# PCIe to PXI Remote Control Interface 41-924

- Provides Seamless Interface Between PC Controller PCIe and PXI Chassis
- Fast PCI Express Interface
- Supports 32 bit 33 MHz PXI Bus
- Supplied Complete with Interface Cable
- Low Power Consumption
- Occupies Single PXI and PCIe Slot
- 3 Year Warranty


Harnessing the bandwidth potential of PCI Express, the 41-924 Extension Kit enables computers with a PCIe slot to remotely control a PXI chassis via a high-speed interface. The extension system operates in 32-bit/33 MHz configuration and has complete end-to-end hardware and software transparency for the host system. Hardware installed in the PXI chassis operates as if it is installed in the host system, requiring no additional drivers or software.

The host system can be separated from the PXI chassis by up to 7 meters using a high-quality shielded twisted pair cable.

## Controlling PXI™ with PCI Express®

Based on PCI Express technology, the PCIe-to-PXI Extension Kit provides bus expansion capability through its high-speed differential signal interface. With the 41-924 Extension Kit, users can use a PCIe slot to control an external PXI chassis. Because the PCIe bridge is transparent, there is no need to install any additional software on the external chassis.

The Extension Kit consists of a 50-924-001 card installed in the host computer, a shielded interface cable, and a 40-924-001 module installed in the remote PXI chassis. The 50-924-001 has a PCIe x1 footprint and communicates with the 40-924-001 via the interface cable. The 40-924-001 converts the PCIe interface into a PCI interface for the PXI slots in the extension system.

The link between host PC and the external chassis is a PCI Express X1 link that consists of a dual-simplex communications channel with two, low-voltage differentially driven signal pairs. The signaling rate can be up to 2.5 Gbps in each direction. With a shielded twisted pair cable, the maximum extension distance is up to 7 m without decreasing signal rate.

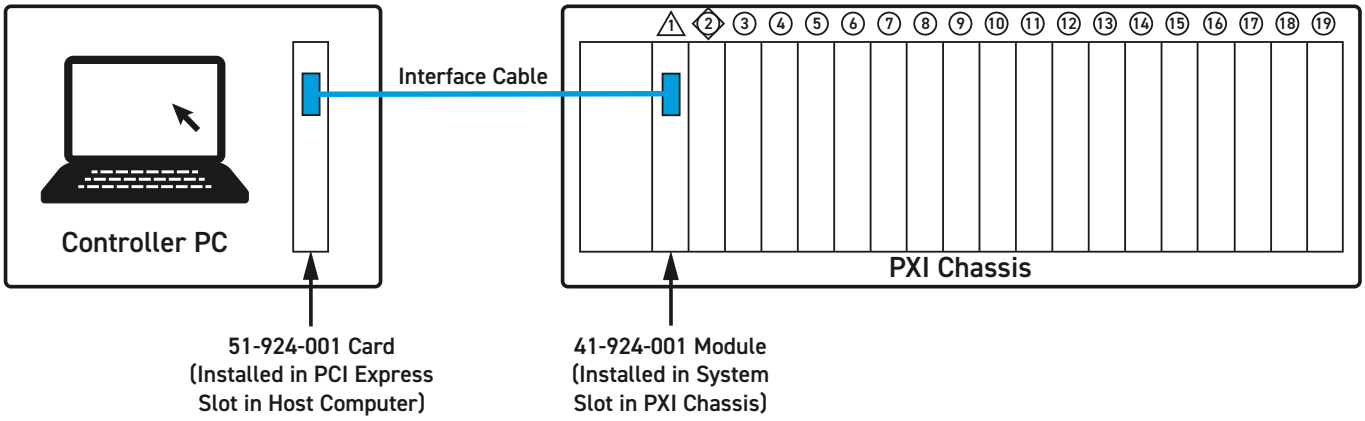



**Diagram Showing Remote Control Interface Kit Fitted in a Controlling PC and a PXI Chassis, Linked With the Interface Cable**

## Specification

| |
|---|
| The system is supplied as kit containing an interface cable, a 41-924-001 PXI module and a 51-924-001 PCIe card and ordered as a complete kit. Provides a single lane PCIe connection from PCIe to PXI. |
| 51-924-001 Specification:<br>Compliant with PCI Express Base Specifications Rev. 1.0a.<br>PCI Express x1 link providing an effective signaling rate of up to 2.5 Gigabits/sec. |
| 41-924-001 Specification:<br>Compliant with PCI-to-PCI Bridge Architecture Specification Rev. 1.2.<br>Supports 5 V and 3.3 V PCI bus<br>32-bit/33 MHz full data throughput. |
| Chassis Compatibility:<br>51-924-001 is suitable for insertion in any PCIe slot of a PC.<br>41-924-001 is suitable for insertion in any PXI chassis controller slot (Slot 1), not suitable for PXIe controller slots. |
| Connection Distance:<br>Supplied with a 3 m interface cable, maximum connection distance of 7 m. |

## Power Requirements

| | +3.3 V | +5 V | +12 V | -12 V |
|---|---|---|---|---|
| 51-924-001 | 210 mA | 0 | 0 | 0 |
| 41-924-001 | 720 mA | 0 | 0 | 0 |

## Mechanical Characteristics

51-924-001: Single slot PCIe Card (height 68.90mm, width 86.65mm)

41-924-001: Single slot 3 U PXI (CompactPCI card).

3D models for all versions in a variety of popular file formats are available on request.

## Product Order Codes

| | |
|---|---|
| PCIe to PXI Remote Control Kit | 41-924-001-KIT |
| (Complete kit 51-924-001, 41-924-001, 3m Interface cable) | |
| PCIe Remote Control Interface Card | 51-924-001 |
| PXI Remote Control Interface Module | 41-924-001 |

## Safety & CE Compliance

All modules are fully CE compliant and meet applicable EU directives:
Low-voltage safety EN61010-1:2010,
EMC Immunity EN61326-1:2013,
Emissions EN55011:2009+A1:2010.

## Operating/Storage Conditions

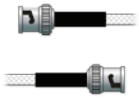
| | |
|---|---|
| Operating Temperature: | 0 °C to +50 °C |
| Humidity: | Up to 90 % non-condensing |
| Altitude: | 5000 m |
| Storage Temperature: | -20 °C to +80 °C |
| Humidity: | Up to 90 % non-condensing |
| Altitude: | 15000 m |

## Connectivity Solutions

We provide a full range of supporting cable and connector solutions for all our switching products—20 connector families with **1200+** products. We offer everything from simple mating connectors to complex cables assemblies and terminal blocks. All assemblies are manufactured by Pickering and are guaranteed to mechanically and electrically mate to our modules. These accessories are detailed in Connector Accessories data sheets, where a complete list and documentation can be found for each accessory.

Connectors & Backshells

Multi-way Cable Assemblies



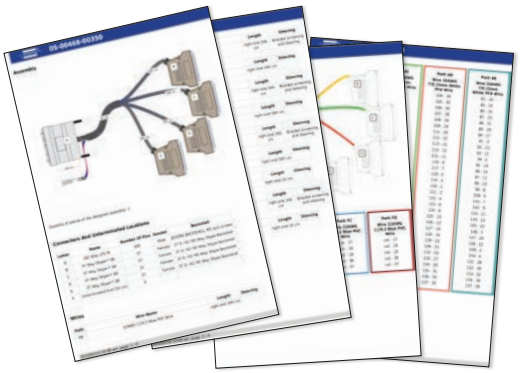
RF Cable Assemblies

Breakouts

Connector Blocks

We also offer customized cabling and have a free online **Cable Design Tool** that can be used to create custom cable solutions for many applications.

- Fully supported on modern browsers and tablet operating systems.
- Built-in tutorials and videos allow you to get quickly up to speed.
- Store cable assemblies in the Cloud and develop over time.
- Each cable design has a downloadable PDF documentation file detailing all specifications



Start designing your custom cabling, go to pickeringtest.com/cdt

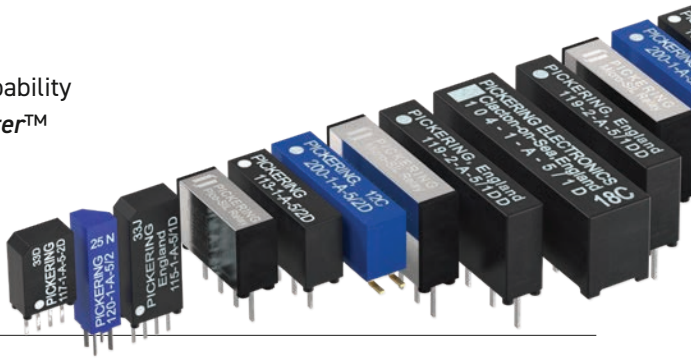
## Mass Interconnect

We recommend the use of a mass interconnect solution when an Interchangeable Test Adapter (ITA) is required for PXI/LXI based test systems. Our modules are fully supported by Virginia Panel and MacPanel.

## Pickering Reed Relays

We are the only switch provider with in-house reed relay manufacturing capability via our Relay Division. These instrument grade reed relays feature ***SoftCenter***™ technology, ensuring long service life and repeatable contact performance.

To learn more go to pickeringrelay.com



## Programming

Pickering provide kernel, IVI and VISA (NI & Keysight) drivers which are compatible with all Microsoft supported versions of Windows and popular older versions.

For more information go to pickeringtest.com/os

The VISA driver support is provided for LabVIEW Real Time Operating Systems (Pharlap and Linux-RT). For other RTOS support contact Pickering. These drivers may be used with a variety of programming environments and applications including:

- **Pickering Interfaces Switch Path Manager**
- **National Instruments** products (LabVIEW, LabWindows/CVI, Switch Executive, MAX, TestStand, VeriStand, etc.)
- **Microsoft Visual Studio** products (Visual Basic, Visual C++)
- **Programming Languages** C, C++, C#, Python
- **Keysight** VEE and OpenTAP
- **Mathworks MATLAB, Simulink**
- **Marvin** ATEasy
- **MTQ Testsolutions** Tecap Test & Measurement Suite

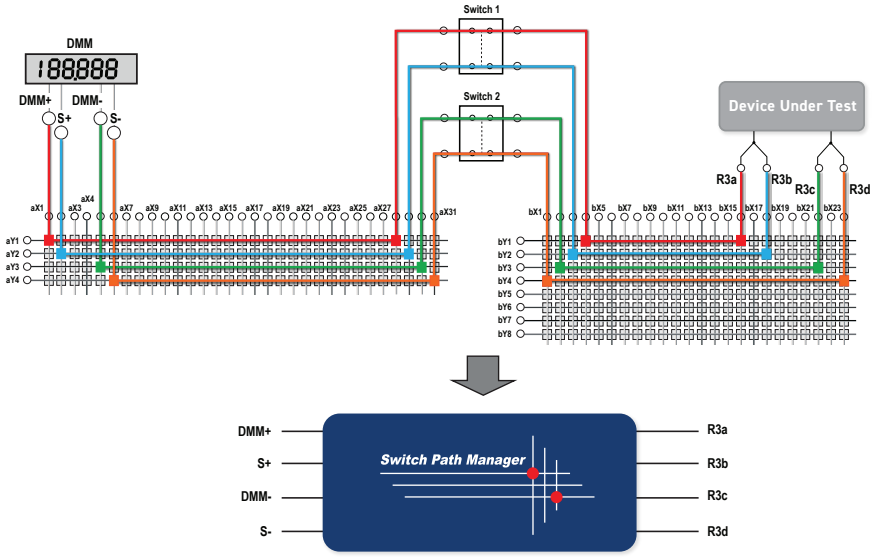
Drivers for popular Linux distributions are available, other environments are also supported, please contact Pickering with specific enquiries. We provide Soft Front Panels (SFPs) for our products for familiarity and manual control, as well as comprehensive documentation and example programs to help you develop test routines with ease.

To learn more about software drivers and development environments go to pickeringtest.com/software

## Signal Routing Software

Our signal routing software, Switch Path Manager, automatically selects and energizes switch paths through Pickering switching systems. Signal routing is performed by simply defining test system endpoints to be connected together, greatly accelerating Test System software development.

To learn more go to pickeringtest.com/spm



## Diagnostic Relay Test Tools

***eBIRST*** Switching System Test Tools are designed specifically for our PXI, PCI or LXI products, these tools simplify switching system fault-finding by quickly testing the system and graphically identifying the faulty relay.

To learn more go to pickeringtest.com/ebirst


## Three Year Warranty & Guaranteed Long-Term Support

All standard products manufactured by Pickering Interfaces are warranted against defective materials and workmanship for three years from the date of delivery to the original purchaser. Extended warranty and service agreements are available with various levels for your requirements. Although we offer a 3-year warranty as standard, we also include guaranteed long-term support—with a history of supporting our products for typically 15-20 years.

To learn more go to pickeringtest.com/support

## Available Product Resources

We have a library of resources including success stories, product and support videos, articles and white papers as well as application-specific brochures to assist you. We have also published reference books on switching technology and the PXI and LXI standards.

To view, download or request any of our product resources go to pickeringtest.com/resources