

PRELIMINARY DATA

- High Performance 21-slot PXIe Backplane
- 1 PXIe System Slot & 20 PXI Express Hybrid Slots
- Ultra-High Performance PCIe Switching With a Default Four-Link (4x4) System Slot
- High Data Bandwidth (Max. 8 GB/s System & 2 GB/s Slot-to-Slot)
- External 10 MHz Clock Input/Output
- Dual 900 W EMC Class B Swappable PSUs
- 80W Per Slot Cooling at 15 K
- Compact Benchtop Footprint
- Low Profile 4 U Rugged Design
- Remote Chassis Monitoring System
- Low Audible Operating Noise
- 3 Year Warranty



Pickering Interfaces' 42-927 PXIe Chassis provides one PXIe system slot and 20 hybrid-compatible slots for application flexibility. The chassis utilizes three PCI segments with a dedicated PCIe-to-PCI bridge module for the hybrid slots. The PXI specific high accuracy clocks and trigger signals are generated and controlled by an independent clock module attached to the rear of the backplane.

The chassis is fitted with dual 900 W industrial grade power supplies mounted at the rear of the unit with sufficient capacity to support PXI modules with very high current demands.

An intelligent chassis management system monitors the power supply voltage, internal temperature and cooling fan speed. The current condition of the chassis can be monitored remotely via a port on the rear panel.

Three 120 mm fans insure maximum PXI module cooling and an efficient direct convection design allows the chassis to operate over an extended ambient temperature range of 0 °C to +55 °C.

Pickering's Range of PXI & PXIe Chassis			
Chassis Type	Slots	Chassis Size	Model No.
PXI	8	4U Full Rack	40-908
PXI	14	4U Full Rack	40-914
PXI	19	4U Full Rack	40-923A
PXI	8	4U Half Rack	40-924
PXIe Hybrid (Gen 3)	8	4U Half Rack	42-924
PXIe Hybrid (Gen 3)	18	4U Full Rack	42-925
PXIe Hybrid (Gen 2)	18	4U Full Rack	42-926
PXIe Hybrid (Gen 2)	21	4U Full Rack	42-927
PXI with LXI/USB Control*	7	4U Half Rack	60-102D
PXI with LXI/USB Control*	18	4U Full Rack	60-103D
PXI with LXI/USB Control	2	1U Half Rack	60-104
PXI with LXI/USB Control	4	2U Half Rack	60-105
PXI with LXI/USB Control*	6	1U Full Rack	60-106

* Includes Scan List Sequencing and optional Triggering function.



Rear of the 42-927 PXIe Chassis Showing Cooling Air Outlets and Dual Swappable Power Supplies

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Specifications

Number of Slots:	1 PXIe System slot. 20 PXIe Hybrid-compatible slots
Bus Interface:	Four-link capacity PXI Express system slot. High data bandwidth (max. 8 GB/s system and 2 GB/s slot-to-slot) PXI-1 compatible with 32 bit / 33 MHz PCI bus.

Cooling

Airflow:	Front & bottom panel intake, rear exhaust.
Per-slot Cooling Capacity:	80 W (100 W*) at 15 K
Fans:	3 off 120 mm fans (each 210 CFM)

* With operating temperature 0 to +40 °C

Power Supply

Input Voltage Range:	100 - 240 VAC full range	
Input Frequency:	50 to 60 Hz	
Supplied with dual 900 W DC output power supplies with the following total capacity:		
DC Outputs	Max Current	Ripple
+3.3 V	65 A	±50 mV
+5 V	30 A	±50 mV
+5 V aux	3 A	±50 mV
+12 V	125 A	±100 mV
-12 V	2 A	±100 mV

Chassis Monitoring

Monitoring Functions:	Chassis voltage level monitoring Power supply monitoring/control Cooling fans monitoring/control Chassis temperature monitoring
Status LEDs:	Chassis temperature, power supply voltage and fan monitoring
Remote Interface:	Monitor port on rear panel

Frequency Standard

Source:	Either 10 MHz PXI compliant internal standard or external 10 MHz standard applied to front panel SMA connector.
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Mechanical Specification

Cardcage:	Front loading 3 U x 160 mm, 21 slots, IEEE 1101.1, 1101.10 and 1101.11
Dimensions:	Width (with brackets): 482.6 mm (19") Height (without feet): 177 mm (6.97") Height (with feet): 192 mm (7.56") Depth (without handles): 465.5 mm (18.33")
Weight:	12.0 Kg without PXI modules

Product Order Codes

21-slot, PXIe Full Hybrid Chassis (Gen 2)	42-927-101
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Operating/Storage Conditions

Operating Temperature:	0 °C to +55 °C
Humidity:	20 % to 80 % non-condensing
Storage Temperature:	-20 °C to +70 °C
Humidity:	10 % to 90 % non-condensing

Safety, CE & RoHS Compliance

All products are fully CE compliant and meet applicable EU directives:

Low-voltage safety EN61010-1:2001,
EMC Immunity EN61000-6-1:2001,
Emissions EN55011:1998.

The 42-927 Chassis also complies with the European Restriction of Hazardous Substances directive (RoHS).

PXI Switching and Sensor Simulation

Pickering is a leading manufacturer of PXI switching and sensor simulation modules, available in PXI and PXIe formats. With our deep portfolio of over 1,000 modules, we provide the assurance that you can optimize your test system switching and simulation to exactly fit your needs. These modules range from the highest density switching matrices, RF/Microwave and optical switching, to sensor simulation, including programmable resistors, strain gauge, battery and thermocouple simulators.

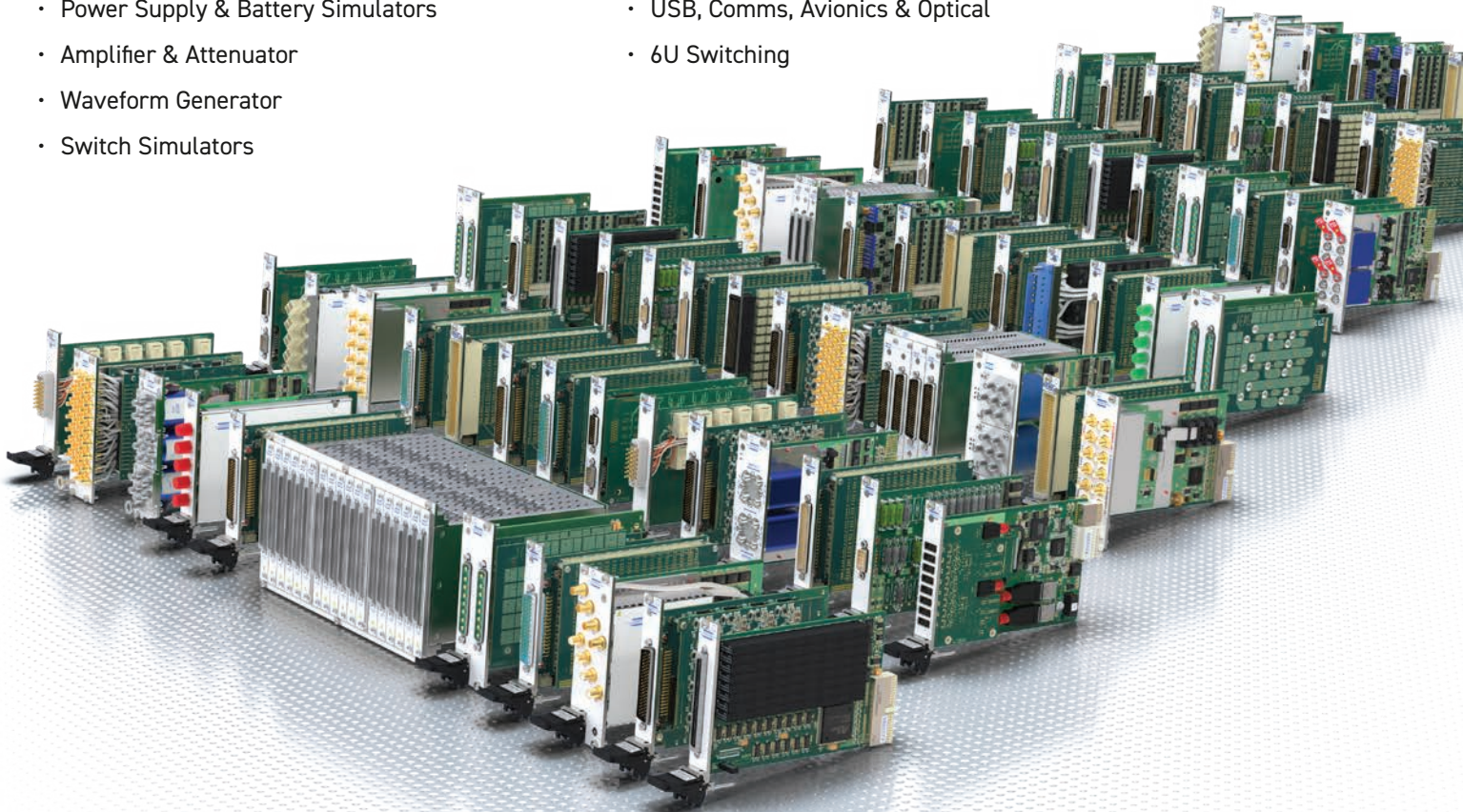
Please refer to the categories below and visit pickeringtest.com/pxi to find the products you need:

Sensor Simulation

- Programmable Resistors
- Thermocouple Simulators
- LVDT/RVDT/Resolver Simulators
- Analog Output/Current Loop Simulators
- Strain Gauge Simulators
- Digital I/O and Prototype
- Power Supply & Battery Simulators
- Amplifier & Attenuator
- Waveform Generator
- Switch Simulators

Switching

- General Purpose Relay
- BRIC™ Large Matrices
- Matrices
- Multiplexers
- RF & Microwave
- Fault Insertion
- USB, Comms, Avionics & Optical
- 6U Switching



All of our PXI modules will plug into any PXI compliant chassis or a Hybrid Slot in a PXIe chassis and may also be used in our Ethernet controlled modular LXI switching chassis. Our PXIe modules will plug into any compliant PXIe slot or Hybrid Slot in a PXIe chassis.

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Connectivity Solutions

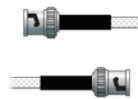
We provide a full range of supporting cable and connector solutions for all our switching products—20 connector families with 1200+ products. We offer everything from simple mating connectors to complex cables assemblies and terminal blocks. All assemblies are manufactured by Pickering and are guaranteed 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



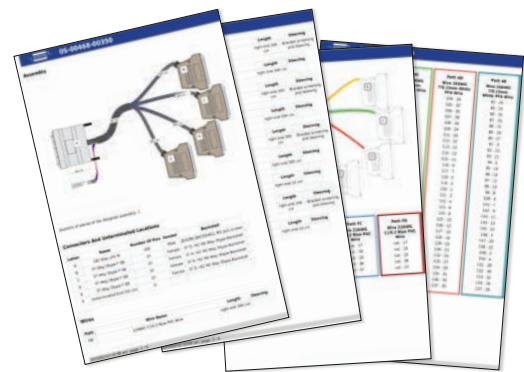
Breakouts



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

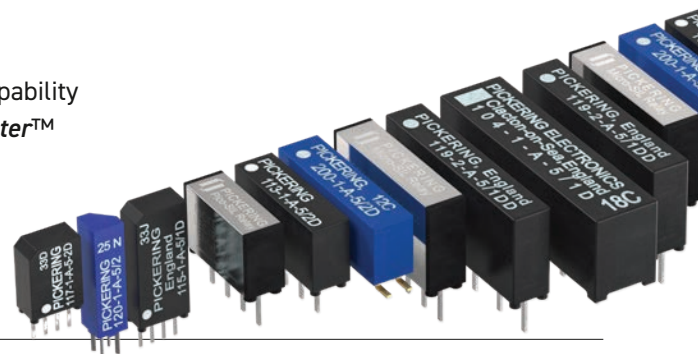
Mass Interconnect

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



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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

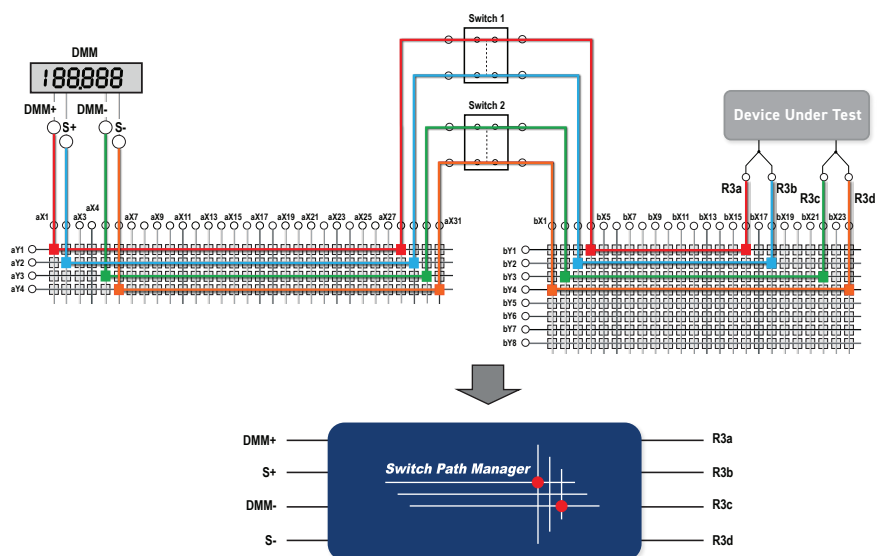
Drivers for popular Linux distributions are available, other environments are also supported, please contact Pickering with specific enquiries. We provide Soft Front Panels (SFPs) for our products for familiarity and manual control, as well as comprehensive documentation and example programs to help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



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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

