

- Fully Compliant LXI Interface (1.5)
- Ethernet 1000baseT Interface
- USB 3 Compatible
- Supports 1000+ Pickering PXI 3U Modules Including:
 - Programmable Resistors
 - Matrices
 - Multiplexers
 - General Purpose Relays
 - RF Switches
 - Fault Insertion
- Supports Two User Slots
- Compact 1/2 Rack Width 1U Form Factor
- 3 Year Warranty



**60-104 Chassis
With Two Pickering
PXI Modules Fitted**

Pickering Interfaces' 60-104 modular chassis offers a small lightweight form factor, making it ideal for portable, benchtop, and space restrictive applications.

The 60-104 supports one or two 3U PXI modules and accepts Pickering's PXI products, it is the perfect platform to construct small scale applications.

Possible systems include switching matrices up to 1536 crosspoints (one 40-558 BRIC2 occupying both slots) or up to 36 channels of programmable resistor/sensor emulation (two 40-295 or 40-297 18-channel resistor modules - one in each slot).

For a list of compatible PXI modules, please refer to the 60-104 user manual.

The USB compatible and LXI compliant interfaces enable the chassis to be controlled directly through standard interfaces found on most personal computers, allowing for a very cost effective route into the modular test and measurement market.

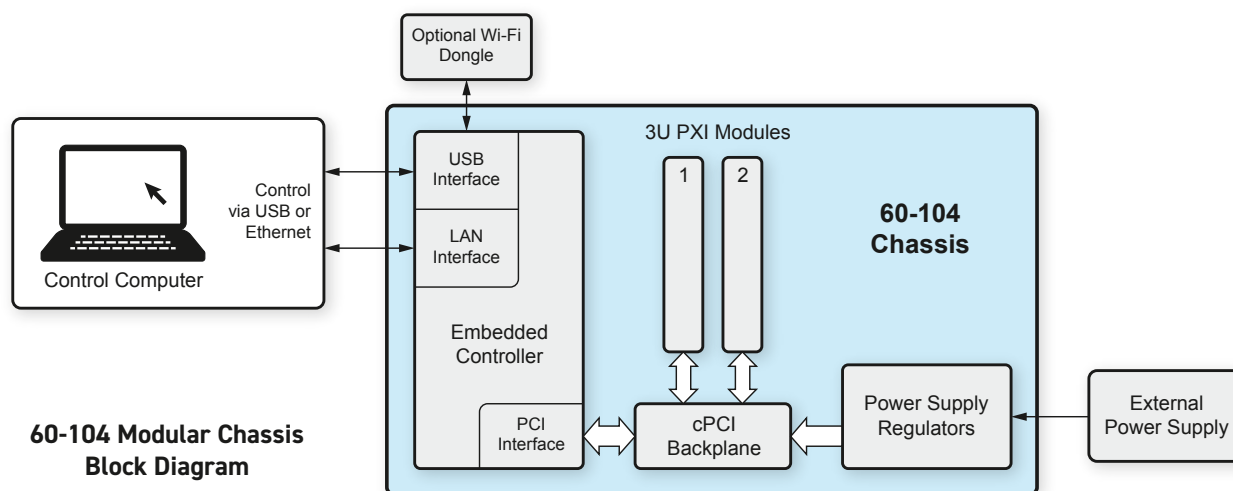
Pickering's Range of PXI & PXIe Chassis			
Chassis Type	Slots	Chassis Size	Model No.
PXI	8	4U Full Rack	40-908
PXI	14	4U Full Rack	40-914
PXI	19	4U Full Rack	40-923A
PXI	8	4U Half Rack	40-924
PXIe Hybrid (Gen 3)	8	4U Half Rack	42-924
PXIe Hybrid (Gen 3)	18	4U Full Rack	42-925
PXIe Hybrid (Gen 2)	18	4U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

The option of a Wi-Fi dongle is useful for control from mobile devices via HTML5 SFP.

The chassis can be controlled through built in software drivers. Chassis configuration and module control is possible through the W3C web page interface.

The 60-104 is powered from an external DC supply, making it lightweight, versatile and extremely portable.



Specifications

Chassis Backplane:	32-bit cPCI backplane, compatible with PXI.
Chassis Capacity:	2 off 3U user slots available.

PXI Module compatibility

The chassis is supplied with drivers for Pickering PXI modules.	
Switching Support:	Most of 3U Pickering Interface's PXI switching modules. Includes (but not limited to): All 2 slot 3U BRIC matrices, featuring up to 1104 crosspoints.
Simulation support:	All programmable resistor and potentiometer modules offering up to 36 channels, RF attenuators, digital I/O and other simulation modules.

Power Supply

Input Voltage Range:	19V (DC)
Input Current Rating:	5.2A (DC)

Cooling

Airflow:	Crossflow
Per-slot Cooling Capacity:	25W at 40°C ambient
Fans:	2 off 7.7 cfm fans

Acoustic Noise Emissions

With fans on maximum:	53dBA typical
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LAN Interface

Designed to comply with the LXI Standard Version 1.5	
Connector:	RJ45 Connector.
Connection Speed:	1000BaseT interface.

USB Interface

Compatible with USB3 (backwardly compatible with USB/USB2)	
Connector:	USB3 type B
Connection Speed:	400MBps

Mechanical Specification

Dimensions:	
With Rubber Bumpers:	Width: 165mm (6.50") Height: 58mm (2.28") Depth: 308mm (12.13")
Weight:	1.3kg without PXI modules
External PSU Dimensions:	W: 58mm, H: 37mm, D: 142mm
Lead Length:	1200mm



The 60-104 LXI/USB Modular Chassis Front Panel

Slot Capacity (Per Slot)

+3.3V	+5V	+12V	-12V
6A	6A	1A	1A

NOTE: Maximum power is 60W for all slots or 30W per slot.

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to +55°C
Humidity:	Up to 90% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 90% non-condensing
Altitude:	15000m

Safety, CE & RoHS Compliance

All products 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.

The 60-105 Chassis also complies with the European Restriction of Hazardous Substances directive (RoHS).

Product Order Codes

Chassis

LXI/USB Modular Switching Chassis, 2-Slot **60-104-001**

Accessories

Replacement 19V DC Power Supply	63-104-001
400Hz 19V DC power supply	63-104-001-400
Optional Wi-Fi Dongle	63-104-002
Optional Chassis Strap Mounting Kit*	63-104A-003
Optional Chassis Plate Mounting Kit*	63-104A-004
Optional Chassis Low Profile Mounting Kit*	63-104-005
Optional Chassis Rack Mounting Kit	63-104-006

* Please refer to the 60-104 User Manual for information on these optional chassis mounting kits.



The 60-104 2-Slot LXI/USB Modular Chassis is Shipped With Everything You Need to Get Started.

The Package Includes: • 60-104 Chassis • Power Supply
• USB3 Cable • Ethernet Cable • Driver DVD
• Optional Wi-Fi Dongle

Connectivity Solutions

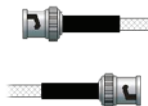
We provide a full range of supporting cable and connector solutions for all our switching products—20 connector families with 1200+ products. We offer everything from simple mating connectors to complex cables assemblies and terminal blocks. All assemblies are manufactured by Pickering and are guaranteed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



Connectors & Backshells



Multiway Cable Assemblies



RF Cable Assemblies



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. Visit: pickeringtest.com/cdt to start your design.

Mass Interconnect

We recommend the use of a mass interconnect solution when an Interchangeable Test Adapter (ITA) is required for a PXI or LXI based test system. Our modules are fully supported by both 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, please 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 a list of all supporting operating systems, please see: 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
- **Marvin** ATEasy
- **MTQ Testsolutions** Tecap Test & Measurement Suite

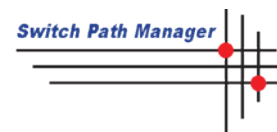
As well as various open source environments such as:

- **Sharp Develop**
- **Dev-C++**

To learn more about software drivers and development environments, please 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, please 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, please 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 a period of three years from the date of delivery to the original purchaser. Extended warranty and service agreements are available for all our modules and systems with various levels to suit 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, please go to: pickeringtest.com/support

Available Product Resources

We have a large library of product resources including success stories, product and support videos, articles and white papers as well as application specific product brochures to assist when looking for the switching, simulation and connection solutions you need. We have also published handy reference books on Switching Technology and for the PXI and LXI standards.



To view, download or request any of our product resources, please visit: pickeringtest.com/resources