

- Fully Compliant LXI Interface
- Ethernet 100base T Interface
- Accepts Any Pickering PXI 3U Switching Module
- More Than 500 Switching Modules Available
- Applications From Simple Switching to RF, Microwave and Optical
- Supports 7 User Slots
- Compact Half Rack Width 4U Form Factor
- 350W Industrial Grade Power Supply
- Low Audible Operating Noise
- Support For Selected Instrument Modules
- RoHS Compliant
- 3 Year Warranty



The 60-102 is compliant with the LXI Standard 1.3 and supports Pickering Interfaces 3U PXI switching modules as though they are an LXI compliant device, complete with a driverless soft front panel. The 60-102 supports up to seven 3U modules and is equivalent to an 8 slot PXI chassis.

The chassis allows the majority of the large number of 3U PXI modules from Pickering to be installed and controlled through an Ethernet interface. It is supplied with a built-in generic IVI driver to control the modules in accordance with the LXI specification, but can also be controlled through a kernel driver.

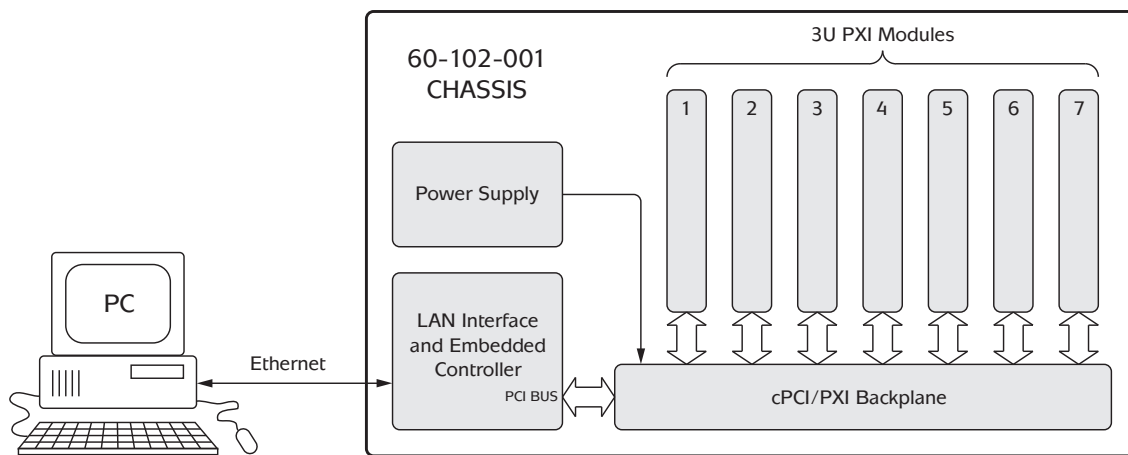
Modules suitable for installation cover a large variety of functions including switches, matrices and multiplexers capable of switching  $\mu$ A up to 40A. RF, microwave and optical switches are supported as well as some instrument functions such as variable resistor modules. For more information on compatible PXI modules, please refer to the 60-102 User Manual.

The Ethernet interface enables the chassis to be controlled through a LAN connection. It allows the remote operation of switching modules over long distances including world wide networks. The separation of the chassis from the controller's PCI bus simplifies power-on sequencing of systems and provides independence from the migration of the Windows and VISA environment.

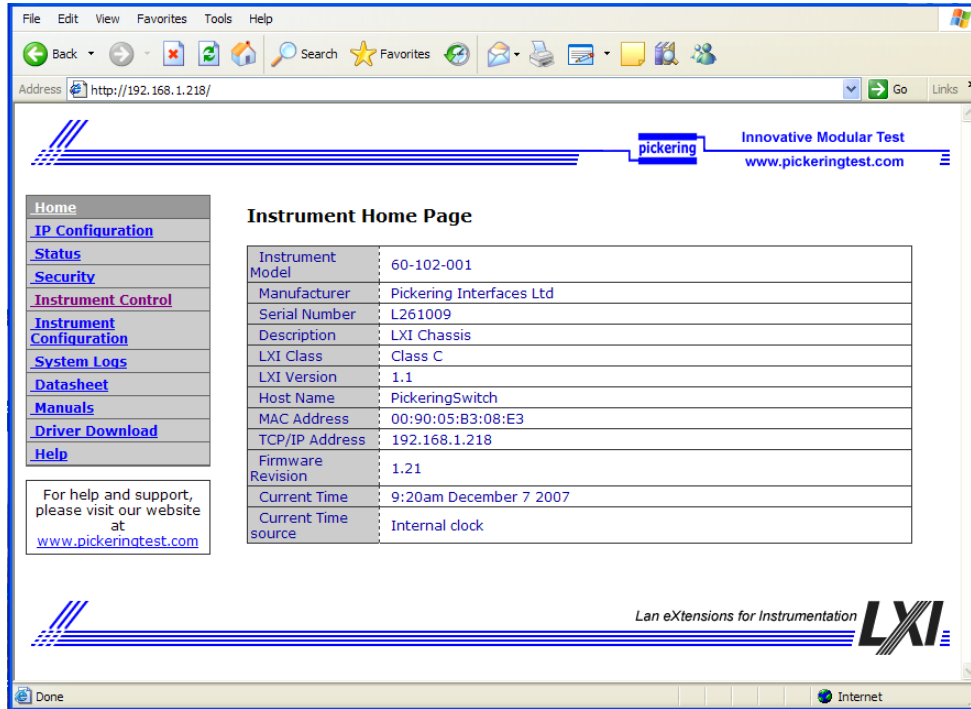
The half rack width and compact 4U height of the 60-102 allows efficient use of space. Two fans insure maximum module cooling and an efficient direct convection design allows operation over an extended temperature range.

Low acoustic emissions make the chassis ideal for noise critical applications such as an office or laboratory. The sound level is dependent upon fan speed which is automatically controlled according to the internal chassis temperature.

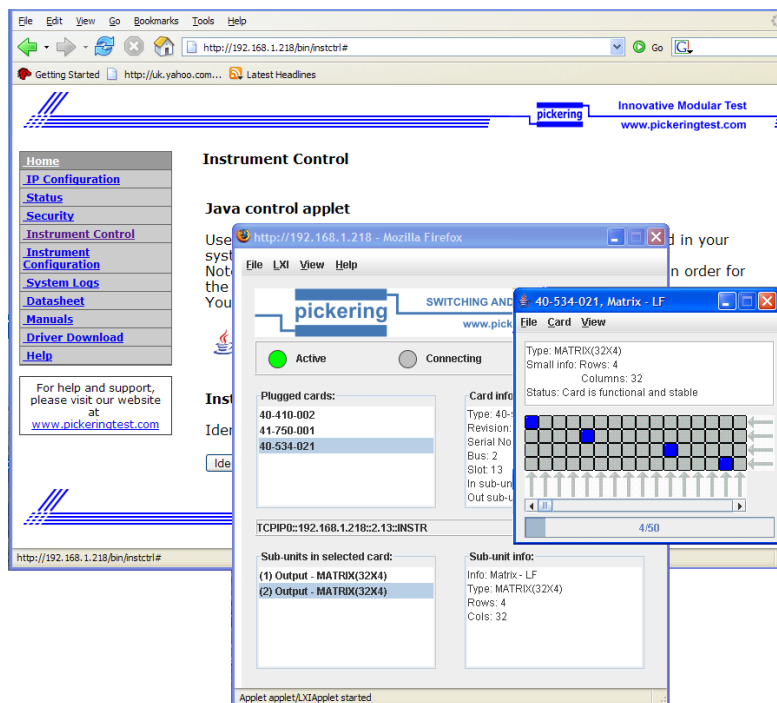
The 60-102 can be configured over its LXI compliant interface using any standard web browser. The interface can be used to load soft front panels for the installed modules so users can manually access them without the need for drivers on the controller.



**Plugging Pickering Interfaces PXI modules into the 60-102 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 60-102 provides fast access to configuration information for The LXI chassis through any web browser.



The 60-102 provides soft front panels to enable manual operation through the web interface, in this example for a 40-534 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.

## Specifications

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 3U Pickering Interface's PXI switching modules. Includes (but not limited to): All 2 & 4 slot 3U BRIC matrices (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:	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 60-102 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: <a href="http://pickeringtest.com">pickeringtest.com</a>	

## Power Supply

Input Voltage Range:	100 - 240VAC
Input Voltage Frequency:	40 to 60Hz
Input Current Rating	8A 115VAC or 4A 230VAC

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

DC Output	+3.3V	+5V	+12V	-12V
Max Current	20A	35A	18A	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 Noise 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, Active Power, Temperature, Fan Speed
Chassis Status LEDs:	Chassis air temperature,
Web Page Monitoring:	Backplane supply voltage levels, Fan speeds

## LAN Interface

Designed to comply with the LXI Standard Version 1.3	
Connector:	RJ45 Connector.
Connection Speed:	100BaseT interface.

## 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
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## Mechanical Specification

Dimensions:	Width: 280mm (11.02") Height: 177mm (6.97") Depth: 303mm (11.93") For rack mounting, recommended to be mounted in 5U to allow free bottom intake of air.
Weight:	5.9kg (13lbs) without PXI modules

## Operating/Storage Conditions

### Operating Conditions

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

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

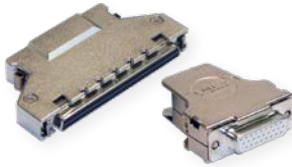
## Product Order Codes

LXI Modular Switching Chassis, 7-Slot	60-102-001
Optional 19" rack mounting hardware*	63-102-001

\* Please refer to the 60-102 User Manual for information on the optional chassis mounting hardware.

## Connectivity Solutions

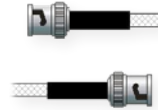
We provide a full range of supporting cable and connector solutions for all our switching products—20 connector families with 1200+ products. We offer everything from simple mating connectors to complex cables assemblies and terminal blocks. All assemblies are manufactured by Pickering and are guaranteed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



Connectors & Backshells



Multiwire 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](http://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 sister company, Pickering Electronics. These instrument grade reed relays feature **SoftCenter®** technology, ensuring long service life and repeatable contact performance.

To learn more, please go to: [pickeringrelay.com](http://pickeringrelay.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: [pickeringtest.com/os](http://pickeringtest.com/os)

The drivers may be used in many commonly used 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++, Visual C#)
- **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](http://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](http://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](http://pickeringtest.com/ebirst)

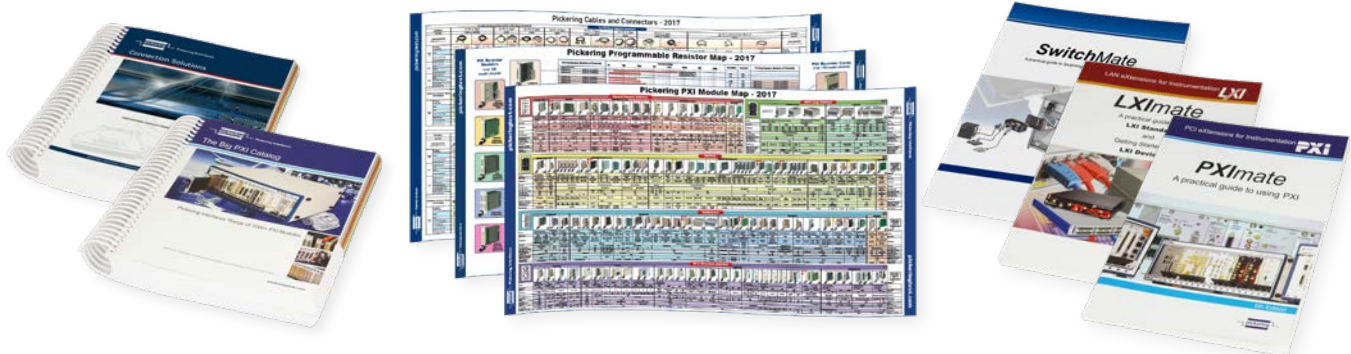


## Three Year Warranty

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

## Available Product Resources

We have a large library of product resources including success stories, product and support videos, articles, as well as complete product catalogs and product reference maps to assist when looking for the switching, simulation and cable and connector 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](http://pickeringtest.com/resources)

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