

# Keysight E5818A LXI Class-B Trigger Box



Quick Start  
Guide



NOTICE: This document contains references to Agilent Technologies. Agilent's former Test and Measurement business has become Keysight Technologies. For more information, go to [www.keysight.com](http://www.keysight.com).



## Safety Information

Use the product only as specified by the manufacturer. Do not install substitute parts or perform any unauthorized modification to the product. Return the product to Keysight Technologies or a designated Keysight Service Center to ensure that safety features are maintained.

The Keysight E5818A LXI Class-B Trigger Box complies with the following safety and EMC requirements:

- IEC 61010-1:2001/EN 61010-1:2001
- CAN/CSA-C22.2 No. 61010-1-04
- IEC 61326-2002/EN 61326:1997+A1:1998+A3:2003

### Safety Terms













#### WARNING

A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a **WARNING** notice until the indicated conditions are fully understood and met.

#### CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

### Safety Symbols

	Direct current
	Alternating current
	Both direct and alternating current
	Three-phase alternating current
	Earth (ground) terminal
	Protective conductor terminal
	Frame or chassis terminal
	Equipotentiality
	Equipment protected throughout by double insulation or reinforced insulation
	Caution, risk of electric shock
	Caution, risk of danger (refer to the manual for specific Warning or Caution information)
	Caution, hot surface

## WARNING

- **Ground the equipment.** For Safety Class 1 equipment (equipment having a protective earth terminal), an uninterruptible safety earth ground must be provided from the mains power source to the product input wiring terminals or supplied power cable.
  - **DO NOT operate the product in an explosive atmosphere or in the presence of flammable gases or fumes.** For continued protection against fire, replace the line fuse(s) only with fuse(s) of the same voltage and current rating and type. DO NOT use repaired fuses or short-circuited fuse holders.
  - **Keep away from live circuits.** Operating personnel must not remove equipment covers or shields. Procedures involving the removal of covers or shields are for use by service-trained personnel only. Under certain conditions, dangerous voltages may exist even with the equipment switched off. To avoid dangerous electrical shock, DO NOT perform procedures involving cover or shield removal unless you are qualified to do so.
  - **DO NOT operate damaged equipment.** Whenever it is possible that the safety protection features built into this product have been impaired, either through physical damage, excessive moisture, or any other reason, REMOVE POWER and do not use the product until safe operation can be verified by service-trained personnel. If necessary, return the product to Keysight for service and repair to ensure that safety features are maintained.
  - **DO NOT service or adjust alone.** Do not attempt internal service or adjustment unless another person, capable of rendering first aid and resuscitation, is present.
  - **DO NOT substitute parts or modify equipment.** Because of the danger of introducing additional hazards, do not install substitute parts or perform any unauthorized modification to the product. Return the product to Keysight for service and repair to ensure that safety features are maintained.
- 

## CAUTION

- Use the device with the cables provided.
  - Repair or service that is not covered in this manual should only be performed by qualified personnels.
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## Regulatory Markings



The CE mark shows that the product complies with all the relevant European Legal Directives.

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ICES/NMB-001

ICES/NMB-001 indicates that this ISM device complies with Canadian ICES-001.  
Cet appareil ISM est conforme à la norme NMB-001 du Canada.



The CSA mark is a registered trademark of the Canadian Standards Association. A CSA mark with the indicators “C” and “US” means that the product is certified for both the U.S. and Canadian markets, to the applicable American and Canadian standards.



The C-tick mark is a registered trademark of the Spectrum Management Agency of Australia. This signifies compliance with the Australian EMC Framework regulations under the terms of the Radio Communications Act of 1992.



This product complies with the WEEE Directive (2002/96/EC) marking requirement. The affixed product label indicates that you must not discard this electrical/electronic product in domestic household waste.

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## Additional Safety Information

For further information, refer to “Safety Notices” section in the *Keysight E5818A LXI Class-B Trigger Box User’s Guide*.



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## Introduction

The Keysight E5818 LXI Class-B Trigger Box is a device handling the IEEE1588 PTP synchronization over the ethernet and managing the precision trigger control signals to the legacy instrument that are not in compliance with LXI standards.

Use Steps 1, 2, 3 and 5 to install and configure the E5818 LXI Class-B Trigger Box via the *E5818 Web Access*. If you want to program the E5818 using your PC or you want to use the Keysight IO Libraries (VISA, VISA COM, and SICL), do Steps 1, 2, 3 and 4.

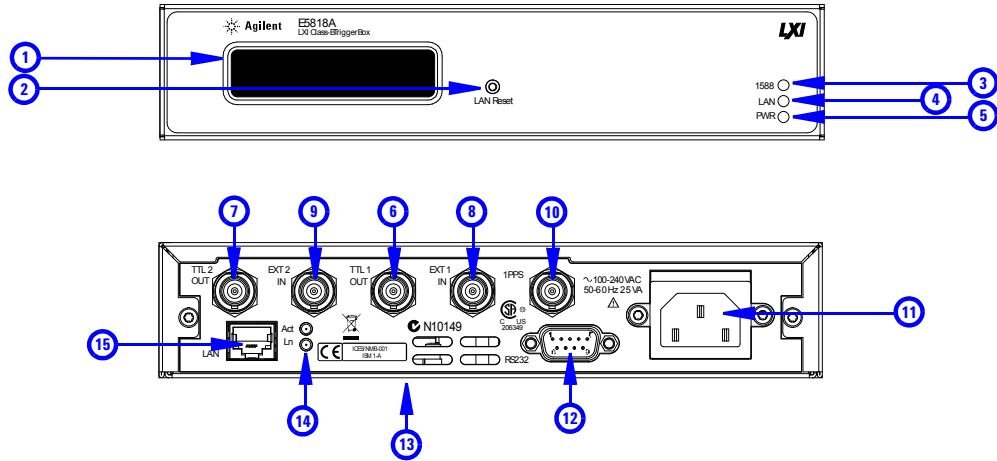
### NOTE

If you have difficulty installing the E5818, see [“Troubleshooting Information” on page 27](#). For additional information on any of the steps on this guide, see *Keysight E5818A LXI Class-B Trigger Box User’s Guide*.

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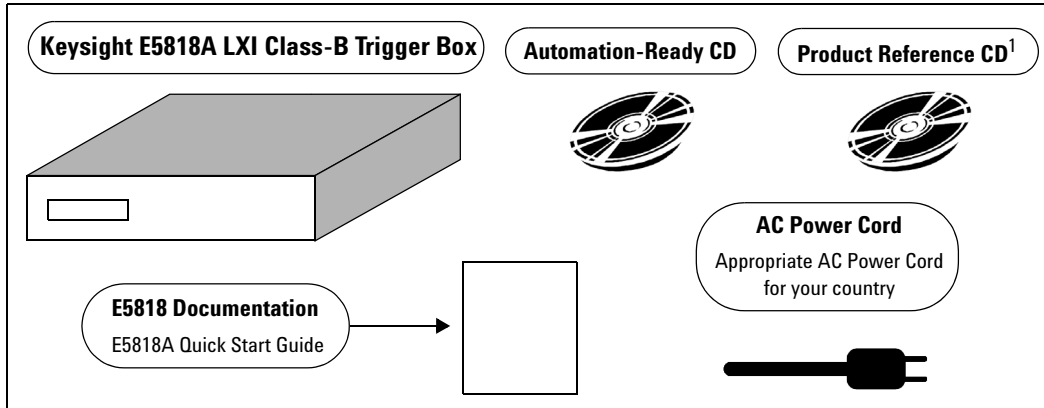
## Front and Rear Panel Displays



No.	Descriptions	No.	Descriptions
1	16-character two-line display	9	EXT2 - Time stamp input signal for connected instrument (port 2)
2	LAN Reset button resets all LAN configuration parameters to their factory default values	10	1PPS - 1 pulse per second output signal at 25 % duty cycle; subject to LVTTTL output level
3	1588 LED shows the status of the 1588 clock	11	PWR Port
4	LAN LED shows the LAN connection status	12	RS232 Port
5	PWR LED - ON (green) shows that AC power is applied to the E5818	13	Serial Number and Ethernet Address are printed on a label on the underside of the E5818
6	TTL1 - Trigger output signal for connected instrument; subject to LVTTTL voltage level (port 1)	14	LAN Activity Lights <ul style="list-style-type: none"> <li>Green Ln light ON - The E5818 is successfully connected to the LAN.</li> <li>Green Act light flashes - The E5818 is transmitting data onto the LAN</li> </ul>
7	TTL2 - Trigger output signal for connected instrument; subject to LVTTTL voltage level (port 2)	15	LAN Port
8	EXT1 - Time stamp input signal for connected instrument (port 1)		

# 1 Before You Connect the E5818

**Check Your Shipment Items** Verify that you received the following items in your shipment of the E5818A LXI Class-B Trigger Box:



- Keysight E5818A LXI Class-B Trigger Box
- Keysight Automation-Ready CD with Keysight IO Libraries Suite
- Keysight E5818A LXI Class-B Trigger Box Product Reference CD
- Keysight E5818A LXI Class-B Trigger Box Quick Start Guide
- Power Cord

<sup>1</sup> The *Product Reference CD* contains the Keysight E5818 IVI Driver, Keysight E5818A LXI Class-B Trigger Box User's Guide (English & Japanese), Quick Start Guide (English & Japanese), Programming Guide and Rack Mount Installation Notes.

If any item is missing or damaged, contact Keysight Technologies. See [“The E5818 Documentation/Support”](#) on page 28 for telephone and Web contact information.

**Check Your PC/Web Browser.** The E5818 is supported only on Windows 2000/XP. To communicate with the E5818 from your Web browser, you will need Internet Explorer 6.0 or higher or Firefox 2.0 or higher.

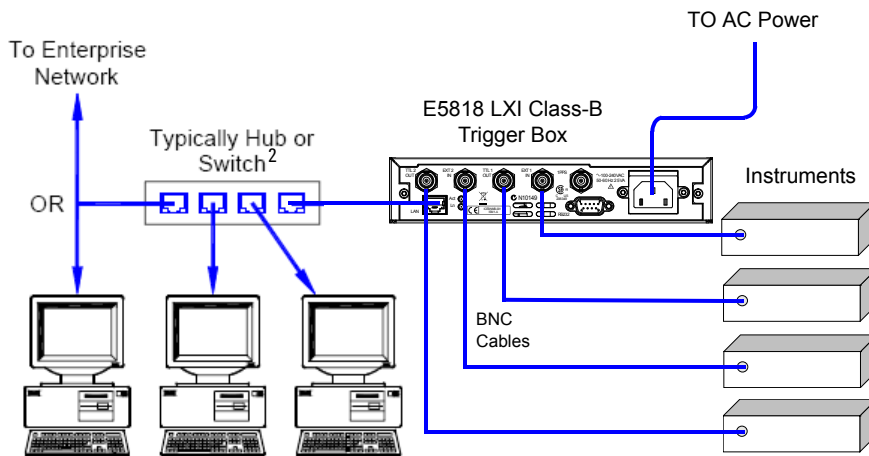
**Rack-Mount the E5818 (Optional).** You can rack mount the E5818 in a standard EIA rack using the E5810-00100/E5818-00202 Rack Mount Kit (or equivalent). The E5818 is one standard rack unit high. See the E5810-00100/E5818-00202 Rack Mount Kit for instructions.

## 2 Connecting and Setting Up the E5818

**Step 1 Connect the E5818 to the Network and to Instruments.** Figure 1 shows typical network and instrument connections for the E5818. Make connections as required for your application. See the *Keysight E5818A LXI Class-B Trigger Box User's Guide* for detailed connections.

### NOTE

Before making any Enterprise (corporate) network connections, contact your Information Technology (IT) department for policies concerning user connections, IP addresses, and so forth. See “3 Contacting Your IT Department” on page 10 for suggested actions.



**Figure 1** Connecting the E5818 to the Network and to Instruments

**Step 2 Apply Power to the E5818.** Plug the E5818 power cord into the E5818 power socket. Then, plug the cord into an AC outlet. On the front panel display, observe the **PWR** LED lights on followed by **LAN** LED and finally the **1588** LED lights on. The LCD display will indicate the IP address, 1588 state and TAI value of the E5818 trigger box. After an initial setup period, the E5818 IP address and hostname (if recognized) should appear on the display. If the IP address does not appear, see “[Troubleshooting Information](#)” on page 27. For LED indication information, see “[Check Display/LEDs.](#)” on page 27.

<sup>2</sup> It is recommended to use IEEE 1588 V2 transparent clock or boundary clock within an IEEE 1588 enabled network.

### 3 Contacting Your IT Department

**Before You Connect the E5818.** Before you connect your E5818 to an Enterprise (Corporate) network, you will need to get some network configuration and network addressing parameters from the System Administrator in your Information Technology (IT) department. Copy the E5818 Serial Number and Ethernet (MAC) address (located on the underside of the E5818) in the space provided on the following *E5818 Network Information Form*.

E5818 LXI Class-B Trigger Box Information	
<b>E5818 General Information (Completed by E5818 User)</b>	
<i>(Serial Number and Ethernet (MAC) Hardware Address are the on label on underside of the E5818)</i>	
Serial Number:	_____
Ethernet (MAC) Hardware Address:	_____
Default Values (for IT Department):	DHCP: Enabled at power-on Hostname: No hostname configured

**Ask Your IT Department for Network Configuration Information.** After you enter the E5818 Serial Number and Hardware Address, copy this page and provide the copy to your IT department. Tell your system administrator you want to add a new device (the E5818) to the network that will provide remote access for LXI instruments and ask him/her to provide the applicable network information on the *E5818 Network Information Form*. Ask them to answer the following questions and return the completed form to you.

**NOTE**

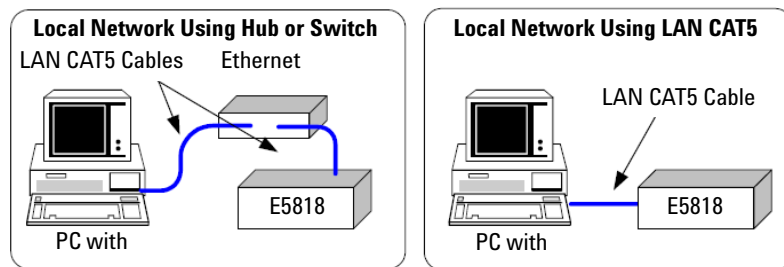
If the Enterprise network does not support DHCP, see [“6 Accessing the E5818 via Web Browser” on page 23](#) to configure the E5818 using a Local network.

Enterprise Network Information (Completed by System Administrator)	
Does the network support DHCP?	Yes ___ No ___
If <b>No</b> , provide:	IP Address (manual): _____
	Subnet Mask: _____
	Gateway IP Address: _____
Does the network support Static DNS?	Yes ___ No ___
If <b>Yes</b> , provide:	E5818 Hostname: _____
Does the network support DNS?	Yes ___ No ___
If <b>Yes</b> , provide:	DNS Server (IP Address): _____

## 4 Setting Up the E5818 Using Local Network

**Introduction.** If your Enterprise (corporate) network does not support DHCP, when the E5818 is connected to the network, (assuming the E5818 default manual IP Address is 169.254.58.18) the E5818 will use its default manual IP address (169.254.58.18), which may not be valid on the network. In this case, you must use a Local network (Isolated LAN) to configure the E5818 for correct operation on the Enterprise network.

**Setting Up a Local Network.** A Local network consists of a computer with an Ethernet port and an E5818. Two example configurations are shown in **Figure 2** below:



**Figure 2** Setting Up a Local Network

**Configuring the E5818.** To configure the E5818 using your Web browser:

- 1 Start your Web browser and type in the E5818 IP Address.
- 2 Click the **View and Modify LAN Configuration** icon to display the *Current LAN Configuration of E5818 Trigger Box* page.
- 3 Click **Modify Configuration**, enter the E5818 password (default is **changeme**) and click **Submit** to show the *Configuring E5818 Trigger Box (LAN Configuration)* page.
- 4 Set DHCP OFF, Auto-IP OFF, Manual IP ON, update the manual IP address, subnet mask, and default gateway parameters provided by your System Administrator.
- 5 If you are using DNS, enter the IP Address of the Domain Name Server and hostname provided by your System Administrator.
- 6 Click **Save** to save changes and then click **Reboot E5818** to reboot the E5818 and have the changes take effect.
- 7 Disconnect the E5818 from the Local network and connect the E5818 to the Enterprise network.

## 5 Programming the E5818

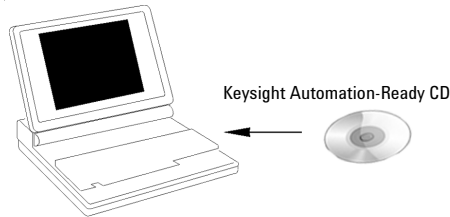
This step gives guidelines to install Keysight IO Libraries Suite (version 14.2 or higher) on a PC with Windows 2000/XP/Vista, and to configure for VISA LAN Client (remote interface) operation.

### A) Installing Keysight IO Libraries Suite

#### NOTE

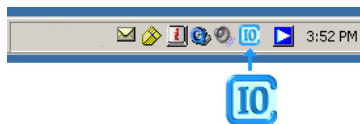
If you only want to use your Web browser to access the E5818, and do not want to program your instruments or to run application software that requires the Keysight IO Libraries Suite, skip this step.

**Insert the CD.** Turn on your PC and insert the *Automation-Ready CD* with Keysight IO Libraries Suite into the CD-ROM drive. If the auto-run window does not appear automatically, go to **Start > Run** then type `<drive>:autorun\auto.exe`, where `<drive>` is your CD drive letter.



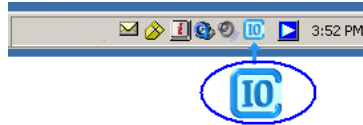
**Install the Libraries.** When the *Keysight IO Libraries Suite* window appears, follow the on-screen instructions to install the libraries. Check the box to run *Keysight Connection Expert* when installation is complete.

**Look for Circled IO Icon.** After the libraries are installed, an IO icon is displayed on the Windows Notification Area on the bottom-right corner of the screen. You can click the icon to manually run IO configuration utilities and to display online documentation. It is not necessary to use the icon at this time.



## B) Run Keysight Connection Expert

Click the **Keysight IO Control** icon in your Microsoft notification area,



and select **Keysight Connection Expert**, or click **Refresh All** in the explorer pane if Connection Expert is already running.

## C) Add a LAN interface

One LAN interface labeled LAN (TCPIP0) appears in the explorer pane by default. If there is not a LAN interface available, or you wish to connect different instruments via LAN with different connection parameters (such as different connect timeouts), then take the following steps:

- 1 Click **Add Interface** on the *Connection Expert toolbar* to create an additional LAN interface.
- 2 When the *Manually Add an Interface* box appears with LAN interface highlighted, click **Add**.
- 3 When the *LAN Interface configuration* box appears, modify the properties as desired, then click **OK**.

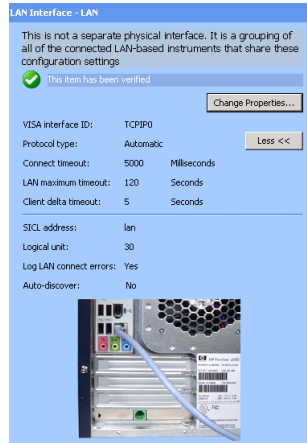
### NOTE

The required Auto-discover setting for LAN interfaces is off. To prevent disrupting your network traffic, Connection Expert does not automatically query each bus on the LAN to detect the presence of new devices.

## D) Configure a LAN Interface

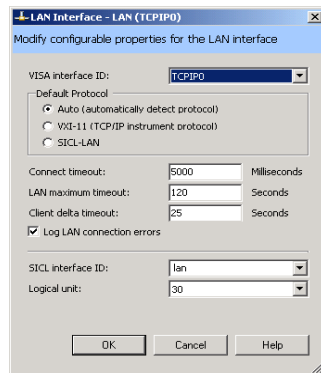
When you select a *LAN interface* in the explorer pane, the properties pane displays the current properties for that interface. The properties that you are most likely to need are displayed at the top of the properties pane. If you see a button labeled “More >>”, you may click it to see additional properties, as shown in [Figure 3](#).

- 1 Click **More** to view the full property list.



**Figure 3** LAN Interface Properties Pane

- 2 Select a LAN interface in the explorer pane. Click the **Change Properties...** button in the properties pane. The *LAN Interface* dialog box appears, as shown in [Figure 4](#).



**Figure 4** LAN Interface Configuration Dialog Box



**3** Change the properties and click **OK**. Your changes will appear in the properties pane.

**VISA Interface ID.** A symbolic name that is used to uniquely identify this interface. The VISA interface ID combines the interface type and a numeric identifier. For example, TCPIP0 is the default VISA interface ID for a TCPIP interface.

**Protocol type.** The protocol type to be used with the LAN client software on this PC. The Keysight IO Libraries Suite supports three protocol choices: Automatic (automatically detect protocol), VXI- 11 (TCP/IP Instrument protocol), and SICL- LAN protocol.

**Default selection:** Automatic.

**Connect timeout.** The time, in milliseconds, that the PC will wait when attempting to connect to a LAN instrument.

**Default value:** 5000 milliseconds

**LAN maximum timeout:** The actual timeout value used when a test program specifies a timeout value of infinity.

**Default value:** 120 seconds

**Client delta timeout.** The incremental time that is added to the timeout value specified in a test program to allow for the additional time required to transfer information over a LAN connection.

**Default value:** 25 seconds

**SICL interface ID.** The unique name that SICL programs use to identify this interface.

**Logical unit.** A number used to uniquely identify an interface in Keysight VEE and SICL applications. The logical unit number is an integer in the range of 0 - 99.

## NOTE

The logical unit may be used in place of the SICL interface ID in Keysight VEE and SICL applications. The logical unit is not used by VISA.

**Log LAN connect errors.** You can set Connection Expert to log LAN connection error information in your Windows Event Viewer or Event Log.

**Default setting:** Yes

**Auto-discover.** Auto-discover is not shown in the Change Properties dialog box, because it is required to be Off (No) for a LAN interface.

## E) Add and Configure the E5818

When an instrument resides on your local area network (LAN), there are several ways to add the instrument to your test system configuration. You may also use any of these methods to make a change to an existing instrument.

### NOTE

Connection Expert only discovers LAN instruments automatically in your local subnet to prevent disrupting your network traffic. In practical terms, your local subnet is defined as being on your side of the nearest router. To communicate with LAN instruments that are *remote* (on the other side of the router), you must be able to specify a Hostname or IP address in the LAN Instrument dialog box.

**Connecting the E5818 on Your LAN Local Subnet** When the E5818 is on your LAN local subnet, the easiest way to add the instrument is to request that Connection Expert discover the instrument. This eliminates the need to specify the IP address or the instrument hostname.

**Connecting the E5818 Outside Your LAN Local Subnet** When the E5818 resides outside your LAN local subnet, you may specify the instrument by either the IP address or the instrument hostname.

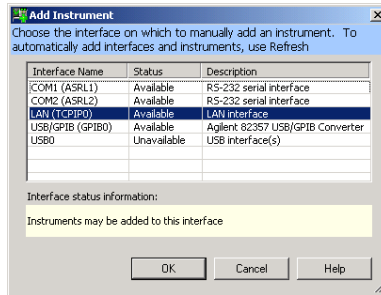
Connection Expert can discover any server on the local subnet that uses either the VXI-11 or the SICL-LAN protocol.

After Connection Expert discovers a remote instrument on the LAN, it performs the same bus addressing procedures as it would for a local instrument. If Connection Expert can open a connection to an instrument, it considers that the instrument has been “discovered” (even though Connection Expert does not send or receive any information).

To discover the E5818 on your local subnet,

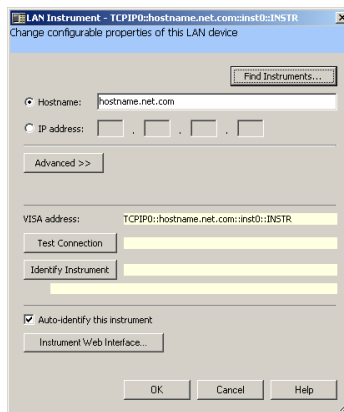
- 1 Select the *LAN interface node* in the explorer pane, **LAN (TCPIP0)** for this example. Right-click to get a menu. Then click **Add Instrument**. (Alternatively, you could click the

Add Instrument button on the toolbar, the Task Guide, or the I/O Configuration menu.) The *Add Instrument* dialog box appears, as shown in [Figure 5](#).



**Figure 5** The Add Instrument Dialog Box

2 Leaving the LAN interface selected, click **OK**. The *LAN instrument configuration* dialog box appears, as shown in [Figure 6](#).



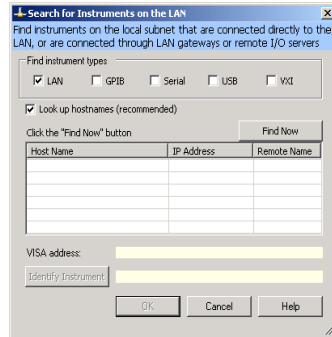
**Figure 6** LAN Instrument Configuration Dialog Box

Click **Find Instruments...**

## NOTE

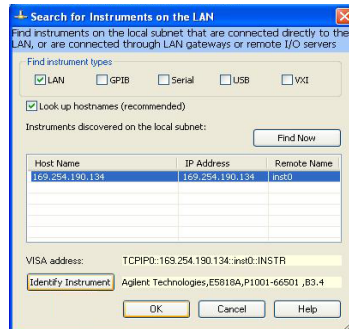
*Find Instruments...* only searches in your local subnet. In practical terms, your local subnet is defined as instruments on your side of the nearest router. To communicate with LAN instruments that are remote (on the other side of the router), you must be able to specify a Hostname or IP address in the LAN Instrument dialog box above.

- 3 When the *Search for instruments on the LAN* dialog box appears (as shown in [Figure 7](#)), leave **LAN** selected, and click **Find Now**.



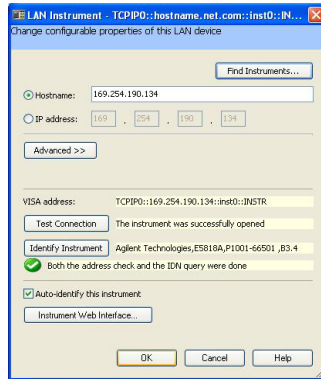
**Figure 7** Search for Instruments on the LAN Dialog Box

- 4 When the E5818 on the subnet are discovered as shown in [Figure 8](#), select the one of interest, click **Identify Instrument** (if desired), then **OK**.



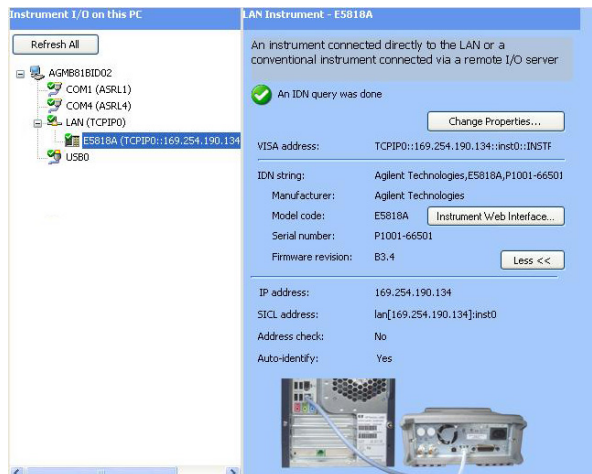
**Figure 8** Discovery of the E5818 on the Subnet

- Click **OK** when you are satisfied that the correct instrument has been located and selected. You now see the *LAN Instrument configuration* dialog box displayed including information from your selected instrument, as shown in **Figure 9**.



**Figure 9** Configuration Properties for Selected Instrument

Automatically, you have the IP address, the Hostname, a default Remote name, the VISA address, a verified test connection. The instrument’s identity has been verified. Click **OK** to return to the main *Connection Expert* window. Now you see the E5818 added to the explorer pane and its properties enumerated in the properties pane.

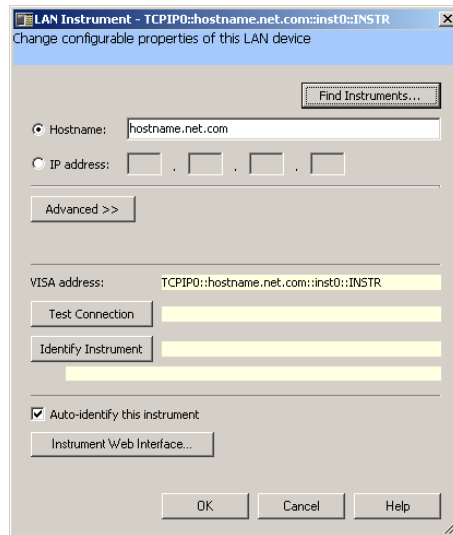


**Figure 10** Newly Added E5818 Trigger Box in Connection Expert

To add the E5818 by specifying the hostname or IP address,

- 1 In the explorer pane, click the **LAN interface node** where you want to add the instrument.
- 2 Right-click the interface node, and select **Add Instrument** from the drop-down menu.
- 3 When the *Add Instrument* dialog box appears with the LAN interface highlighted, click **OK**.
- 4 When the *LAN Instrument configuration* dialog box appears, as shown in **Figure 11** below, select and edit either the IP address or the Hostname. With either choice, you will also need to enter the remote name for the instrument.

*Optional tests:* Click **Test Connection**. Click **Identify Instrument**. Click **OK**.



**Figure 11** Editing Properties in the LAN Instrument Dialog Box

## F) Communicate with Instruments Using Interactive IO

You can use the Interactive IO utility within Connection Expert, or VISA Assistant to verify communication with instruments via the LAN.

This section gives guidelines to communicate with your instruments using Interactive IO.

### NOTE

Communication with installed LAN instruments was established in Run Keysight Connection Expert if the instruments were visible and verified in the Connection Expert explorer view. Therefore, this is an optional step you can use to verify communication with instruments.

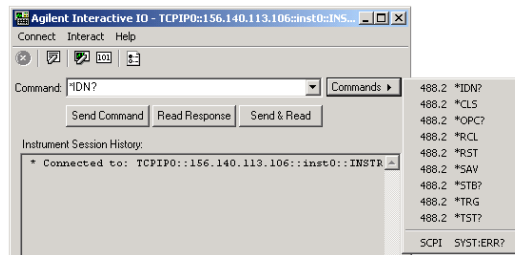
Interactive IO is a software utility that lets you interactively send commands to instruments and see their responses without writing any program code.

You can use Interactive IO to quickly verify connectivity to your instrument, to troubleshoot communication problems, to learn the instrument's command set, and to rapidly prototype commands and check the instrument's responses before writing code.

Start Interactive IO from within Connection Expert, either by clicking the **Send commands to this instrument task** in the task guide, or, on the Connection Expert menu bar, by clicking **Tools > Interactive IO**.

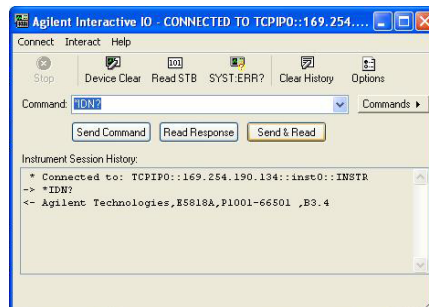
### Example using Interactive IO

- 1 Select the E5818 in the explorer view. Click Tools > Interactive IO. Interactive IO gives you a number of common IEEE 488.2 and SCPI commands for communicating with instruments, as shown in [Figure 12](#) below:



**Figure 12** Common 488.2 and SCPI Commands in Interactive IO

- 2 Open the *Commands* menu and select a command. The example in below ([Figure 13](#)) shows a \*IDN? command selected.



**Figure 13** \*IDN? Command Example in Interactive IO

- 3 Click **Send & Read** to send the command and receive a response. The results are displayed in the *Instrument Session History*.

Alternatively, you can click the **Send Command** and **Read Response** buttons, when you desire, to control the time gap between these commands. Interactive IO has a default timeout value set (5000 ms), which may not be long enough for your particular application. To change that default, go to **Interact > Options**, edit the *Timeout* value, and click **OK**.

## G) Using a Supported Programming Language

To use applications that require the Keysight IO Libraries, you must install and configure the Keysight IO Libraries Suite on each PC to be used for programming. Then, you can program connected instruments using a supported programming language (such as C or Visual Basic) using the Keysight Virtual Instrument Software Architecture (VISA), VISA COM, or Standard Instrument Control Language (SICL). See the *Keysight IO Libraries Suite Getting Started Guide* and *Keysight IO Libraries Suite Online Help* for more information on the Keysight IO Libraries.

For detailed information on SCPI programming of the E5818, see *Keysight E5818A LXI Class-B Trigger Box Programming Guide*.

For detailed information on the IVI Driver, see *Keysight E5818 IVI Driver Helpfile* located in the *Product Reference CD*.



## 6 Accessing the E5818 via Web Browser

Since the E5818 is Web-enabled, you can access and communicate with the E5818 using your Web browser (Internet Explorer 6.0 or higher or Firefox 2.0 or higher).

### A) Configuring Your Web Browser

**Introduction.** The E5818 Internet interface generates Web pages that depend on Javascript and Frames. For best results, you may need to configure the Enable Javascript, Cache and Page Refresh, and Proxies options on your Web browser. See *Keysight E5818A LXI Class-B Trigger Box User's Guide* for steps to set your Web browser.

**Enabling Javascript.** If the E5818 detects that Javascript is not enabled, a dialog box appears on the E5818 *Welcome* page that displays instructions to enable Javascript for Internet Explorer and Firefox.

- **Fix:** *Follow the instructions to enable Javascript. If Javascript is not enabled, you will not be able to use the **View & Modify LAN Config page** or the **View & Modify 1588 Config page** of the interface.*

**Cache and Page Refresh.** Typically, Web browsers cache Web pages to store an image of the Web page locally. When you navigate to an already viewed page, the page is loaded from cache rather than from the network. This is acceptable for "static" Web pages in which information does not change. However, the E5818 uses "dynamic" Web pages in which information can quickly change.

- **Fix:** *To avoid displaying outdated information on the Web pages, the "Check for newer versions of stored pages" (or equivalent) option on your Web browser should be set for "Every visit to the page" (or equivalent).*

**Proxies.** If you are using a proxy server, the Web page may time out, even though the correct IP address or hostname is entered into the Web browser.

- **Fix:** *To correct this problem, the browser must be informed that any requests to the E5818 should not use a proxy. To do this, add the IP address of the E5818 to the list box "Do not use proxy server for addresses beginning with:" (or equivalent).*

## B) Accessing the E5818 via Web Access

To display the E5818 *Welcome* page, open your Web browser and type **http://<E5818 IP Address>** or **http://<E5818 Hostname>** on the address line, where **<E5818 IP Address>** is the IP address of the E5818 and **<E5818 hostname>** is the Hostname of the E5818 (if known). Then, press the **Enter** key.

For example, assume the E5818 IP Address is 169.254.58.18 (the default manual IP address). Typing **http://169.254.58.18** and pressing **Enter** displays the E5818 *Welcome* page.

### NOTE

If the *Welcome* page does not display correctly, you may need to change your Web browser settings. See **"A) Configuring Your Web Browser"** on page 23 for details.

The screenshot shows the Agilent Technologies web interface for the E5818 LXI Class-B Trigger Box. The page title is "E5818 LXI Class-B Trigger Box". The main content area displays "Welcome to your Web-Enabled E5818 Trigger Box" and provides information about the instrument. A sidebar on the left contains navigation icons, with a callout box pointing to "View & Modify LAN Config" and "View & Modify 1588 Config". A callout box on the right points to the "VISA TCP/IP Connect String" field, which contains "TCPIP0:141:163:190:73::inst0:INSTR". Another callout box points to the "Advanced Information about this Web-Enabled E5818 Trigger Box" section, which lists various system details.

Information about this Web-Enabled E5818 Trigger Box:	
Instrument:	Agilent Technologies LXI Class-B Trigger Box
Serial Number:	M/12345678
Description:	Agilent E5818 00:30:c3:0e:0f:2b
Hostname:	a-e5818-45678
IP Address:	141.193.190.73
VISA TCP/IP Connect String:	TCPIP0:141:163:190:73::inst0:INSTR

Advanced Information about this Web-Enabled E5818 Trigger Box:	
Firmware Revision:	B.03.08
Ethernet (MAC) Address:	00:30:c3:0e:0f:2b
LXI Class:	LXI Class B
LXI Version:	LXI Version 1.1
IEEE 1588 PTP Current Time:	SAT JAN 03 00:10:48.223965241 UTC-0900 1970
Auto-MDIX Capable:	True

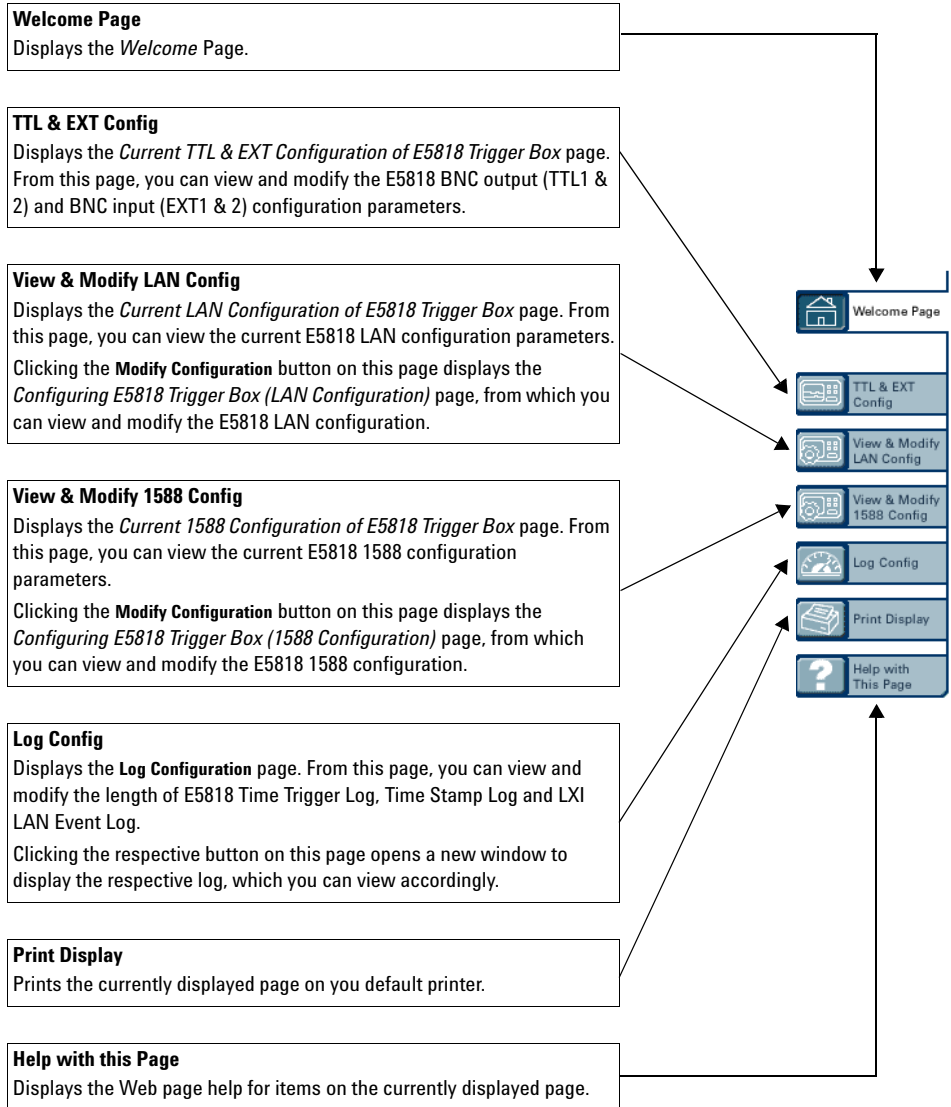
Figure 14 E5818 Welcome Page

**View/Modify Current LAN Configuration (Optional).** To view current configuration settings (and change settings as desired), click the **View & Modify LAN Config** icon and enter the password (the default password is changeme) to display the *Current LAN Configuration of E5818 Trigger Box* page. Click the **Modify Configuration** button to enable you to change settings. After making changes, click **Save** and then **Reboot E5818** to make changes effective.

**View/Modify Current 1588 Configuration (Optional).** To view current configuration settings (and change settings as desired), click the **View & Modify 1588 Config** icon and enter the password (the default password is changeme) to display the *Current 1588 Configuration of E5818 Trigger Box* page. Click the **Modify Configuration** button to enable you to change settings. After making changes, click **Save** and then **Reboot E5818** to make changes effective.

### C) Navigating the E5818 Web Access

Clicking the applicable icon on the navigation bar on the left side of the *E5818 Web Access* page allows you to take the actions shown in **Figure 15** below.



**Figure 15** E5818 Current Settings overview

## Troubleshooting Information

**Introduction.** If you have communication or operation problems with the E5818 LXI Class-B Trigger Box, you can use this information to help you identify the problem and take corrective action. See *Keysight E5818A LXI Class-B Trigger Box User's Guide* for further troubleshooting information.

**Check Display/LEDs.** Check front panel display/LEDs and back panel Ln LED.

Status	Possible Cause(s)	Corrective Action(s)
All LEDs Off	<ul style="list-style-type: none"><li>• NO AC power to the E5818</li></ul>	<ul style="list-style-type: none"><li>• Check AC power connections</li></ul>
PWR On, LAN LED Red (light on)	<ul style="list-style-type: none"><li>• DHCP renewal failure</li><li>• No link integrity</li><li>• Duplicate IP address</li><li>• *TST? execution</li></ul>	<ul style="list-style-type: none"><li>• Re-configure LAN by pressing the <b>LAN Reset</b> button</li><li>• If problem still persists, check the parameters in the <i>Current LAN Configuration of E5818 Trigger Box</i> page</li></ul>
PWR On, LAN LED Green (light on), 1588 LED Red	<ul style="list-style-type: none"><li>• IEEE 1588 protocol not initialized</li></ul>	<ul style="list-style-type: none"><li>• Reboot the E5818 trigger box</li></ul>

**Network Configuration.** Check the network for configuration problems.

Status	Possible Cause(s)	Corrective Action(s)
Cannot access the E5818 Internet Interface	<ul style="list-style-type: none"><li>• Improper network installation</li><li>• Missing/improper Web addresses</li><li>• Improper Web Server settings</li></ul>	<ul style="list-style-type: none"><li>• Check network installation or contact System Administrator</li><li>• See <a href="#">"3 Contacting Your IT Department"</a></li><li>• See <a href="#">"A) Configuring Your Web Browser"</a></li></ul>
No password	<ul style="list-style-type: none"><li>• Unknown or forgotten password</li></ul>	<ul style="list-style-type: none"><li>• Use <b>LAN Reset</b> button to reset to factory default (<b>changeme</b>)</li></ul>

## The E5818 Documentation/Support

**The E5818 Related Documentation.** See the following documents for information related to the E5818. When the Keysight IO Libraries Suite is installed, all documents are available in electronic format by clicking the circled **IO** icon on the Windows Notification Area and selecting **Documentation**.

- *Keysight E5818A LXI Class- B Trigger Box User's Guide* describes the E5818 and provides installation and troubleshooting information.
- *Keysight E5818A LXI Class- B Trigger Box Programming Guide* provides information on SCPI programming of the E5818.
- *Keysight IO Libraries Suite Getting Started Guide* provides a description of the Keysight IO Libraries Suite.
- *Keysight IO Libraries Suite Online Help* provides detailed usage information on the Keysight IO Libraries Suite.
- *Keysight VISA User's Guide* describes the Keysight Virtual Instrument Software Architecture (VISA) library.
- *Keysight SICL User's Guide* describes the Keysight Standard Instrument Control Library (SICL) for Windows.

**The E5818 Support Information.** See the following Web sites or contact Keysight at the number shown.

### Keysight Technologies Telephone Number (Americas Call Center)

Americas Call Center: 1-800-829-4444

### World Wide Web Sites

- |                                                                                            |                                         |
|--------------------------------------------------------------------------------------------|-----------------------------------------|
| <a href="http://www.keysight.com/find/assist">www.keysight.com/find/assist</a>             | Contact information for your country    |
| <a href="http://www.keysight.com/find/e5818a">www.keysight.com/find/e5818a</a>             | For E5818A info/firmware updates        |
| <a href="http://www.keysight.com/find/iolib">www.keysight.com/find/iolib</a>               | To download Keysight IO Libraries Suite |
| <a href="http://www.keysight.com/find/manuals">www.keysight.com/find/manuals</a>           | To access manuals and application notes |
| <a href="http://www.keysight.com/find/connectivity">www.keysight.com/find/connectivity</a> | Connectivity products and resources     |

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

## Contact us

To obtain service, warranty or technical support assistance, contact us at the following phone numbers:

United States:

(tel) 800 829 4444 (fax) 800 829 4433

Canada:

(tel) 877 894 4414 (fax) 800 746 4866

China:

(tel) 800 810 0189 (fax) 800 820 2816

Europe:

(tel) 31 20 547 2111

Japan:

(tel) (81) 426 56 7832 (fax) (81) 426 56 7840

Korea:

(tel) (080) 769 0800 (fax) (080) 769 0900

Latin America:

(tel) (305) 269 7500

Taiwan:

(tel) 0800 047 866 (fax) 0800 286 331

Other Asia Pacific Countries:

(tel) (65) 6375 8100 (fax) (65) 6755 0042

Or visit Keysight worldwide Web at:

[www.keysight.com/find/assist](http://www.keysight.com/find/assist)

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