

# LXI/USB Modular Chassis

from Pickering Interfaces

## Compact Switching & Simulation Solutions

for a Wide Variety of Electronic Test & Measurement Applications



**1000+**  
Pickering  
PXI Modules

- 2, 4 and 6-Slot Versions
  - Fully LXI Compliant
  - Remote Control via USB3, Ethernet LXI or Optional Wi-Fi
  - Compact Form Factors Ideal for Portable, Benchtop and Space Restrictive Applications
  - 3-Year Warranty
- All chassis accept virtually any of Pickering's 1000+ PXI modules including:
    - General Purpose Relays
    - Cross-point Matrices
    - Multiplexers
    - Programmable Resistors
    - Thermocouple Simulators
    - RF/Microwave Switching to 65 GHz
    - Digital I/O
    - Optical Switching
    - Or Mix & Match for Your Application

Switching | Simulation | Programmable Resistors | Custom Design | Connectivity & Cables



[pickeringtest.com](http://pickeringtest.com)

# 2-Slot LXI/USB Modular Chassis (60-104)



Rubber bumpers are provided to protect the chassis from damage when used on a benchtop.

Our 2-slot chassis is perfect for small to medium benchtop Test & Measurement applications.

### Application Examples:

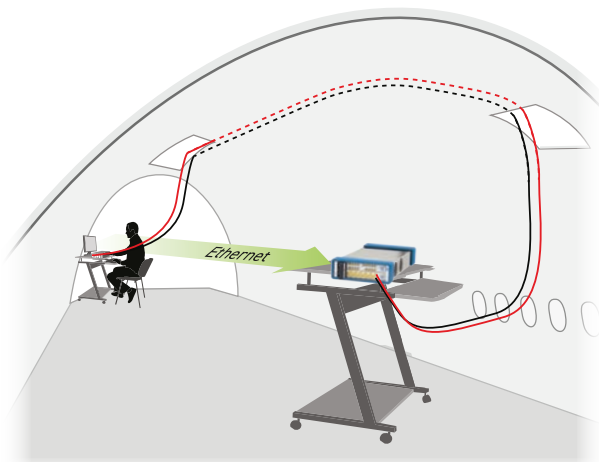
- 200 General Purpose 1 A Relays
- 1104 Cross-point 0.5 A Matrix
- 396 Channel 1A Multiplexer
- 36 Programmable Resistor channels
- 32:1 Terminated 600 MHz MUX
- 8 Channel Optical MUX
- 64 in/64 Out Digital I/O
- **or Mix & Match for Your Application**



Horizontal rack-mounting only takes up 1U of rack space.



May be mounted vertically inside a test rack using optional magnetic/screw mounting brackets.



Ideal for remote switching requirements. The above illustration shows a 2-slot chassis providing a remote-controlled loop-back for aircraft cable testing.



Up to one day's operation can typically be achieved when powered by a 19V high-capacity battery pack.

# 4-Slot LXI/USB Modular Chassis (60-105)



Our 4-slot chassis is designed to fit alongside half-rack width instrumentation, such as a DMM, and can also be used for portable and benchtop applications.

## Application Examples:

- 80 General Purpose 10 A Relays
- 2048 Cross-point 1 A Matrix
- 96 Channel 1000 V Multiplexer
- 128 Channel Thermocouple Simulator
- 296 Channel 2 A Fault Insertion Switch
- 6 SP6T 40 GHz Microwave MUX
- 128 Channel 100  $\Omega$  Differential MUX
- or Mix & Match for Your Application



Rubber bumpers are provided to protect the chassis from damage when used on a benchtop.



4-slot LXI/USB modular chassis front panel



# 6-Slot LXI/USB Modular Chassis (60-106)

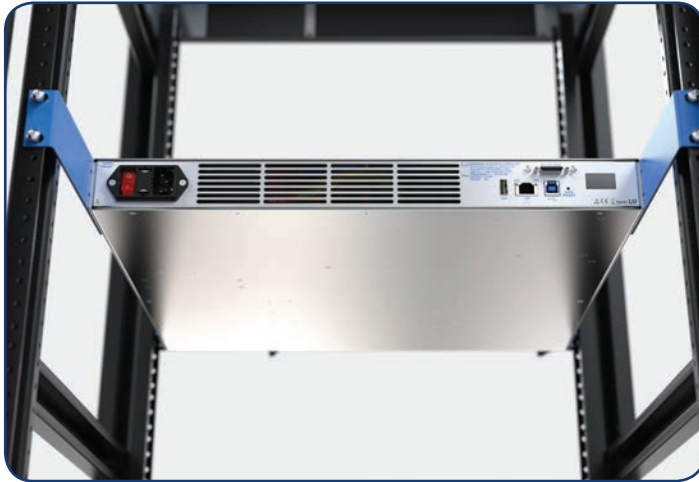


Our 6-slot chassis is 1U high and is designed to fit into a 19 inch rack making it suitable for portable and space-restricted rack-mount applications. It also incorporates an efficient direct convection design to ensure maximum module cooling.

Optional built-in scan list sequencing and triggering is available.

## Application Examples:

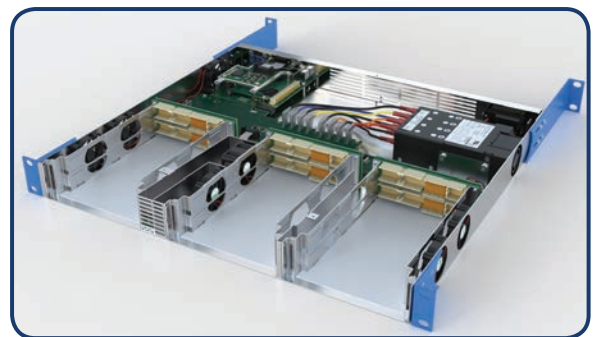
- 498 General Purpose 2 A SPDT Relays
- 2304 Cross-point 2 A Matrix
- 948 Channel 2 A Multiplexer
- 36 Channel Strain Gauge Simulator
- 36 Cell Battery Stack Simulator
- 12 x 65 GHz SPDT Microwave Switches
- 384 Channel External Relay Driver
- **or Mix & Match for Your Application**



Rear view of the chassis fitted into a 19 inch rack using the supplied front and rear mounting ears.



As with the other chassis in this family, the 6-slot can also be controlled via cable using the Ethernet or USB interface. Alternatively, it can be controlled wirelessly using an optional WiFi dongle.



6-slot LXI/USB chassis with the top cover removed showing internal construction.



# Control of the LXI/USB Chassis

## Optional Sequencing Service and Triggering on 6-Slot Version

The 6-slot chassis also has the option of sequencing service and triggering. The Sequencing service provides the user with the ability to set a series of predetermined sequences on an LXI instrument. These sequences can be triggered by software or one of the sixteen software configurable open collector triggers.

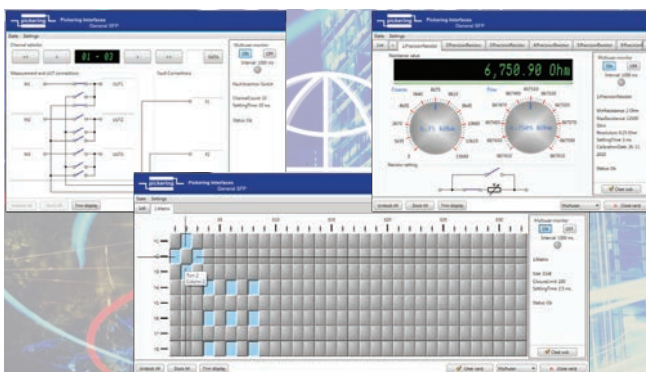
The sequencing is system-wide, and lets the user combine switch and simulation card commands in one single operation. For example, if you have a resistor card connected to a matrix, you can set resistance and operate crosspoints as part of the same sequence. Furthermore, operations can also be grouped together which will minimize the number of control transactions required to achieve a composite change of target switch state, condensing multiple operations in a single sub unit into a single operation, thus reducing the overall system switch settling time. For example, if a user wants to operate X1-Y1, X4-Y1, X2-Y2, in the first sequence, only one operation, and one delay, will be used.

Additionally, as the switch state sequences are stored within the LXI controller itself, the burden on the Host CPU and Ethernet traffic is greatly reduced, so the overall system latency is reduced.

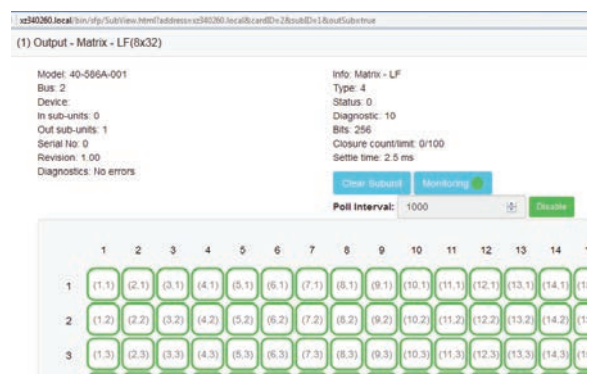


## Software Development

We provide open software development interfaces allowing the freedom to create different test scenarios using a wide range of development environments.



Manual control of all switching and simulation modules in the 2, 4 and 6-slot chassis is enabled via a web-browser Soft Front Panel.



Our HTML5 SFP also allows control of our modules via tablets and other mobile devices.

# PXI Module compatibility with LXI/USB Modular Chassis

## PXI Module Compatibility

Our 2, 4 and 6-slot chassis support our range of 1000+ 3U PXI Modules as follows, with exceptions noted:

**Switching** - All Pickering 3U PXI Switching modules, including BRIC large matrices and RF/Microwave switching to 65GHz.

**Simulation** - All Pickering 3U PXI Programmable Resistor, Amplifiers, Attenuators, Digital I/O and other Simulation modules including Thermocouple, Strain Gauge, RTD and Battery simulator modules.

Exceptions:

- Max width of modules for 60-104 and 60-106 is 2-slots.
- Max width of modules for 60-105 is 4-slots.
- 41-620 and 41-740 modules are not compatible with our LXI/USB chassis.



## Accessories

Replacement 19V DC power supply, Wi-Fi dongle and a selection of mounting hardware.

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To download the full data sheet and manual or to learn more about our 2, 4 and 6-slot chassis, please go to [pickeringtest.com/lxichassis](http://pickeringtest.com/lxichassis), or contact your local Pickering office or representative.

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