

# 60-102B

## 7 Slot LXI Modular Chassis

- Gigabit Ethernet Interface
- Accepts More Than 1000 Pickering Interfaces PXI 3U Switch and Simulation Modules
- Accepts most Pickering Interfaces 3U PXI Instrumentation Modules
- Applications From Simple Switching to RF, Microwave and Optical
- Front Panel IP Address Display
- Low Audible Operating Noise
- 3 Year Warranty

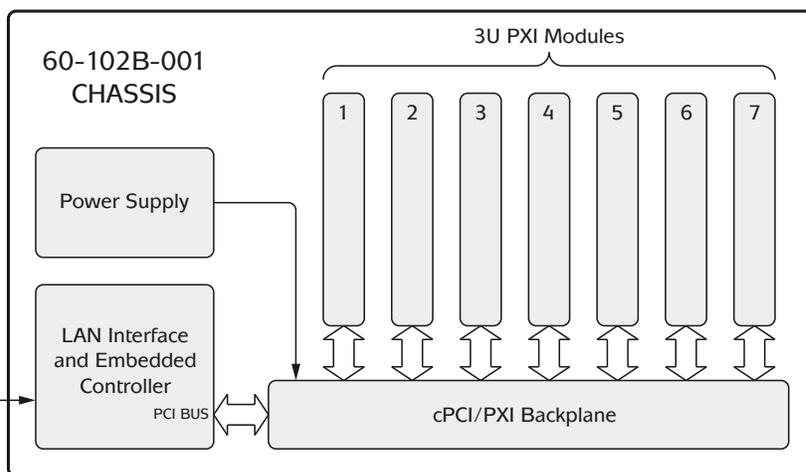
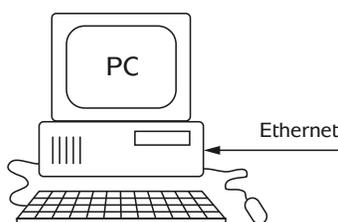


The 60-102B is fully compliant with the LXI Standard 1.4 and supports Pickering Interfaces 3U PXI switching and simulation modules. Each module is supported as though it is an LXI compliant device, complete with a driverless soft front panel that provides complete control of the module functions. The 60-102B supports up to 7 off 3U modules and is equivalent to an 8 slot PXI chassis.

The chassis allows all Switching and Simulation 3U PXI modules from Pickering Interfaces and most† instrumentation products (such as digital I/O, attenuators, power supplies) to be installed and controlled through a standardized Ethernet interface. The chassis is supplied with a built-in generic IVI driver to control the PXI modules in accordance with the LXI specification, but can also be controlled through a kernel driver.

Modules available for installation in the 60-102B chassis cover a large variety of switching functions. They include simple switches, matrices and multiplexers based on reed relay and electromechanical technology which can switch from micro Amps to 40 Amps. A range of RF, microwave and optical switching functions are supported as well as some instrument functions such as variable resistor cards. For a list of compatible PXI modules, please refer to the LXI Product Guide.

The LXI compliant Ethernet interface enables the chassis to be controlled through standard LAN interfaces found on all controllers, a front panel display shows the set IP address to simplify Ethernet connection. It allows the remote operation of switching products with simple cabling over long distances, even permitting



a chassis to be controlled over world wide networks. The separation of the chassis from the controller's PCI bus simplifies power-on sequencing of systems and provides a high degree of independence from the migration of the Windows and VISA environment

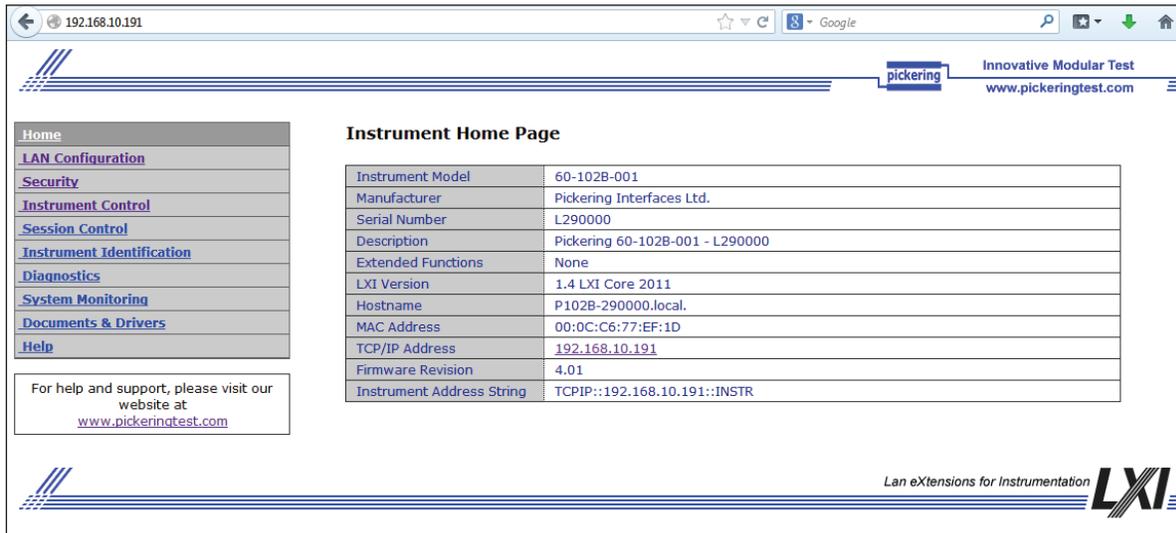
The form factor of the 60-102B allows efficient use of space thanks to its half rack width size and compact 4U height. Two 60cfm fans ensure maximum module cooling and an efficient direct convection design allows the chassis to operate over an extended ambient temperature range of 0°C to +55°C.

The low acoustic emissions make the chassis ideal for applications such as office or laboratory environments where noise levels are critical. The sound pressure level varies between 41.6dB and 47.3dB dependant upon the fan speed which is automatically controlled according to the internal chassis temperature.

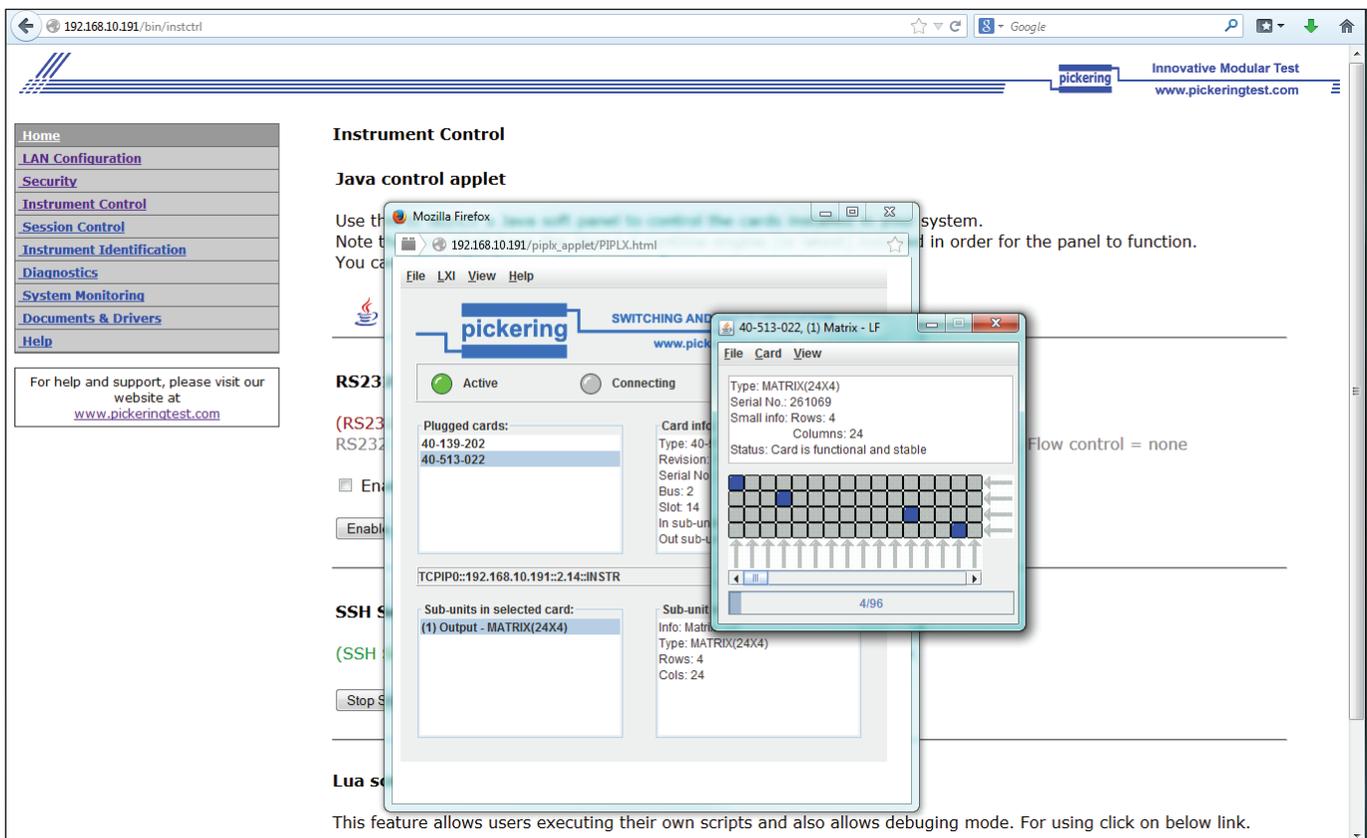
The 60-102B can be simply configured over its LXI compliant interface using any industry standard web browser. The interface can be used to load a Java based soft front panel to the user for any of the modules fitted to the chassis, permitting users to manually access modules without the need for drivers on the controller.

† For the compatibility of Pickering's PXI modules other than switching or simulation functions, please check the module's data sheet.

Plugging Pickering Interfaces PXI modules into the 60-102B LXI Modular Switching Chassis provides an LXI compliant switching platform. A simple Ethernet lead is the only physical control connection required.



The home page for the 60-102B provides fast access to configuration information for the LXI chassis through any web browser.



The 60-102B provides soft front panels to enable manual operation through the web interface, in this example for a 40-513 matrix module.

The back window is the Instrument Control web page, the middle window lists all the modules installed in the chassis and the control panel for the selected module is at the front.

## Specification

Chassis Backplane:	64 bit backplane, compliant with cPCI/PXI specification. Provides trigger, local bus support (subject to module support).
Chassis Capacity:	7 off 3U user slots available.

## PXI Module compatibility

The chassis is supplied with drivers for Pickering system 40 switching modules.

Switching Support:	All of 3U Pickering Interface's PXI switching modules. Includes (but not limited to): All 2 and 4 slot 3U BRIC matrices, featuring up to 2208 crosspoints.
Instrumentation support:	Programmable resistor and potentiometer modules, RF attenuators, battery simulators, programmable power supplies and digital I/O modules.
Soft Front Panel:	All supported PXI modules can be controlled through a W3C compliant web browser (Internet Explorer, Firefox, Netscape and others).

For a selection guide on the range of modules capable of being hosted by the 60-102B chassis, please see the PXI Module Selection Guide in the LXI Product Guide. This is available as a download from the On-Line Catalogs section of our website: [www.pickeringtest.com](http://www.pickeringtest.com)

## Programming

All LXI devices are supplied with built-in software drivers, web pages for configuration and soft front panels as required by the LXI specification.

A variety of drivers are provided (C, .NET, IVI, SOAP) which are compatible with all Microsoft supported versions of Windows and popular older versions. For a list of all supporting operating systems, please see: [www.pickeringtest.com/os](http://www.pickeringtest.com/os) The drivers may be used in many commonly used programming environments and applications including:

- **Pickering Interfaces Switch Path Manager**
- **MTQ Testolutions** Tecap Test & Measurement Suite
- **National Instruments** (LabVIEW, LabWindows/CVI, Switch Executive, TestStand, VeriStand, MAX etc.)
- **Microsoft Visual Studio** (Visual Basic, Visual C++, Visual C#)
- **Keysight VEE** • **Mathworks Matlab** • **Marvin ATEasy**

As well as various open source environments such as:

- **Sharp Develop** • **Dev-C++**

## Power Supply

Input Voltage Range:	90 - 264VAC
Input Voltage Frequency:	47 to 63Hz
Input Current Rating:	8A 115VAC or 4A 230VAC

Supplied with a 350W DC output power supply with the following capacity:

DC Output	Max Current
+3.3V	20A
+5V	35A
+12V	18A
-12V	2A

Note: Combined 3.3V and 5V current, 35A Maximum.

## Cooling

Airflow:	Bottom intake, top exhaust
Per-slot Cooling Capacity:	25W at 55°C ambient 40W at 40°C ambient
Fans:	2 off 60cfm fans

## Acoustic Emissions

Sound Pressure Level(dBA):	Minimum fan speed: 41.6dB Maximum fan speed: 47.3dB
Sound Power (dBA):	Minimum fan speed: 51.9dB Maximum fan speed: 55.5dB

## Monitoring

LXI Interface Status LEDs:	Power, Ready, Error, LAN, 100BaseT, 1000BaseT.
Chassis Status LEDs:	Power, Temperature, Fan Speed.
Web Page Monitoring:	Chassis air temperature, Backplane supply voltage levels, Fan speeds.

## LAN Interface

Connector:	RJ45 Connector.
Connection Speed:	1000BaseT interface.
Designed to comply with the LXI Standard Version 1.4	

## Other Connectors

Rear panel Diagnostics Port on 9 pin D connector, front panel Aux connection on USB style connector. Neither connection is intended for normal use, see manual for more information.

## Supporting Documentation

Manuals, drivers and a copy of the short form catalog are stored internally and are accessible through any browser compliant with W3C standards.

## Width and Dimensions

Dimensions:	Width: 280mm (11.02") Height: 177mm (6.97") Depth: 303mm (11.93")
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For rack mounting, recommended to be mounted in 5U to allow free bottom intake of air.

Weight:	5.9kg (13 lbs) without PXI modules
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## Safety, CE & RoHS Compliance

All modules 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 60-102B Chassis also complies with the European Restriction of Hazardous Substances directive (RoHS).

## Product Order Codes

LXI Modular Chassis, 7-Slot:	<b>60-102B-001</b>
Optional 19" rack mounting hardware:	<b>63-102-001</b>

## Latest Details

Please refer to our Web Site for Latest Product Details.

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

## Operating/Storage Conditions

**Operating Conditions** (operating with specified airflow)

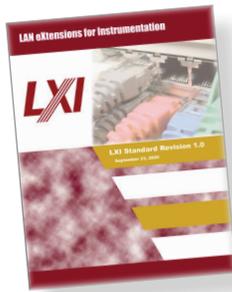
Operating Temperature:	0°C to +55°C
Humidity:	10% to 95% non-condensing

## Storage and Transport Conditions

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

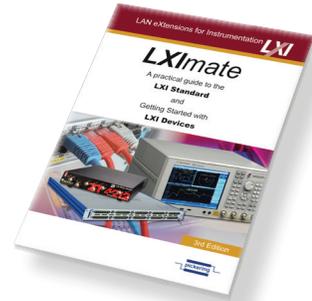


LXI is the standard for Ethernet control of instrumentation. It is the natural successor to GPIB (IEEE-488) incorporating LAN connectivity, full web browser support, IVI drivers and advanced triggering capability.

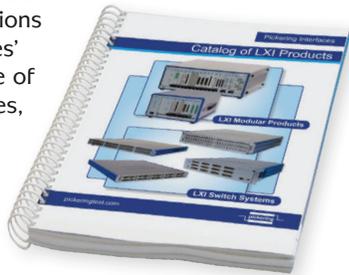


Pickering Interfaces is a Board level member of the LXI Consortium ([www.lxistandard.org](http://www.lxistandard.org)) and together with Agilent Technologies was the first company to release a fully compliant LXI device. Pickering is developing a large range of products conforming to the LXI standard and is constantly introducing new products in response to specific user demand. For further information go to [Pickering's LXI homepage](http://Pickering's LXI homepage).

Pickering Interfaces has published a book, LXImate, which provides an easy to read overview of the LXI Standard. To order your free copy simply go to [www.pickeringtest.com/lximate](http://www.pickeringtest.com/lximate) and request your copy.



Refer to the “**LXI Product Catalog**” for descriptions of Pickering Interfaces’ comprehensive range of LXI switching modules, including Modular Chassis capable of supporting Pickering’s range of PXI switching modules.



The Product Catalog is available on request or can be downloaded from the Pickering website.

Please refer to the Pickering Interfaces “**Connection Solutions**” catalog for the full list of connector/cabling options, including drawings, photos and specifications. This is available in either print or as a download. Alternatively our web site has dynamically linked connector/cabling options, including pricing, for all Pickering modules.



The “**LXI Module Map**” - a simple fold-out selection guide to all Pickering’s LXI Switch Systems including the LXI Modular Chassis.



The “**Cables & Connectors Map**” - outlines the cable and connector options available for all PXI Modules.

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