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GETTING STARTED GUIDE



Issue C, April 2006

pickering

www.pickeringtest.com

ISO 9002
Reg No. FM38792

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HARDWARE SET-UP

Before you begin, take a moment to check your box contents to ensure you have the necessary components present. Contact your local sales office if you find that any part or component is missing.



Your box will contain:

1) An LXI device

2) This document entitled ‘Getting started with your LXI device’.

3) Two 2 metre ethernet patch leads:
One labelled ‘crossover’ and the other ‘straight-through’

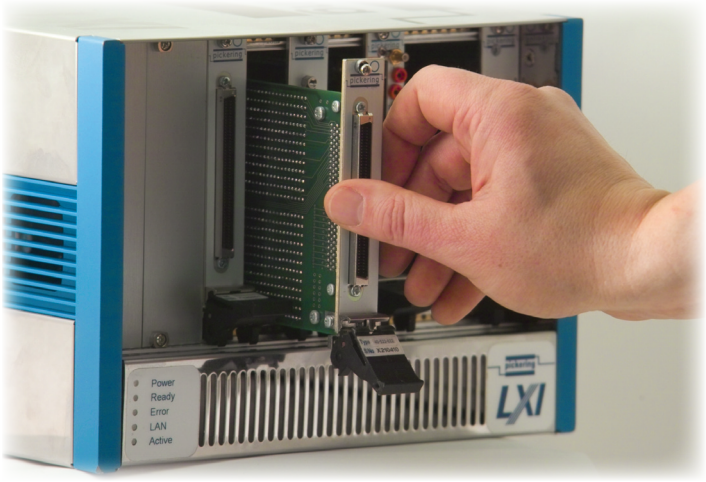
4) A power lead for your territory

5) A driver CD

If you have purchased a 60-100, You may also have a number of additional cards. Check your shipping invoice for details.

Remove your LXI device from its protective packaging.

If the device is a 60-100 LXI chassis, insert your option cards into it now. You may need to remove blanking panels to fit your cards. Retain these panels, as the chassis will not be cooled correctly with a card removed if these are not fitted.



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If you are using an ethernet hub or switch, use the Ethernet cable marked ‘straight-through’. Connect one end to the socket on the back of your LXI device, and the other to a free socket on your hub or switch. If you are connecting directly from your computer to the LXI device, use the Ethernet lead marked ‘crossover’.

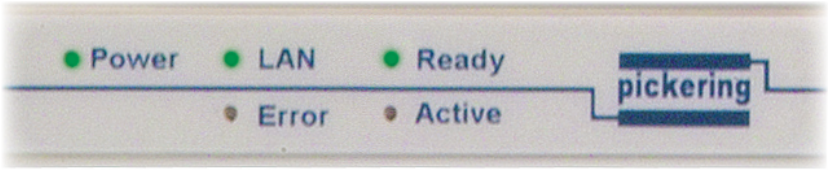




Insert the power lead into the socket on the back of your device and plug the other end into a mains electricity socket. You can now power up the device using the switch on the rear panel next to the mains inlet.



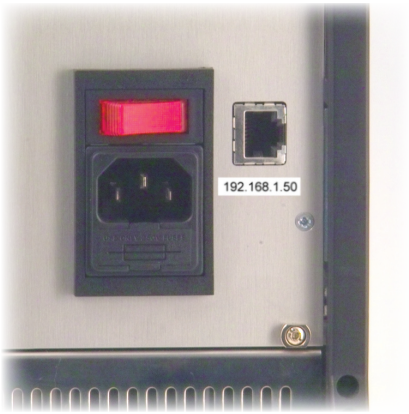
Your device will now start going through its boot up procedure which can take up to twenty seconds to complete. A green ready light should illuminate along with the LAN and power light if everything has worked correctly. If not check your Ethernet connection. If you have an error light proceed to the troubleshooting section of this guide for further assistance.



CONNECTING YOUR LXI INSTRUMENT

Control of the LXI device is through a web server at the devices IP address. From the web server the user can also access drivers, utility programs and documentation. So, it is important to first establish the IP address that your LXI device is using.

By default, Pickering LXI devices are configured using DHCP to acquire a TCP/IP address. By matching the MAC address listed on the rear of the unit, with the lease log on your DHCP server, you can determine your LXI devices address and proceed to configuring your LXI devices settings.



If you do not have a DHCP server, you must ensure that your computer is set to use Auto-IP as its TCP/IP configuration method. This is the default fallback condition under Windows XP if you set your computer for DHCP and it cannot locate a server.

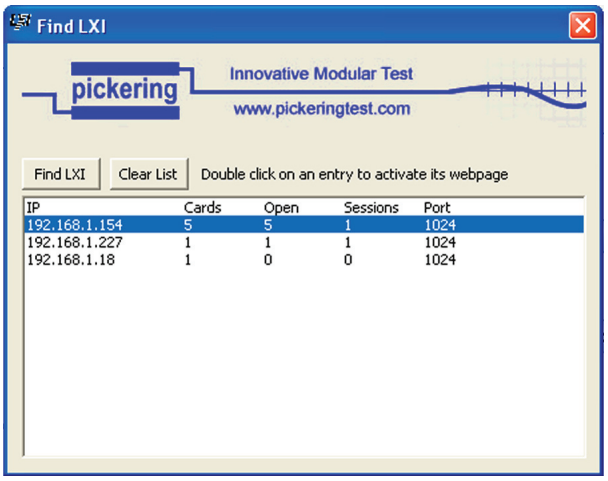
You can then establish your LXI devices TCP/IP address using one of the three following methods:

1) Using the Pickering Discovery tools located on the CD included in your box. These tools can tell you the TCP/IP address your device is using.

lxifind – a simple Windows application which will list all Pickering LXI devices. The home page of an LXI device is displayed when the corresponding IP address is double-clicked.

LXI Discovery Tool - a more capable application (requires .NET framework 2.0)

NOTE: These tools only work if there are Pickering PXI cards fitted into the chassis. If no cards are present then use one of the following utilities:



2) VXI-11 Discovery protocol.

Some tools, for example Agilent IO Library, provide a VXI-11 protocol discovery tool. This may be used to establish the address of any connected LXI compliant device.
A VXI-11 Discovery browser is supplied on the distribution CD and may be used to locate any LXI device, Pickering or otherwise.

3) Bonjour or Rendezvous discovery protocol

By default, Pickering LXI devices have the Bonjour or Rendezvous service switched on, by using a suitable Bonjour client on your computer, you can search for and configure an LXI device without knowing its TCP/IP address beforehand. Use the MAC address on the rear of the device and that present on the LXI devices homepage to confirm you are configuring the correct device if you have more than one LXI device running.
A Rendezvous browser is shipped on the CD.

All the discovery tools are located on the Pickering distribution CD in the LXI Products/Tools directory.

Once you have a valid IP address, you can move on to configuring your LXI devices settings

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CONFIGURING YOUR LXI DEVICES SETTINGS

As you now know your devices TCP/IP address, you can proceed to configure the device to your requirements.

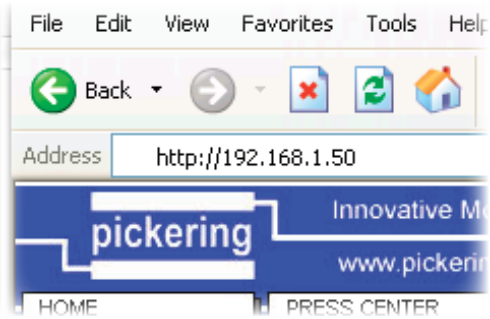
Type your devices IP address into the address bar of your web browser in this format:

http://<IPNUM>

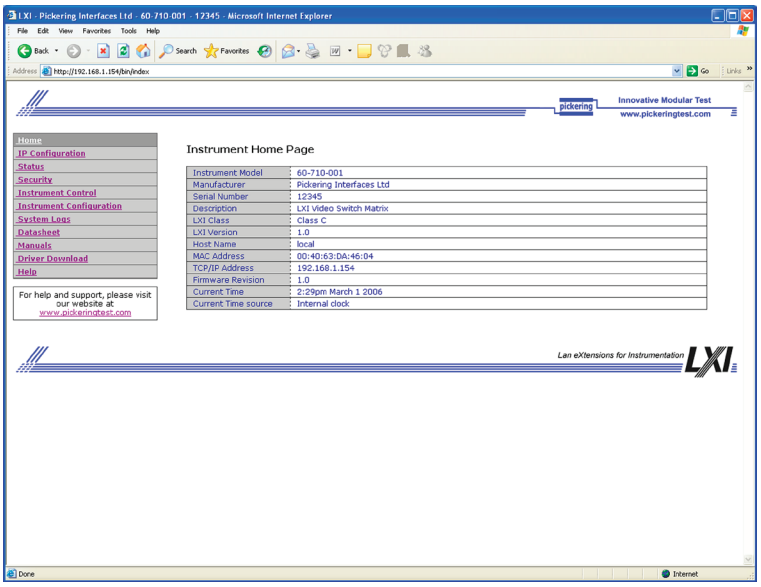
Replacing <IPNUM> with the address your LXI device is currently using.

I.e. if your LXI device has been issued an address of 192.168.1.50, then type the following into your browser address bar:

http://192.168.1.50



You will now be presented with your LXI devices embedded homepage. This page lists the devices settings, LXI class and model number. Use the MAC address listed on this page and that on the rear of your device to confirm you are configuring the correct device if you have more than one.



Clicking on IP Config will take you through to the main configuration screen for your device. It is here that you can set the method the device uses for acquiring a TCP/IP address.

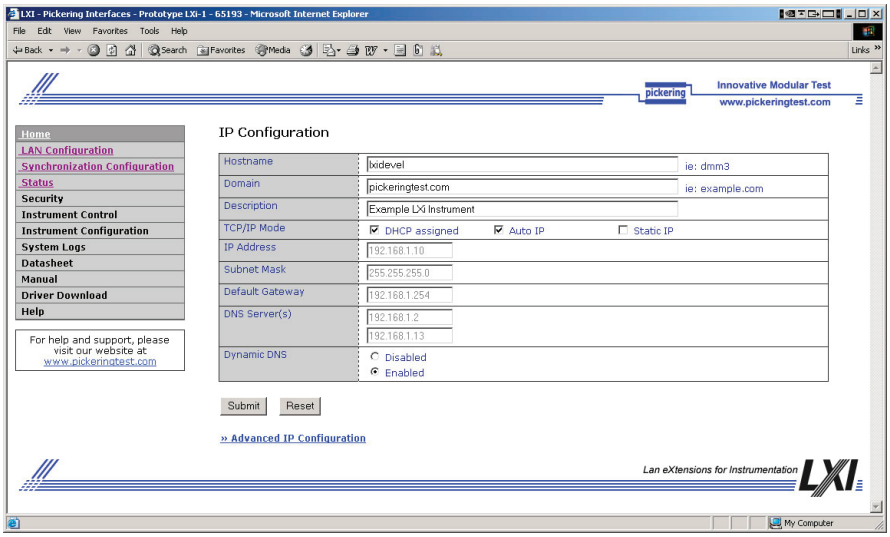
There are three main ways of configuring your LXI devices TCP/IP address:

1) DHCP, a server issues IP addresses from a pool and ensures that no two devices can have the same IP address.

2) Where no DHCP server exists, Auto-IP negotiates with other devices to choose an IP address that does not conflict. This is the default condition a Windows based computer reverts to if it is configured for DHCP but there is no DHCP server present.

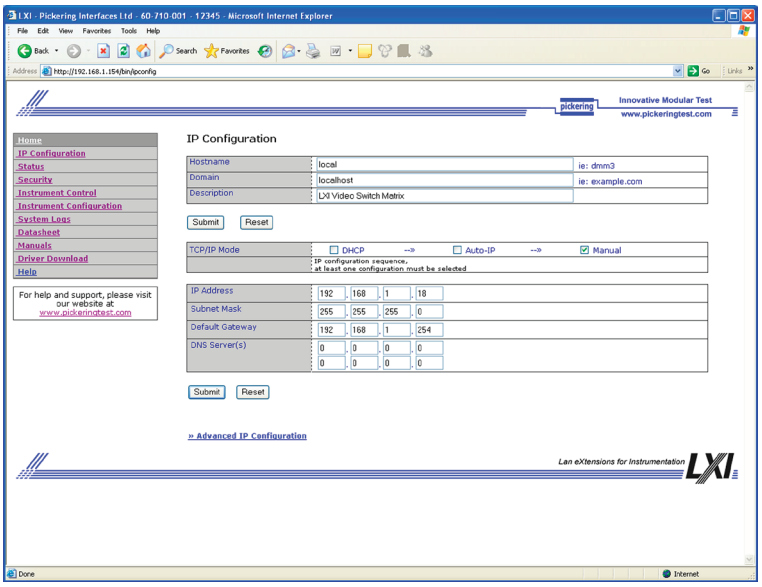
3) Static IP, address settings are manually entered and care must be taken to ensure that the settings chosen do not conflict with other devices present on the network.

4) Contact your network administrator if you are unsure as what these settings should be.



More than one addressing scheme may be enabled if required. By default Pickering LXI devices ship with DHCP and Auto-IP enabled. If the LXI device fails to acquire a TCP/IP address by using DHCP, it reverts to using Auto-IP. This fail over process is designed to ensure you can still communicate with your device in the event of a server failure.

Note that at least one configuration method must be enabled at all times.

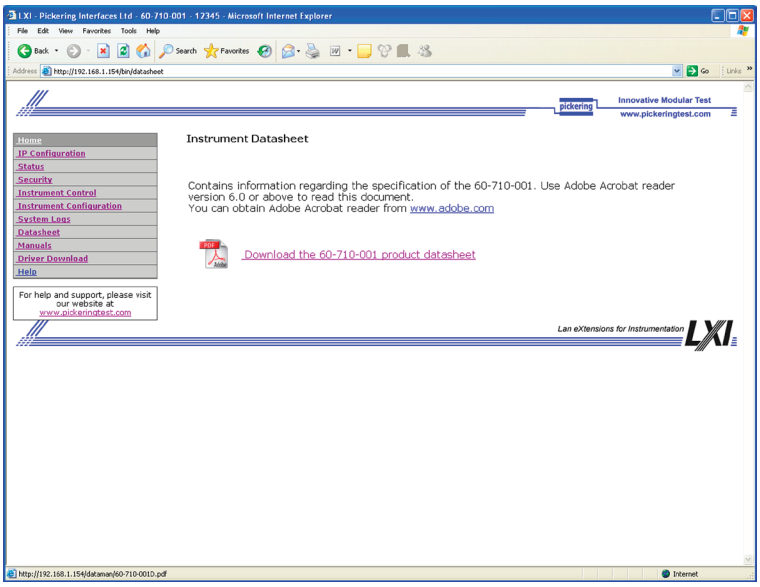


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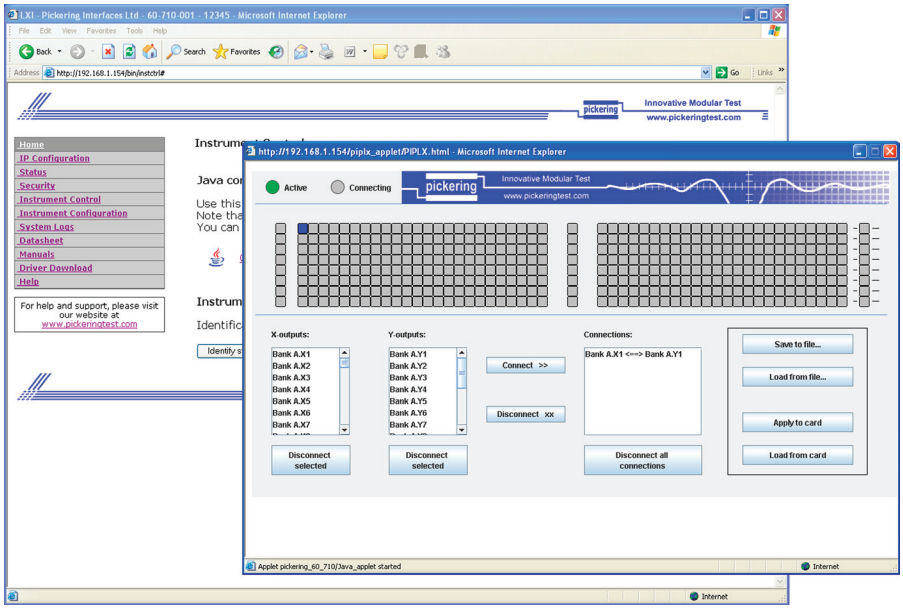
WHERE TO GO FROM HERE

If you have successfully configured a TCP/IP address for your LXI device, you can use the resources built in to your device to do useful work:

Drivers, manuals and datasheets are provided in the devices memory and can be downloaded and viewed at any time. You must have Adobe Acrobat Reader installed to view the embedded documents.



Some LXI devices also have the ability to be controlled from the web using Java Applets. You must have the Java Runtime environment loaded from Sun Microsystems to use this facility.



You driver CD contains useful applications and extended programming manuals. Use this CD for programmer API's and advanced utilities.

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TROUBLESHOOTING

Q I have a power light and a ready light, but the LAN light just flashes.
A You have an IP conflict. That is another device on your network has the same TCP/IP address as your LXI device. Remove the conflict or change the IP address of your LXI device.

Q The LAN light does not light up at all.
A There is a cabling fault. Check your Ethernet lead is of the correct type and is plugged into a working hub or switch. Most hubs and switches have a link indicator to show when the connection is correct.

Q I have a red error light, but the ready and power lights are on.
A Most likely cause is in LXI Chassis devices, where the peripheral cards have not been installed. Power down your LXI device and install some cards.

Q I have only a red error and power light on.
A There is a hardware fault with your device, contact your local sales office.

Q How do I know when I can begin communicating with my device.
A The LXI devices have a ready and active light that indicate its current activity. Whenever the active light is illuminated, the system is busy and may not be able to process other commands. This will normally occur when a TCP/IP configuration change has occurred.

Q My LXI device's lights are all on, or flash wildly.
A The system is booting up, these sequences are used to monitor the LXI devices boot progress as an aid to fault finding. Until the devices Ready light is illuminated green, you should not attempt to communicate with the device.

Q All of my devices lights are on, and I never see a Green ready light even after a few minutes.
A Your device has a fault, contact your local sales office.

Please contact your local Pickering Interfaces sales office for any further support or email:
Lxisupport@pickeringtest.com

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