PCES-8581-4S/13S

PCIe-to-PCI Expansion Systems

PCES-8581-4S

PCES-8581-13S

Introduction

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

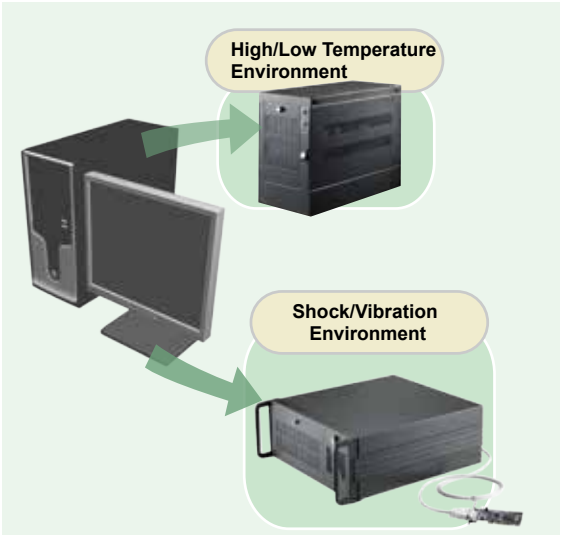
Controlling PCI™ Remotely via the PCI Express® Interface

Most commercial desktop PCs are equipped with only one or two PCI slots. For systems 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 expansion system, users can easily expand their system and conveniently accommodate 13 PCI devices or more.

For rugged applications where the PC system is subjected to 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 expansion system can 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 expansion system is designed to withstand extreme temperatures or high vibration. If the PCI devices require less electromagnetic interference, you may also use the PCI Express-to-PCI expansion system to isolate high frequency interferences from the CPU, memory, or North/Southbridge chips. These expansion 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.

Features

- **PCI Express-based control of PCI - PCES-8581-4S/13S**
- **High-speed PCI Express x1 interface**
- **Compatible with 5 V and 3.3 V PCI signaling**
- **32-bit/33 MHz PCI interface support**
- **PCES-8581-4S expand four half-size PCI slots in a shoebox size wallmount chassis with built-in 200 W power supply**
- **PCES-8581-13S expands 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



Separate your PC system and PCI devices, protect your PC system from hazardous environments.

RK-8005

PCIe-8560

RK-8014

Specifications

■ PCIe-8560	• PCI Express Base Specifications Rev. 1.0a compliant • PCI Express x1 link with 250 MB/s data throughput • Dimension: Low-profile PCI Express card (69 mm (H) x 87 mm (W), 2.69" x 3.39") • Power requirements:

Device	+3.3 V
PCIe-8560	210 mA

■ PCI-8565	• PCI-to-PCI Bridge Architecture Specifications Rev. 1.2 compliant • PCI™ Local Bus Specifications Rev. 3.0 compliant • Supports 5 V and 3.3 V PCI™ bus • Dimensions: Low-profile PCI™ add-on card (64 mm (H) x 120 mm (W), 2.49" x 4.68") • Power requirements:

Device	+3.3 V
PCI-8565	720 mA

■ RK-8005	• Dimensions: - 122 mm (W) x 195 mm (H) x 259 mm (D) (4.75" x 7.6" x 10.1"), for half-sized PCI cards • Weight: 3.2Kg (7.04 lb) • Backplane: Five 32-bit/33 MHz half-sized PCI™ slots - 1 slot for expansion card - 4 slots available for PCI™ cards • Power supply: - Input voltage: 85 VAC to 265 VAC - Output: 200 W • Cooling: One 37.5 CFM ball bearing fan (80 mm)
■ RK-8014	• Dimensions: 483.5 mm (W) x 177 mm (H) x 448.5 mm (D) (18.85" x 6.9" x 17.5") • Weight: 12 Kg (26.4 lb) • Backplane: 14 x 32-bit/33 MHz full-sized PCI slots - 1 slot for expansion card - 13 slots available for PCI cards • Power supply: - Input voltage: 85 VAC to 265 VAC with auto-switching - Output: 400 W • Cooling: Two 88 CFM ball bearing fan (120 mm)
■ ACL-EXPRESS-1/-3/-7	• Length: 1 M, 3 M, 7 M

General Specifications

- Operating temperature: 0°C to 50°C (32°F to 122°F)
- Storage temperature: -20°C to 80°C (-4°F to 176°F)
- Relative humidity: 10% to 90%, non-condensing

Ordering Information

■ **PCES-8581-4S**
Includes One PCIe-8560, One RK-8005, and One ACL-EXPRESS-3 Cable

■ **PCES-8581-13S**
Includes One PCIe-8560, One RK-8014, and One ACL-EXPRESS-3 Cable

■ **ACL-EXPRESS-1**
Optional 1 M Expansion Cable

■ **ACL-EXPRESS-3**
Optional 3 M Expansion Cable

■ **ACL-EXPRESS-7**
Optional 7 M Expansion Cable

PCI-8565

ACL-EXPRESS-1/-3/-7

PCIe-to-PCI Expansion Systems

System Model	Host Bus Type	Expansion Bus Type	Slots No.	Expansion System Includes				Cable Option
				Card (Host)	Card (Remote)	Expansion Chassis	Accessory	
PCES-8581-4S	PCI Express	PCI	4	PCIe-8560	PCI-8565	RK-8005	ACL-EXPRESS-3	ACL-EXPRESS-1/-7
PCES-8581-13S	PCI Express	PCI	13	PCIe-8560	PCI-8565	RK-8014	ACL-EXPRESS-3	ACL-EXPRESS-1/-7