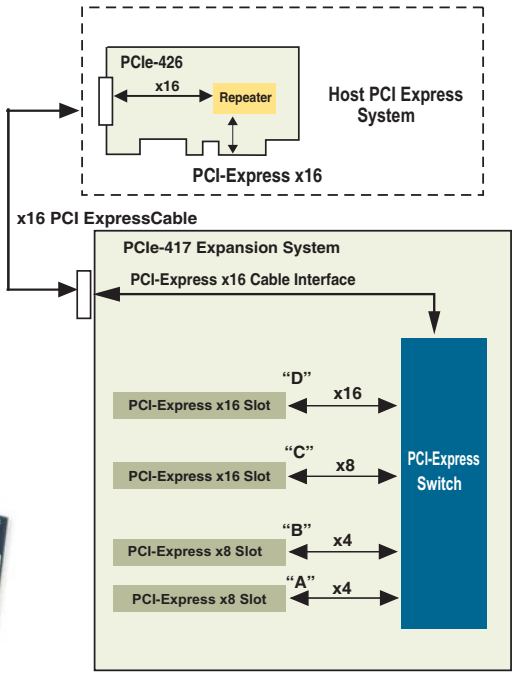
CYCLONE Microsystems
Intelligent I/O Controllers

2706 - Four Slot, x16 PCI Express Expansion System

PCIe-426 PCIe Host Bus to PCIe x16 Expansion Cable Adapter
PCIe-417 Four Slot, x16 PCI Express Expansion Backplane
600-2060 PCI Express Expansion Chassis

- Four PCI Express Expansion Slots
  - One x16
  - One x8
  - Two x4 Slots
- 40 Gb/s Bi-directional Expansion Cable
- Low Latency Reapter-Based Host Bus Adpater
- 650 Watt Power Supply



PCI EXPRESS

RoHS Compliant

The Cyclone Microsystems' 2706 PCI Express Expansion System is a x16 PCI Express (PCIe) Expansion System that allows a system developer to add up to four PCI Express 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 2706 PCI Express Expansion Systems permits system developers to use powerful and cost-effective PCs as a foundation for a robust embedded system. All four expansion slots accommodate full length and full height cards and are cooled by three fans. Two slots, D and C, support double-width graphics cards. A 650 watt supply powers the rack-mounted expansion chassis.

The Expansion System's x16 PCI Express Expansion Cable supports 20 Gb/s bi-directional traffic to and from the host system and utilizes PCI Express x16 bus repeaters for low latency bus throughput. For PCs with modern BIOSs, the 2706 Expansion System is recognized by the host system upon boot-up, requires no hardware specific drivers, and is entirely host operating system agnostic.

The 600-2706 system is composed from three elements: a x16 PCI Express Host Bus Cable Adapter, an Expansion System Cable and an Expansion Chassis. Our PCIe-426 x16 PCIe Host Bus to Expansion Cable Adapter card is inserted into a host computer's x16 PCIe slot. The PCIe-426 does not support down-shifting and must be plugged in a x16 PCIe slot that is fully routed with x16 PCIe lanes. A x16 PCIe expansion cable links the PCI host with the PCIe-417 expansion backplane.

The 600-2706 was specifically develop to satisfy low latency system requirements for advanced graphics processing, geophysical workstations, and other demanding embedded applications.

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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PCI Express Expansion System
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2706 - Seven Slot PCI Express Expansion System

PCIe-426 PCIe Host Bus to PCIe x16 Expansion Cable Adapter
PCIe-417 Four Slot, x16 PCI Express Expansion Backplane
600-2060 PCI Express Expansion Chassis

PCI EXPRESS

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PCIe-426 Host Bus to PCIe Expansion Cable Adapter

- PCI Express x16 Host Interface
- Low Latency PCI Express Bus Repeaters to x16 Expansion Cable
- Host Processor and Operating System Independent
- Standard Height Face Panel
- RoHS Compliant

PCIe-417 PCI Express Expansion Backplane

- x16 Upstream Port
  - x16 PCI Express Cable Interface from Host
  - One or Three Meter Cable from Host
- Four PCIe Expansion Slots
  - x16 PCI Express Slot (Double Width - x16 Connector)
  - x8 PCI Express Slot (Double Width - x16 Connector)
  - x4 PCI Express Slot (Single Width - x8 Connector)
  - x4 PCI Express Slot (Single Width - x8 Connector)
- 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 Four 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-426	PCIe-417
Physical Dimensions	PCI-Express Card Short Length	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	1.09	0.33
Maximum	1.60	0.40
+5V Typical	–	1.03
Maximum	–	1.56
+12V Typical	0	0.02
Maximum	0	0.04
-12V Typical	–	–
Maximum	–	–

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2706 - Four Slot, x16 PCI Express Expansion System

PCIe-426 **PCIe Host Bus to PCIe x16 Expansion Cable Adapter**
PCIe-417 **Four Slot, x16 PCI Express Expansion Backplane**
600-2060 **PCI Express Expansion Chassis**

2706 Component Boards

PCIe-426
Host Bus to PCIe Expansion Cable Adapter

PCIe-417
PCI Express Expansion Backplane

PCI Express Expansion Chassis

Four Slot, x16 PCI Express Expansion System Ordering Information

600-2706-1 Four Slot, x16 PCI Express Expansion System, One Meter Cable Including:

PCIe-426	PCI Express Host Bus to Expansion Cable Adapter
530-R2040	One Meter x16 PCIe Expansion Cable
PCIe-417	PCI Express Expansion Backplane
600-2060	Expansion Chassis

600-2706-3 Four Slot, x16 PCI Express Expansion System, Three Meter Cable Including:

PCIe-426	PCI Express Host Bus to Expansion Cable Adapter
530-R2041	Three Meter x16 PCIe Expansion Cable
PCIe-417	PCI Express Expansion Backplane
600-2060	Expansion Chassis

800-2706	600-2706 User's Manual
800-0416	PCIe-426 User's Manual
800-0417	PCIe-417 User's Manual

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