NEW

PCES-8581-4S/PCES-8581-13S

4-slot/13-slot PCI Express-to-PCI Extension System

Features

- PCI Express-based control of PCI
- High-speed PCI Express x1 interface
- Compatible with 5 V and 3.3 V PCI bus
- 32-bit/33 MHz PCI interface support
- PCES-8581-4S extends four half-size PCI slots in a shoebox size wall-mount chassis with built-in 200 W power supply
- PCES-8581-13S extends 13 full-size PCI slots in a 19" rack-mount chassis with built-in 400 W power supply
- Extension distance of up to 7 meters (extension cables at 1 M, 3 M, and 7 M)
- Comprehensive hardware and software transparency
- Compliant with
  - PCI Express® Base Specification Rev. 1.0a
  - PCI-to-PCI Bridge Architecture Specification, Revision 1.2
  - PCI™ Local Bus Specification, Revision 3.0

PCES-8581-4S

PCES-8581-13S

Introduction

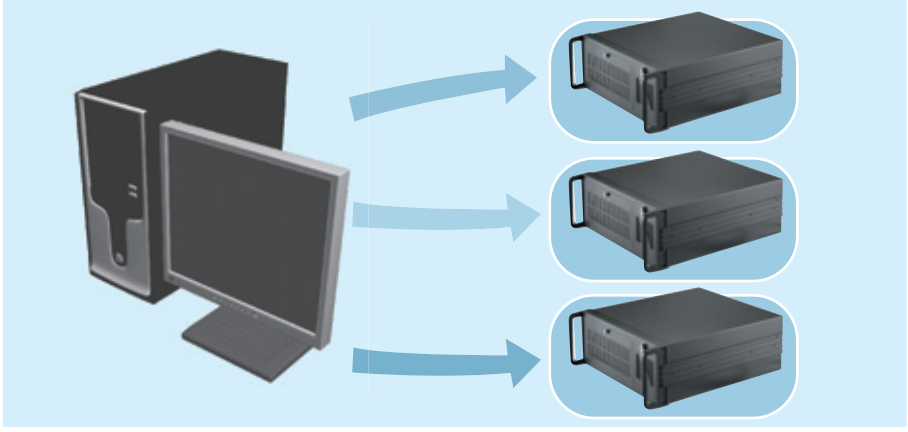
Harnessing the bandwidth potential of the PCI Express, these latest smart extension systems enable computers with a PCI Express slot to remotely manage and control up to 13 PCI devices seven meters away, using the high-speed PCI Express interface. Offering up to 13 (PCES-8581-13S) or four PCI slots (PCES-8581-4S), these extension systems operate in 32-bit/33 MHz configuration and come with complete end-to-end hardware and software transparency for the host system. Hardware devices installed in the extension system behave and work as if these are directly installed into the host system, requiring no additional drivers or software installation. The host system may be separated from the extension system at up to seven meters using high-quality shielded twisted copper cables. The robust and reliable PCI Express-to-PCI extension systems are suited for portable test and measurement applications with high-density I/O requirement and in hazardous industrial control and automation environments.

Controlling PCI with PCI Express

The PCES-8581-13S and PCES-8581-4S implement a PCI Express-based control of PCI modules. The technology consists of a PCIe-8560 card installed in the host computer, a shielded cable, and the extension system. The PCIe-8560 comes in a PCI Express x1 footprint and communicates with the extension system's low-profile PCI-8565 via a twisted and shielded cable. The PCI-8565 converts the PCI Express interface into a PCI bridge for additional PCI slots in the extension system.

Expand PCI connectivity from one PC

Most commercial desktop PCs of today are equipped with only one or two PCI slots. For users and applications requiring control of multiple PCI devices from one PC system, this limitation causes great difficulty when searching for and deciding on a suitable computer system. With the ADLINK PCES-8581-13S extension system, users can easily expand their system and conveniently accommodate 13 up to 26 PCI devices or more. Requiring no additional software installation, users can control these PCI devices as if these are directly installed on one PC system

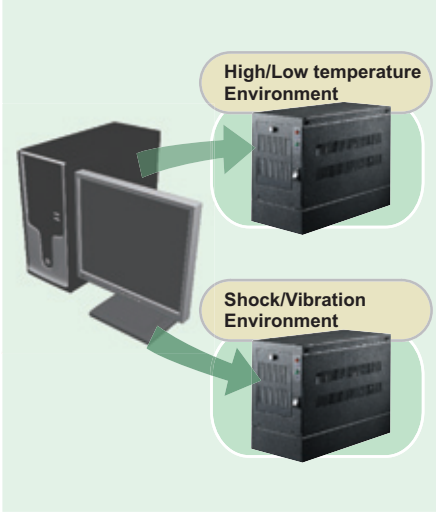


Expand more PCI slots in single PC system.

Controlling PCI devices remotely

For rugged applications where the PC system is subjected into a hazardous environment, valuable components such as the CPU and hard disk drive are easily damaged. To protect these valuable IT investments, the PCES-8581-13S and the PCES-8581-4S PCI Express-to-PCI extension system may be controlled remotely at up to 7 meters from the host PC using a high-speed and well-shielded cable. While the host PC system is installed at a safe distance from the rugged environment, the remote extension system is designed to withstand extreme temperatures or high vibration.

On the other hand, if your PCI devices require less electromagnetic interference, you may also use the PCI Express-to-PCI extension system to isolate high frequency interferences from the CPU, memory, or North/Southbridge chips. These extension systems also allow close installation of your DAQ and/or control cards with the DUT (Device Under Test) for a more compact and space-saving test and measurement environment.



Separate your PC system and PCI devices, protect your PC system from danger environment.

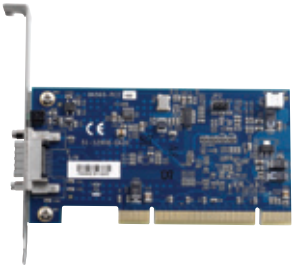
Specifications

PCIe-8560 (on host computer)
- Compliant with PCI Express Base Specifications Rev. 1.0a
- PCI Express® x1 link with 250 MB/s data throughput
- Extended distance of up to 7 meters
- Low-profile PCI Express add-on card, 69 mm (H) x 87 mm (W)
- Power requirement:

Device	+3.3 V
PCIe-8560	210 mA (max)

RK-8005 Chassis (for PCES-8581-4S)
- Dimension: 122 mm (W) x 195 mm (H) x 259 mm (D)
- Weight: 3.2 kg (7.04 lb)
- Backplane: 5 x 32-bit/33 MHz full-size PCI slots
  - 1 slot for extension card
  - 4 slots available for PCI cards
- Power supply:
  - Input voltage: 85 VAC to 265 VAC
  - Output: 200 W
- Cooling: One 80 mm ball bearing fan

ACL-EXPRESS-1/-3/-7
- Length
  - ACL-EXPRESS-1: 1 M
  - ACL-EXPRESS-3: 3 M
  - ACL-EXPRESS-7: 7 M
- Construction: Shielded twisted pair copper cable
- Signal bandwidth: 2.5 Gbps



PCI-8565 (Installed in the RK-8005/8014 chassis)
- Compliant with PCI-to-PCI Bridge Architecture Specifications Rev. 1.2
- Compliant with PCI™ Local Bus Specifications Rev. 3.0
- Supports 5 V and 3.3 V PCI™ bus
- Supports 32-bit/33 MHz full data throughput
- Extended distance of up to 7 meters
- Dimensions: Low-profile PCI™ add-on card (64 mm (H) x 120 mm (W))
- Power requirement:

Device	+3.3 V
PCI-8565	720 mA

RK-8014 Chassis (for PCES-8581-13S)
- Dimension: 483.5 mm (W) x 177 mm (H) x 448.5 mm (D)
- Weight: 12 kg (26.4 lb)
- Backplane: 14 x 32-bit/33 MHz full-size PCI slots
  - 1 slot for extension card
  - 13 slots available for PCI cards
- Power supply
  - Input voltage: 85 VAC to 265 VAC, with auto-switching
  - Output: 400 W
- Cooling: Two 120 mm ball bearing fans

General Specifications

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

Applications

- Industrial automation or control
- Electronics manufacturing test
- Military/aerospace
- Video capture
- Remote test and measurement
- Test system for rugged environments
- High-density I/O system

Ordering Information

- **PCES-8581-4S**
  4-slot PCI Express-to-PCI Extension System, including the PCIe-8560 extension card, RK-8005 4-slot extension chassis, and an ACL-EXPRESS-3 cable
- **PCES-8581-13S**
  13-slot PCI Express-to-PCI Extension System, including the PCIe-8560 extension card, RK-8014 13-slot extension chassis, and an ACL-EXPRESS-3 cable
- **ACL-EXPRESS-1**
  High-speed extension cable, 1 M
- **ACL-EXPRESS-3**
  High-speed extension cable, 3 M
- **ACL-EXPRESS-7**
  High-speed extension cable, 7 M