PCIS-8580-4S/PCIS-8580-13S
4-Slot/13-Slot PCI-to-PCI Extension System

Features

PCIS-8580-4S
- Compliant with PCI local bus specification rev 2.2
- Compliant with PCI bridge architecture specification rev 1.2
- Provides 4 extended PCI slots
- Full 32-bit/33MHz PCI bandwidth extension (132MB/s)
- Maximum 10m extension distance
- Complete hardware and software transparency
- 24-pin DVI-D connector for robust connectivity
- Shoebox size wall-mount chassis with built-in 200W power supply

PCIS-8580-13S
- Compliant with PCI local bus specification rev 2.2
- Compliant with PCI bridge architecture specification rev 1.2
- Provides 13 extended PCI slots
- Full 32-bit/33MHz PCI bandwidth extension (132MB/s)
- Maximum 10m extension distance
- Complete hardware and software transparency
- 24-pin DVI-D connector for robust connectivity
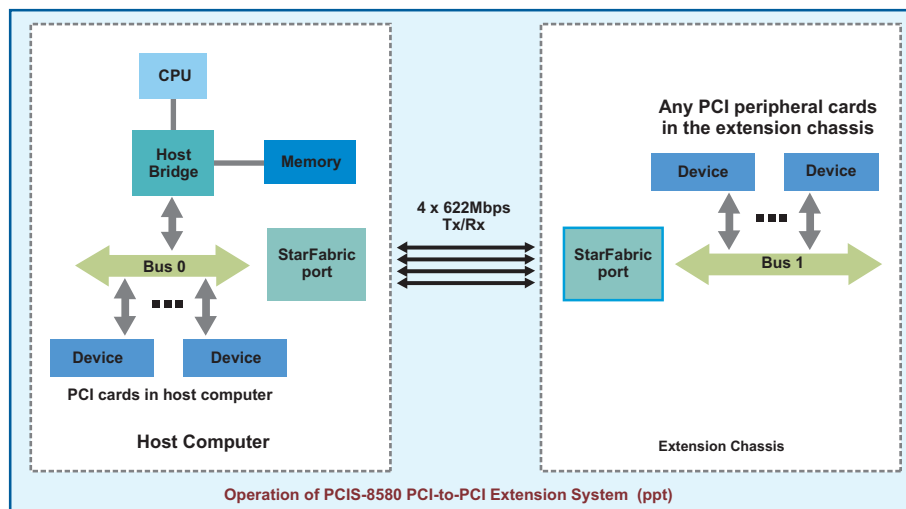- 19 rack-mount chassis with built-in 400W power supply

Introduction

The ADLINK PCIS-8580 is a PCI-to-PCI extension systems to extend the PCI buses of host computers. With its state-of-art StarFabric high-speed serial link technology, you can extend your PCI bus of a host computer to an external chassis, which accommodates 4 (PCIS-8580-4S) or 13 (PCIS-8580-13S) additional PCI slots. This advanced technology provides full 32-bit/33MHz PCI bandwidth (132MB/s) and a maximum of 10m distance between host computer and extension chassis. The ADLINK PCI-to-PCI extension system utilizes the concept of "serialized bridge" to provide complete hardware and software transparency to your host system. Any hardware installed in the extension chassis works as if it is directly installed inside the host system without the need for additional drivers or software.

The ADLINK PCIS-8580 PCI-to-PCI extension system is composed of three major components: a PCI extension card (LPCI-8575), an extension chassis (RK-8005/RK-8014), and a cable (ACL-PCIEXT-2). The PCI extension card is the core of this sy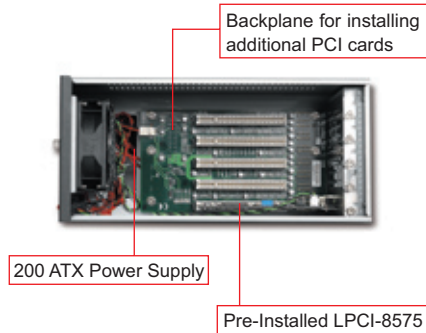stem. It acts as a PCI bridge with the capability to serialize PCI signals and maintain a 5Gbps serial link between the host system and extension chassis. The extension chassis, which is a 4-slot wall-mount chassis (RK-8005) or a 13-slot rack-mount chassis (RK-8014), is the platform to accommodate PCI slots. It contains a backplane, a power supply, and a pre-installed PCI extension card. The cable, which consists of DVI-D connector and shielding twisted pairs, provides robust connectivity and maintains proper signal quality between the host computer and the extension chassis.

PCI-to-PCI Extension Technology

Operation of PCIS-8580 PCI-to-PCI Extension System (ppt)

The ADLINK PCIS-8580 PCI-to-PCI extension system utilizes the state-of-art StarFabric technology as the groundwork for extending the PCI bus. A PCI-StarFabric bridge located on the host computer provides an interface between PCI and StarFabric port, which translates parallel PCI signals into serial frame format for transmission across a StarFabric link. Each StarFabric link contains 4 pairs, 622Mps LVDS signals and provides 2.5Gbps total bandwidth to accommodate complete PCI traffic without any compromise in bandwidth. Error detection and error correction are automatically performed during the StarFabric transmission to guarantee data integrity.
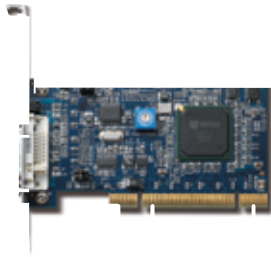
Inside the Extension Chassis

Backplane for installing additional PCI cards

200 ATX Power Supply

Pre-Installed LPCI-8575

Applications

- Industrial automation/control
- Electronics manufacturing test
- Military/aerospace
- Video capture
- Remote test and measurement

Specifications

LPCI-8575 PCI-PCI Extension Card

- UPCI local bus specification rev 2.2 compliant
- PCI bridge architecture specification rev 1.2 compliant
- Supports both 5V and 3.3V PCI buses
- Data throughput: full 32-bit/33MHz PCI bandwidth (132MB/s)
- I/O connector: DVI-D 24-pin connector
- Maximal extended distance: 10m
- Power requirements

+5V	+3.3V
190mA	250mA

RK-8005 Extended Chassis

- Dimensions:
  122mm (W) x 195mm (H) x 259mm (D)
- Weight: 3.2kg
- Backplane: 5x 32-bit/33MHz PCI slots
  - 1 slot for extension card
  - 4 slots available for PCI cards
- Power supply
  - Input voltage: 85V$_{AC}$ to 265V$_{AC}$
  - Output: 200W
- Cooling: One 80mm ball bearing fan

RK-8014 Extension chassis

- Dimension:
  483.5mm (W) x 177mm (H) x 448.5mm (D)
- Weight: 12kg
- Backplane: 14x 32-bit/33MHz PCI slots
  - slot for extension card
  - 13 slots available for PCI cards
- Power supply
  - Input voltage: 85V$_{AC}$ to 265V$_{AC}$, auto-switching
  - Output: 400W
- Cooling: Two 120mm ball bearing fans

ACL-PCIEXT-2 Cable

- Length: 2m
- Construction: 8 pairs of shielding twisted copper wires
- Connector: DVI-D 24-pin

General

- Operating temperature: 0°C to 50°C
- Storage temperature: -20°C to 80°C
- Relative humidity: 10 to 90%, non-condensing