Agilent 89600B VSA

Software Installation Guide

Agilent Technologies

Notices

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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.

In this book

This book documents how to install the Agilent 89600B VSA software and also documents setting up a floating license server.

The basic steps to install the Agilent 89600B VSA software are:

1. "Setting Up Hardware" on page 9

   This chapter provides PC system requirements and instrument interface requirements. If you are installing the VSA software in an instrument and will not be connecting to external hardware, you can skip this chapter.

2. "Installing 89600B Software" on page 15

   This chapter provides procedures for installing the 89600B VSA software in a PC, an Agilent X-Series Signal Analyzer, an Agilent Infiniium XP Scope, and an Agilent Logic Analyzer.

3. "Installing Licenses" on page 27

   This chapter provides procedures for installing trial, PC/instrument, and floating licenses.

4. "Configuring IO Interfaces" on page 43

   This chapter provides instructions for configuring your computer to communicate with instruments via IEEE-1394, LAN, USB/GPIB, USB, or GPIB interfaces. If your instrument is one of the following, skip this chapter and follow the instructions specific for your instrument:

   "Configuring Infiniium Windows XP Scopes" on page 59

   "Configuring Agilent N7100 Series" on page 71

   "Configuring Logic Analyzers" on page 87

The steps for setting up a license server are in "Setting Up a Floating License Server" on page 105.

This book does not contain operating information. All operating information is contained in the 89600B online help.

Other documentation

In addition to the Installation Guide (this book), the following documentation also comes with your software:

- 89600B Online Help is available after you install the software on your computer. The help includes reference information and tutorials on making several kinds of measurements.

- An online version of this Installation Guide (InstallationGuide.pdf) is available at `C:\Program Files\Agilent\89600B VSA` *xx.y*`\89601B VSA\Help` (where *xx.y* is the VSA version number) after you install the software on your computer.

- The complete documentation (PDF files) for the Agilent IO libraries is located in `C:\Program Files\Agilent\IO Libraries Suite\Manuals` (if you install the IO libraries).

- Technical Specifications are available from the 89600B web page: http://www.agilent.com/find/89601B.

Independent operation of the Agilent 89605, 89606, E2730, and E2731 modules is not supported at this time.

To read the PDF files, you must have Acrobat® Reader installed on your computer. You can install this application from the 89600B Installation DVD.

Contents

1 Setting Up Hardware

Introduction

This chapter provides PC system requirements and instrument interface requirements. If required, install interface cards, configure the instrument interfaces, and connect the instruments to your PC. If you are installing the VSA software in an instrument and will not be connecting to external hardware, you can skip this chapter.

After your PC and instrument interfaces are set up, the basic steps to install and setup the 89600B VSA are:

1. **Install the software**
   See "Installing 89600B Software" on page 15.

2. **License the software**
   See "Installing Licenses" on page 27.

3. **Configure IO interfaces**
   See "Configuring IO Interfaces" on page 43.

4. **Calibrate the analyzer**
   Before making measurements, you should calibrate (or align) your measurement hardware to optimize measurement accuracy. Refer to the 89600B online help for details on calibration for your VSA configuration.

System Requirements

Be sure your desktop or laptop PC satisfies the following minimum requirements.

Characteristic	Microsoft® Windows®XP Professional SP3	Microsoft Windows 7 Professional, Enterprise, or Ultimate
CPU	600 MHz Pentium or AMD-K6 (≥ 2 GHz recommended)	1 GHz or faster 32-bit (x86) or 64-bit (x64) processor
RAM	512 MB (1 GB recommended)	2 GB recommended (32-bit) / 4 GB recommended (64-bit)
Video RAM	4 MB (16 MB recommended)	128 MB (512 MB recommended)
Hard disk	1 GB available	1 GB available
Additional drives	DVD to load software; license transfer requires network access, USB Flash drive, USB hard drive, or USB DVD drive	DVD to load software; license transfer requires network access, USB Flash drive, USB hard drive, or USB DVD drive
Interface support	LAN, GPIB, USB or IEEE-1394 (only for VXI hardware and 1690 Series Logic Analyzer)	LAN, GPIB, USB, or IEEE-1394 (only for VXI hardware and 1690 Series Logic Analyzer)

Required Instrument Interfaces

Determine what kind of interface is required for your instruments using the following table. Note that you may need to install and configure more than one interface.

Measurement Hardware	Computer Type	Interface
VXI (Agilent 89610, 89611, 89640, 89641)	Laptop or desktop PC	IEEE-1394 VXI to PC
Agilent ESA	Laptop or desktop PC	GPIB, or USB/GPIB adapter
Agilent ESA-E Series Analyzer	Laptop or desktop PC	GPIB or USB/GPIB
Agilent InfiniiVision 6000/7000 Series Oscilloscope	Laptop or desktop PC	LAN, GPIB, or USB/GPIB
Agilent Infiniium Oscilloscope	Laptop or desktop PC or embedded Windows XP scope	LAN, GPIB, USB/GPIB, or internal
Agilent Logic Analyzer	Laptop, desktop PC, or embedded PC	LAN, IEEE-1394 (only for 1690 Series), or internal
Agilent X-Series Signal Analyzer	Laptop, desktop PC, or embedded PC	LAN or internal**
Agilent N4010 Wireless Connectivity Test Set	Laptop or desktop PC	USB, LAN, GPIB, or USB/GPIB
Agilent PSA (used as ADC)*	Laptop or desktop PC	LAN, GPIB, USB, or USB/GPIB*
Agilent N7100 Series Multi-Channel Signal Analysis System (N7109A)	Laptop or desktop PC	LAN

* To use GPIB with the PSA, your PSA firmware must be version A.4.0 or later. With earlier firmware versions, you must use the LAN connection.

** The Agilent X-Series Signal Analyzer embedded PC configuration (89600B analyzer running in the analyzer) only supports a LAN interface between the analyzer and an Agilent Source; GPIB is not supported.

Installing Interface Cards in the PC

If the interface has not been installed in your PC, install the interface card, following the instructions that came with the card. If you need to install other interface cards, do not put the cover back on your PC until you have installed those cards.

For a National Instruments GPIB card, be sure to install the NI 488.2 software first, then reboot your PC and install the interface card.

| NOTE | If you control other GPIB instruments or devices from this PC, see "Troubleshooting Interference With Other Devices or Instruments " on page 103 for information on excluding those devices from the 89600B identification process. |

Configuring the Interface in Your Instruments

Configure the LAN, USB, and/or GPIB interface in the instruments you plan to connect to the PC, referring to the instrument's user's guide for documentation on configuring I/O. (Look in the instrument user guide index under "GPIB" or "I/O configuration.")

You probably can use the instrument default settings. Make sure that each instrument on the GPIB has a unique GPIB address; two instruments cannot use the same address.

Connecting Instruments to Your PC

Connect all instruments to the appropriate interface on your PC or to the LAN. Plug in and turn on all instruments and your PC (if they are not already on).

| NOTE | If your PC and instruments are connected to a building LAN, you may need to check with your network administrator to verify that the IP addresses for your PC and instruments satisfy requirements. |

2 Installing 89600B Software

Agilent 89600B VSA Software

The 89600B VSA Software DVD includes software for the following applications:

- Agilent 89601B Vector Signal Analysis (VSA software)

- Agilent License Services

- 89601A-to-89601B License Migration Tool

NOTE

Installation Overview

The 89600B VSA software can be installed in a PC or in certain instruments that have a Windows XP operating system. To install the software, use one of the following procedures:

- "Installing 89600B Software in a PC" on the facing page

- "Installing 89600B Software in an Agilent X-Series Signal Analyzer" on page 20

- "Installing 89600B Software in an Agilent Infiniium XP Scope" on page 22

- "Installing 89600B Software in an Agilent Logic Analyzer " on page 24

Installing 89600B Software in a PC

To install the Agilent 89600B VSA software in a PC:

1. Turn on the computer. If the computer is already on, close any applications you have open.

   > **NOTE**　To install the Agilent 89600B VSA software, you must have administrator privileges on the computer you are installing the Agilent 89600B VSA software on.

2. Insert the Agilent 89600B VSA Software installation DVD.

3. If the installation utility does not start automatically, click **Start > Run**, then type:

   drive:\autoplay.exe

   ...where *drive* represents the drive containing the installation DVD. Click **OK.**

4. When the Agilent 89600B Installation Manager window opens, please read the Readme information.
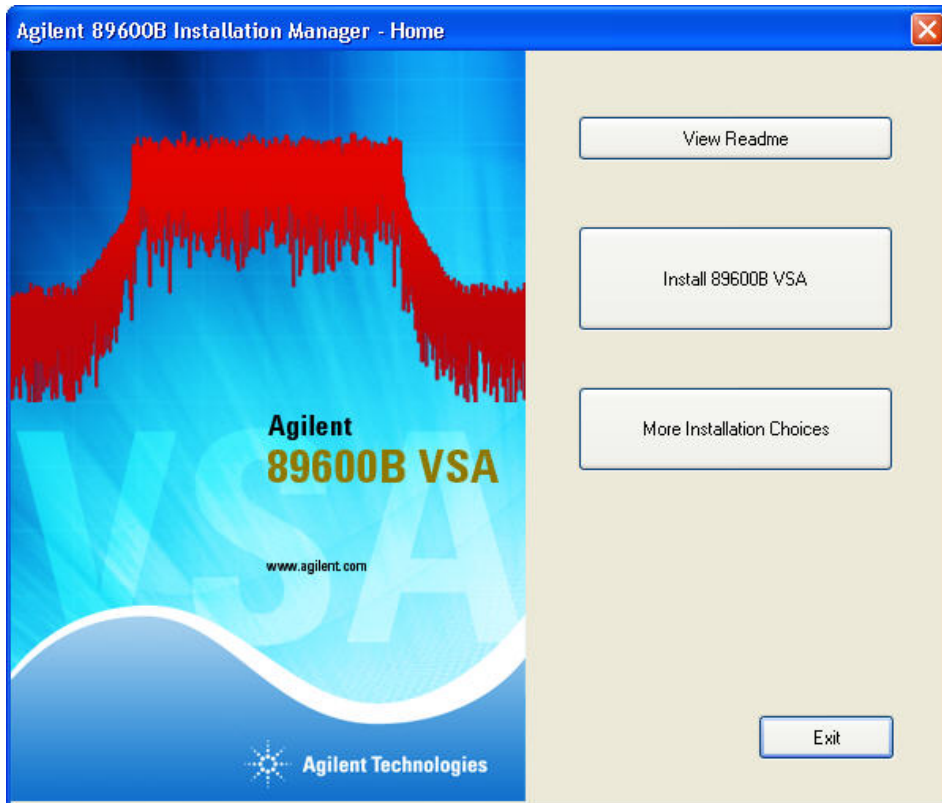
5. After you read the Readme file, close it then click **Install 89600B VSA**. Continue through the InstallShield Wizard until you reach the *Select Products and Features* window.

6. Select the features you want to install, then continue through the InstallShield Wizard to complete the installation.

7. After the 89600B software is installed, you will have the choice to install hardware support. If you do not choose to install any hardware support at this time, all hardware support components are available for installation at a later time. See "Adding Hardware Support " on the facing page.

8. The installation program preconfigures your system environment for 89600B. The installation process may ask you to reboot your computer. Click **OK**.

IMPORTANT   After rebooting you will need to be logged on with administrative privileges to complete the installation.

| NOTE | If you are installing from a remotely mounted DVD drive, the remote drive must be configured to reconnect at logon so that the installation files can be found after the reboot. |

Adding Hardware Support

1. Turn on the computer. If the computer is already on, close any applications you have open.

   | NOTE | To install the Agilent 89600B VSA software, you must have administrator privileges on the computer you are installing the Agilent 89600B VSA software on. |

2. Insert the Agilent 89600B VSA installation DVD.

3. If the installation utility does not start automatically, click **Start > Run**, and type:

   drive:\autoplay.exe

   ...where *drive* represents the drive containing the installation DVD. Click **OK.**

4. When the Agilent 89600B Installation Manager window opens, click **More Installation Choices**.

5. In the More Installation Choices window, click **Hardware Support Menu**.

6. The Hardware Support window will open. Select the components to add and continue through the InstallShield Wizard.

Installing 89600B Software in an Agilent X-Series Signal Analyzer

> **NOTE** Verify that the Instrument software revision (**System** hardkey > **Show** softkey > **System** softkey) is A.07.06 or greater.

If you have an Internet connection to the X-series analyzer, you can download the Agilent 89600B VSA software from the Agilent 89600B VSA software home page (www.agilent.com/find/89600B).

You can also install the software from the Agilent 89600B Software installation DVD. Since Agilent X-Series Signal Analyzers do not have a DVD drive, you can use a USB Flash drive. The first step is to copy the contents of the Agilent 89600B VSA Software DVD onto the USB Flash Drive. The Agilent 89600B VSA Software DVD is not protected or encrypted. The copy will be identical to the original DVD.

> **NOTE** This procedure assumes that a USB Flash Drive is being used. Other USB storage devices, such as a USB hard drive or USB DVD drive, could also be used.

To install the 89600B VSA software in an Agilent X-Series Signal Analyzer using a USB Flash drive:

1. Insert the Agilent 89600B VSA Software DVD into a PC's DVD drive. If the Agilent 89600B Installation Manager window opens, close the installer program (click Exit).

2. Insert a USB Flash Drive into a USB port on the same PC that the Agilent 89600B VSA Software DVD is in.

3. Copy the contents of the Agilent 89600B VSA Software DVD onto the USB Flash Drive.

4. Connect a USB keyboard and mouse to the analyzer.

> **NOTE** To install the Agilent 89600B VSA software on the analyzer, you need to have administrator privileges. Press **Ctrl - Alt - Delete**, then click **Log Off...**. Log back in as the Administrator. The default password is agilent4u.

5. Insert the USB Flash Drive into an available USB port on the analyzer.

6. Open Windows Explorer and navigate to the USB drive.

7. Double-click **autoplay.EXE**.

8. When the Agilent 89600B Installation Manager window opens, please read the Readme information.

9. After you read the Readme file, close it then click **Install 89600B VSA**. Continue through the InstallShield Wizard until you reach the *Select Products and Features* window.

10. Select the features you want to install, then continue through the InstallShield Wizard to complete the installation.

11. When the installation is complete, exit the Installation Manager.

12. Start the X-Series analyzer application: Double-click the **LaunchXSA** icon on the Windows desktop.

13. After the X-Series analyzer finishes booting up, start the Agilent 89600B VSA software (press the **Mode** hardkey then press the **More** softkey until the **89601 VSA** softkey appears. Press the **89601 VSA** softkey followed by the **Start 89601B** softkey to launch the VSA software).

Installing 89600B Software in an Agilent Infiniium XP Scope

IMPORTANT   Embedded operation with the 89600B is not recommended for the Infiniium 8000 and 80000 Series scopes.

Many Infiniium oscilloscopes provide an open Microsoft Windows XP Pro operating system that enables you to install other applications. You can install and operate the 89600B Vector Signal Analysis software on these scopes.

If you have an Internet connection to the Agilent Infiniium XP scope, you can download the Agilent 89600B VSA software from the Agilent 89600B VSA software home page (www.agilent.com/find/89600B).

You can also install the software from the Agilent 89600B Software installation DVD. Since not all Agilent Infiniium XP scopes have a DVD drive, you can use a USB Flash drive. The first step is to copy the contents of the Agilent 89600B VSA Software DVD onto the USB Flash Drive. The Agilent 89600B VSA Software DVD is not protected or encrypted. The copy will be identical to the original DVD.

NOTE   This procedure assumes that a USB Flash Drive is being used. Other USB storage devices, such as a USB hard drive or USB DVD drive, could also be used.

To install the 89601B VSA software in an XP scope:

1. Increase the scope's virtual memory to at least 1 GB as follows:
   a. Minimize the scope application.

   b. Navigate to: **Start > Control Panel > Administrative Tools** (double-click) **> Computer Management** (double-click) > **Computer Management (Local)** (right-click) **> Properties > Advanced** (tab)> **Performance Settings** (button) **> Virtual Memory - Change** (button) to display the Virtual Memory dialog screen.

   c. Set Initial Size (MB) and Maximum Size (MB) to 1000 MB (or more if you have sufficient Space Available), then click **Set > OK > OK** (reboot message) **> OK > OK**.

   d. When the *System Settings Change* dialog appears, click **Yes** to restart the computer.

2. Insert the Agilent 89600B VSA Software installation DVD into the scope's DVD drive. If your scope does not have a DVD drive, use the following procedure:

a. Insert the Agilent 89600B VSA Software DVD into a PC's DVD drive. If the Agilent 89600B Installation Manager window opens, close the installer program (click Exit).

b. Insert a USB Flash Drive into a USB port on the same PC that the Agilent 89600B VSA Software DVD is in.

c. Copy the contents of the Agilent 89600B VSA Software DVD onto the USB Flash Drive.

d. Connect a USB keyboard and mouse to the scope.

> **NOTE**   To install the Agilent 89600B VSA software on the scope, you need to have administrator privileges. Press **Ctrl - Alt - Delete**, then click **Log Off...**. Log back in as the Administrator.

e. Insert the USB Flash Drive into an available USB port.

f. Open Windows Explorer and navigate to the USB drive.

g. Double-click **autoplay.EXE** to bring up the Agilent 89600B Installation Manager.

3. When the Agilent 89600B Installation Manager window opens, please read the Readme information.

4. After you read the Readme file, close it then click **Install 89600B VSA**. Continue through the InstallShield Wizard until you reach the *Select Products and Features* window.

5. Select the features you want to install, then continue through the InstallShield Wizard to complete the installation.

6. When the installation is complete, exit the Installation Manager.

7. Start the 89600B VSA. Click **Start > (All) Programs > Agilent 89600B VSA *xx.y* > Vector Signal Analysis**.

...where $xx.y$ is the VSA version number.

Installing 89600B Software in an Agilent Logic Analyzer

The first step is to decide where you want to install the 89600B VSA software. For information on logic analyzer configurations, see "Configurations " on page 89.

If you have an Internet connection to the logic analyzer, you can download the Agilent 89600B VSA software from the Agilent 89600B VSA software home page (www.agilent.com/find/89600B).

You can also install the software from the Agilent 89600B Software installation DVD. Since not all Agilent logic analyzers have a DVD drive, you can use a USB Flash drive. The first step is to copy the contents of the Agilent 89600B VSA Software DVD onto the USB Flash Drive. The Agilent 89600B VSA Software DVD is not protected or encrypted. The copy will be identical to the original DVD.

> **NOTE** This procedure assumes that a USB Flash Drive is being used. Other USB storage devices, such as a USB hard drive or USB DVD drive, could also be used.

To install the 89601B VSA software in a logic analyzer:

1. Insert the Agilent 89600B VSA Software DVD into the logic analyzer's DVD drive. If your logic analyzer does not have a DVD drive, use the following procedure:

   a. Insert the Agilent 89600B VSA Software DVD into a PC's DVD drive. If the Agilent 89600B Installation Manager window opens, close the installer program (click Exit).

   b. Insert a USB Flash Drive into a USB port on the same PC that the Agilent 89600B VSA Software DVD is in.

   c. Copy the contents of the Agilent 89600B VSA Software DVD onto the USB Flash Drive.

   d. Connect a USB keyboard and mouse to the analyzer.

   > **NOTE** To install the Agilent 89600B VSA software on the logic analyzer, you need to log on with administrator privileges.

   e. Insert the USB Flash Drive into an available USB port on the analyzer.

   f. Open Windows Explorer and navigate to the USB drive.

g. Double-click **autoplay.EXE** to bring up the Agilent 89600B Installation Manager.

2. When the Agilent 89600B Installation Manager window opens, please read the Readme information.

3. After you read the Readme file, close it then click **Install 89600B VSA**. Continue through the InstallShield Wizard until you reach the *Select Products and Features* window.

4. Select the features you want to install, then continue through the InstallShield Wizard to complete the installation.

5. When the installation is complete, exit the Installation Manager.

> **NOTE**   When installing the 89600B VSA in a logic analyzer mainframe, **Hardware support** is disabled. This prevents using disk space for unnecessary components that are not needed when the 89600B VSA software is installed in a logic analyzer.

6. Start the 89600B VSA. Click **Start > (All) Programs > Agilent 89600B VSA *xx.y* > Vector Signal Analysis**....where *xx.y* is the VSA version number.

3 Installing Licenses

License Overview

There are four types of licenses: demo, trial, PC/instrument, or floating.

- **Demo**:
  The demo license is automatically installed when the VSA software is installed. When you use the demo license, the VSA will accept signals only from the simulated input or from the example time capture signals (recordings) provided with the product. Example signal files are located in the following directory:

  ```
  C:\Program Files\Agilent\89600B VSA xx.y\89601B VSA\Help\S-
  ignals
  ```

  ...where *xx.y* is the VSA version number

  When you are using a demo license, the trace grid displays Demo License, Limited Functionality as shown below:
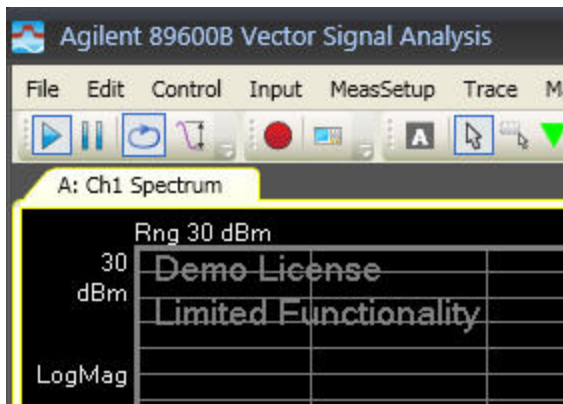
  > **NOTE**   If you have an option 200 license installed but only the demo license is being used, see "Troubleshooting a Licensing Problem" on page 98.

- **Trial**:
  The trial license enables all software options for 14 days. This license provides the time for you to operate the software while you obtain and install your PC/instrument or floating license. It also allows users who have not purchased the software to try the VSA for 14 days. For a trial license, perform the steps in "Trial License" on page 30.

- **PC/instrument**:
  The PC/Instrument (transportable) license must be installed on the same

computer that runs the 89600B VSA software. However, the license can be moved from one computer to another. For a PC/instrument license, perform the steps in " PC/Instrument License" on page 32.

- **Floating or Network**:
  For a floating or network license, perform these steps:

  1. Set up the license server as instructed in "Setting Up a Floating License Server" on page 105.

  2. Set up the license client as instructed in "Floating Client License" on page 40.

Trial License

This section documents installing and setting up a Trial license for your 89600B VSA. The Trial License enables you to start using the VSA software immediately while you obtain a PC/instrument license or floating license. During the 14 day trial period, all software options are enabled, so even if you have already purchased the VSA, you can try out software options you did not purchase.

When the 14 day trial expires, the 89600B VSA will revert back to the demo license unless you have installed a PC/instrument license or floating license.

> **NOTE**   You will only be granted one trial license per license Host ID.

Obtaining a Trial License

To obtain a trial license, follow these steps:

1. Obtain the license Host ID (Model Number, Serial Number) from the computer that you installed the VSA software on.

   a. Click **Start > (All) Programs > Agilent > Agilent License Manager**.

   b. The license Host ID (Model Number, Serial Number) value is needed in the next step.

   > **NOTE**   On an instrument, the Host IDs consist of an Agilent instrument model number and serial number. On a PC, the default model number is PCSERNO.

2. Go to the Agilent 89601B VSA website at http://www.agilent.com/find/89601B, select the *Downloads & Trials* tab, then follow the instructions to obtain a trial license.

   - You will need to provide contact information.

   - The requested Host ID is from the Agilent License Manager in step 1 above. If you are accessing the website from the same computer that the VSA software was installed on, you can simply copy and paste the Host ID into the website form.

   - You will only be granted one trial license per license Host ID.

3. After you finish using the Agilent website, check your email for your license file, then follow the next procedure to install the license.

Installing a Trial License

When you receive the email containing your license file, follow these steps to install it:

1. Place the license file either on a network-connected drive or on a drive that is directly connected to the computer.

2. Start the Agilent License Manager by clicking **Utilities > Licenses > Status > Agilent License Manager** or double clicking on the Agilent License Notifier icon in your Windows notification area.

3. In Agilent License Manager, click **File > Install**.

4. An Install License File(s) window appears. In this window, browse to the location where you saved the license file. Select the license file, and then click the **Open** button.

The license is automatically installed (from the previously selected license file) and now appears in the Tree View as an installed license under *localhost* (your computer). Note that the install operation takes some time to complete (up to 30–40 seconds).

For details on other ways to install licenses, see Installing Licenses in the Agilent License Manager Help (click **Help > Agilent License Manager Help** from within the Agilent License Manager utility or click **Start > (All) Programs > Agilent > Agilent License Manager Help**).

PC/Instrument License

This section documents installing and setting up a PC/Instrument (transportable) license for your 89600B VSA. The PC/Instrument license enables the software and options that you purchased. The license must be installed on the same computer that runs the 89600B VSA software. However, the license can be moved from one computer to another using the Agilent License Manager communicating with the Agilent Software Manager website.

After purchasing a PC/Instrument License, you will receive a Software License Entitlement Certificate. Using the information on the certificate along with the license Host ID of the computer that you installed the VSA software on, you can redeem your license by going to the Agilent Software Manager website (see "Obtaining a Trial License " on page 30). After providing the required information, a license file will be emailed to you. You then need to install the license file on the same computer that runs the 89600B VSA software (see "Installing a Trial License " on previous page). After installing the license, you need to restart the VSA software to activate the license.

> **NOTE** The term PC also refers to products such as analyzers and oscilloscopes running the 89600B VSA software.

Redeeming a PC/Instrument License

To redeem a license, follow these steps:

1. Collect the Software License Entitlement Certificates for all copies of the 89600B software and each software option that you purchased. The Software License Entitlement Certificates are printed on gray parchment and are shipped in the Installation Materials envelope.

2. Obtain the license Host ID (Model Number, Serial Number) from the computer that you installed the VSA software on.

   a. Click **Start > (All) Programs > Agilent > Agilent License Manager**.

   b. The license Host ID (Model Number, Serial Number) value is needed in the next step.

   > **NOTE** On an instrument, the Host IDs consist of an Agilent instrument model number and serial number. On a PC, the default model number is PCSERNO.

3. Go to the Agilent Software Manager website at
http://www.agilent.com/find/softwaremanager and follow the instructions to
register and assign your licenses.

- If you have not registered, you will need to register using your email
  address and a password. Remember your password as you will need to go
  back to this website to manage your licenses. For example, to restore your
  license if your hard drive crashes.

- When registering a license, the requested Order Number and Certificate
  Number are located on the top of your Software License Entitlement
  Certificate.

- When assigning a license, the requested Host ID is from the Agilent
  License Manager in step 2 above. If you are accessing the website from
  the same computer that the VSA software was installed on, you can
  simply copy and paste the Host ID into the website form.

- If your order includes 89601B-200 you will also be activating your Update
  Service subscription at this website.

4. After you finish using the Agilent Software Manager website, check your
   email for your license file, then follow the next procedure to install the
   license.

Installing a PC/Instrument License

When you receive the email containing your license file, follow these steps to
install it:

1. Place the license file either on a network-connected drive or on a drive that
   is directly connected to the computer.

2. Start the Agilent License Manager by clicking **Utilities > Licenses > Status >
   Agilent License Manager** or double clicking on the Agilent License Notifier icon
    in your Windows notification area.

3. In Agilent License Manager, click **File > Install**.

4. An Install License File(s) window appears. In this window, browse to the
   location where you saved the license file. Select the license file, and then
   click the **Open** button.

The license is automatically installed (from the previously selected license file) and now appears in the Tree View as an installed license under *localhost* (your computer). Note that the install operation takes some time to complete (up to 30–40 seconds).

For details on other ways to install licenses, see Installing Licenses in the Agilent License Manager Help (click **Help > Agilent License Manager Help** from within the Agilent License Manager utility or click **Start > (All) Programs > Agilent > Agilent License Manager Help**).

Transporting a PC/Instrument License

The PC/Instrument license is a transportable license that can be moved from one computer to another.

An internet browser must be able to connect to the Agilent Software Manager website to transport a license. This connection takes a small, but noticeable, amount of time (up to 60–90 seconds) to complete a license transport operation.

Choose one of the following procedures based on your network configuration to transport a transportable license:

- Both Source and Target Computers Connected to a LAN

- Target Computer Not Connected to a LAN

- Source Computer Not Connected to a LAN

- Both Source Computer and Target Computer Not Connected to a LAN

Both Source and Target Computers Connected to a LAN

To transport a license from one computer to another when both the source computer and the target computer are connected to a LAN, you can easily transport a transportable license in either of the following ways. (Note that these methods assume that both the source computer and target computer are connected (use **File > Connect**) in the Agilent License Manager and visible in the Tree View.)

- In the Agilent License Manager's Tree View, select a license or product (to transport all licenses for the product) on the source computer and drag it to the target computer's IP address/hostname node. The licenses are automatically transported from the source computer to the target computer.

Or:

- In the Tree View, select a license or product (to transport all licenses for the product), then click **File > Transport**. This opens the *Transport one or more licenses* dialog box. Select the target host name from the drop down box and click the **Transport** button. The licenses are automatically transported from the source computer to the target computer.

Target Computer Not Connected to a LAN

If the target computer is not connected to a LAN, the transport operation is more difficult than if all computers have network connectivity. Follow this procedure to transport a license when the target computer is not connected to a LAN or if you are not able to connect to it using the Agilent License Manager. (Note that this procedure assumes that the source computer has an internet connection.)

1. On the source computer, click **Start > (All) Programs > Agilent > Agilent License Manager.**

2. In the Tree View, select a license or product (to transport all licenses for the product). Click **File > Transport**. This open the *Transport one or more licenses* dialog box.

3. Since the target computer is off line, keep the Destination Host as <offline>. Click the **Transport** button. You will be asked to verify the transport. Click the **Yes** button.

4. This opens a *Transportation Confirmation* screen indicating that the license was deleted from the localhost and shows the confirmation code. This confirmation screen also specifies a path and the URL file so that you can rehost the license at a later time. Click the **Explore** button to view the file, otherwise, click the **Ok** button to return to the main display.

5. From the Agilent License Manager, click **Tools > Explore Transport Confirmation URLs**. This opens the folder where all of the Transport Confirmation file were saved.

6. Double-click the *.url* Transport Confirmation file for the license you want to rehost. This opens the Agilent Software Manager website, which enables you to acquire a transported license that is node-locked to the target computer.

7. On the Agilent Software Manager website, type the target computer's Host ID (model number, serial number), and then click the **Submit** button.

8. The Agilent Software Manager website displays a link for the license. On the license link, right-click the link and select **Save Target As**.

9. On the source computer, save the license file.

10. On the source computer, connect an external, portable mass storage device—such as: a USB Flash Drive, an external hard drive, or a writable CD/DVD.

11. On the source computer, copy the license file to the portable mass storage device.

12. Disconnect the portable mass storage device from the source computer and connect it to the target computer.

13. On the target computer, click **Start > (All) Programs > Agilent > Agilent License Manager**.

14. On the target computer, open Windows Explorer, locate the .lic license file saved on the connected portable storage device, and then drag the license file into the Tree view.

Source Computer Not Connected to a LAN

If the source computer is not connected to a LAN, the transport operation is more difficult than if all computers have network connectivity. Follow this procedure to transport a license when the source computer is not connected to a LAN. (Note that this procedure assumes that the target computer has an internet connection.)

1. On the source computer, click **Start > (All) Programs > Agilent > Agilent License Manager**.

2. In the Tree View, select a license or product (to transport all licenses for the product). Click **File > Transport**. This open the Transport one or more licenses dialog box.

3. Since the Target computer is off line, keep the Destination Host as <offline>. Click the **Transport** button. You will be asked to verify the transport. Click the **Yes** button.

4. This opens a Transportation Confirmation screen indicating that the license was deleted from the localhost and shows the confirmation code. This

confirmation screen also specifies a path and the URL file so that you can rehost the license. Click the **Explore** button to view the file, otherwise, click the **Ok** button to return to the Agilent License Manager main display.

5. On the source computer, connect an external, portable mass storage device— such as: a USB Flash Drive, an external hard drive, or a writable CD/DVD.

6. On the source computer, copy the .url file to the portable mass storage device.

7. Disconnect the portable mass storage device from the source computer and connect it to the target computer.

8. Locate the *.url* file on the portable mass storage device and double-click it.

9. The *.url* file appears in a browser that is connected to the Agilent Software Manager website. Note that the fields are automatically filled in with the license contents.

10. On the Agilent Software Manager website, type the target computer's Host ID (model number, serial number) and then click the **Submit** button.

11. The Agilent Software Manager website displays a link for the license. On the license link, right-click the link and select **Save Target As**.

12. On the target computer, save the license file.

13. On the target computer, click **Start > (All) Programs > Agilent > Agilent License Manager**.

14. On the target computer, open Windows Explorer, locate the license file, and then drag the license file into the Tree View.

Both Source and Target Computers Not Connected to a LAN

If both the source computer and the target computer are not connected to a LAN, the transport operation is more difficult but can be accomplished using a portable mass storage device and a computer with an internet connection. Follow this procedure to transport a license when both the source computer and the target computer are not connected to a LAN.

1. On the source computer, click **Start > (All) Programs > Agilent > Agilent License Manager**.

2. In the Tree View, select a license or product (to transport all licenses for the product). Click **File > Transport**. This open the *Transport one or more licenses* dialog box.

3. Since the target computer is off line, keep the Destination Host as <offline>. Click the **Transport** button. You will be asked to verify the transport. Click the **Yes** button.

4. This opens a Transportation Confirmation screen indicating that the license was deleted from the localhost and shows the confirmation code. This confirmation screen also specifies a path and the URL file so that you can rehost the license. Click the **Explore** button to view the file, otherwise, click the **Ok** button to return to the Agilent License Manager main display.

5. On the source computer, connect an external, portable mass storage device— such as: a USB Flash Drive, an external hard drive, or a writable CD/DVD.

6. On the source computer, copy the .url file, to the portable mass storage device.

7. Disconnect the portable mass storage device from the source computer and connect it to a computer with an internet connection.

8. Using Windows Explorer on the internet-connected computer, locate the .url file on the portable mass storage device and double-click it.

9. The *.url* file appears in a browser that is connected to the Agilent Software Manager website. Note that the fields are automatically filled in with the license contents.

10. On the Agilent Software Manager website, type the target computer's Host ID (model number, serial number) and then click the **Submit** button.

11. The Agilent Software Manager website displays a link for the (re-issued) license. On the license link, right-click the link and select **Save Target As**.

12. Save the license file to a location on the portable mass storage device.

13. Disconnect the portable mass storage device from the internet-connected computer and connect it to the target computer.

14. On the target computer, click **Start > (All) Programs > Agilent > Agilent License Manager**.

15. On the target computer, open Windows Explorer, locate the .lic license file saved on the connected portable storage device, and then drag the license file into the Tree view.

Floating Client License

This section documents installing an 89600B VSA floating client license on a client PC.

> **NOTE** The license server should already be set up and the client license file should already be created. If not, see "Setting Up a Floating License Server" on page 105.

Floating License Overview

Floating licenses provide the ability to use the same license on different PCs. This is in contrast to the PC/instrument license that enables a license on only one PC.

A floating license requires one PC to function as the server that manages the license allocation to client PCs. The server keeps track of the number of licenses checked out and the number of licenses still available for use.

The client PCs request a license from the server to run the 89600B VSA software. If a license is available, the server will allocate the license to the client PC.

The 89600B VSA Software uses Agilent License Manager software for floating (network) software security configurations. When you install the 89600B VSA software, the Agilent License Manager software is installed at:

```
C:\Program Files\Agilent\Agilent License Manager
```

and the supporting Agilent License Service (and Notifier) is installed at:

```
C:\Program Files\Agilent\CDF
```

Installing a Client License

The client license file redirects licensing requests to your license server. To create a client license, see "Creating a License File for the Client PCs" on page 114.

Follow these steps to install the client license:

1. Place the license file either on a network-connected drive or on a drive that is directly connected to your PC.

2. Start the Agilent License Manager by clicking **Start > (All) Programs > Agilent > Agilent License Manager**.

3. In Agilent License Manager, click **File > Install**.

4. The *Install License File(s)* window appears. In this window, browse to the location where you saved the license file. Select the license file, and then click the **Open** button.

   The license is automatically installed and now appears in the Tree View as an installed license under the PC. Note that the install operation takes some time to complete (up to 30–40 seconds).

5. To select only the licenses you need, go to .

6. If the VSA software was running when you installed the license, restart the VSA software to activate your licenses.

For details on other ways to install licenses, see *Installing Licenses* in the Agilent License Manager Help (click **Help > Agilent License Manager Help** from within the Agilent License Manager utility or click **Start > (All) Programs > Agilent > Agilent License Manager Help**).

Selecting License Options

The Select License Options dialog box enables you to select which floating licenses you want to acquire when you run the VSA software. By selecting only the licenses you need, you free up licenses for other users.

IMPORTANT   All license options are listed in the Select License Options dialog box but you will only be able to acquire the licenses that have been purchased and installed on the license server.

By default all options are selected. Follow these steps to select only the licenses you need.

1. Open *the Select License Options* dialog box by clicking **Start > (All) Programs > Agilent 89600B VSA *xx.y* > Select License Options** (where $xx.y$ is the VSA version number).

2. After you select the licenses you need, click the **OK** button to save your choices.

3. If the VSA software was already running, restart the VSA to activate the licenses you selected.

Starting the 89600B Software

Start the application by using the Start menu:

Start > (All) Programs > Agilent 89600B VSA *xx.y*> Vector Signal Analysis

...where *xx.y* is the VSA version number

NOTE If two to three minutes after starting the 89600B VSA software, a License Warning message window appears that says *Lost connection to network license server for the following*, you may have a firewall incompatibility. Every two to three minutes, the 89600B VSA software will connect to the license server to check the floating license status. Some third party firewall applications treat this as a port scan attack and will lock out the client. This problem can be fixed by turning off any third party firewall software that resides on the server. This is not an issue with the Windows firewall.

4 Configuring IO Interfaces

Introduction

This chapter provides instructions for configuring your computer to communicate with hardware via IEEE-1394, LAN, USB/GPIB, USB, or GPIB interfaces.

If your measurement hardware is one of the following, skip this chapter and follow the instructions specific for your measurement hardware:

- "Configuring Infiniium Windows XP Scopes" on page 59.

- "Configuring Agilent N7100 Series" on page 71

- "Configuring Logic Analyzers" on page 87

> **NOTE**   Do not configure more than one interface to point to a single instrument, either from a single computer or from multiple computers. For example, if your instrument is on a LAN, do not point to it from two computers simultaneously.

Perform the procedures for each interface type as directed below:

- **IEEE-1394 to VXI**: For VXI IEEE-1394 to VXI interface, start on "Configuring the VXI interface" on the facing page.

- **LAN**: For LAN interface, start on "Configuring the LAN interface" on page 47.

- **USB/GPIB**: For USB/GPIB interface, start on "Configuring the USB/GPIB Interface" on page 53.

- **GPIB**: For GPIB interface, start on "Configuring the GPIB Interface" on page 55.

- **USB**: For USB interface, start on "Configuring the USB Interface" on page 57.

Configuring the VXI interface

To configure the VXI interface:

1. Connect the IEEE 1394 interface card from the computer to the E8491 VXI module in the mainframe.

2. If using a laptop PC, connect the EMC grounding cable from the VXI mainframe chassis to a USB port on the laptop.

3. Power on the computer and the VXI mainframe.

   > **NOTE**   If the Found New Hardware Wizard opens, click **Next** and when it is finished, click **Finish**.

4. Run Connection Expert:

   Click the IO Control icon in the task bar, then click **Agilent Connection Expert**. (Or click **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert**.)

   Connection Expert will automatically detect and configure most interfaces and instruments and will assign names and other default configuration settings.

   If the VXIO interface does not show up, check cable connections and power cord connections. Also, check another port on the E8491 VXI Interconnect Module. Click **Refresh All** to update.

   Interfaces or instruments can also be added manually to the test system configuration. See Agilent IO Libraries Suite Online Help for more information.

5. To verify that the computer recognized all the modules in your VXI mainframe, expand **VXI0** in the *Instrument I/O on this PC* section.

Connection Expert will list all the modules and their addresses. A green checkmark is shown to verify the VXI mainframe and modules are on and connected properly.
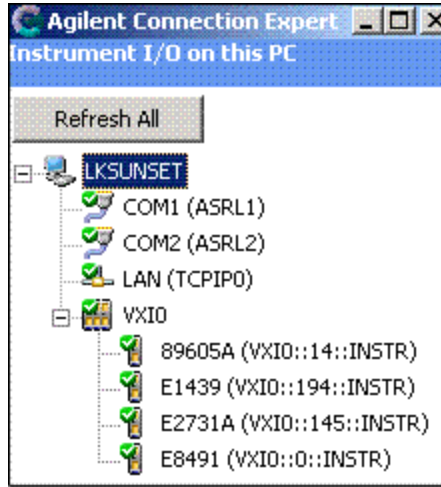
Agilent IO Libraries Suite also provides a VXI Resource Manager that initializes and prepares a VXI system for use. The VXI Resource Manager runs when any of the following conditions occur:

- You start it from the Connection Expert's Tools menu (select **Tools > VXI Resource Manager > Edit Resources**, then click **Run** in the resulting Resource Manager dialog box)You start it from the Agilent IO Control

- You apply or cycle VXI mainframe power

- You press the E8491 Reset button

- You reboot your PC

  In VXI systems with multiple E8491 interfaces, you can turn off individual VXI mainframes without affecting other mainframes in the system. When a mainframe is turned on, the VXI Resource Manager reconfigures that mainframe.

For more information about VXI interfaces, see Connectivity in the *Agilent IO Libraries Suite Documentation*. Click on the **IO Control** icon in the task bar and then select **Documentation**. (Or click **Start >(All) Programs > Agilent IO Libraries Suite > Documentation**.)

Configuring the LAN interface

Use this procedure to configure the LAN interface for all instruments except the following:

- **Agilent Infiniium oscilloscope**: If your measurement hardware is an Agilent Infiniium oscilloscope, skip this chapter and follow the instructions in the "Configuring Infiniium Windows XP Scopes" on page 59.

- **Agilent Logic Analyzer**: If your measurement hardware is an Agilent Logic Analyzer, skip this chapter and follow the instructions in "Connecting to a Network " on page 93 and "89600B I/O Connections" on page 95.

- **Agilent N7100 Series**: If your measurement hardware is an Agilent N7100 Series, skip this chapter and follow the instructions in "Configuring Agilent N7100 Series" on page 71.

For more information about LAN interfaces, see *Connectivity* in the Documentation section of the Agilent IO Libraries Suite. You can find this when you click on the **IO Control** icon in the task bar and then select **Documentation**. (Or click **Start > (All) Programs > Agilent IO Libraries Suite > Documentation.**)

You must ensure that the IP addresses for your computer and measurement hardware are compatible, then configure the LAN interface. The IP address consists of 4 groups of numbers separated by periods (for example, 192.192.192.25).

To configure your LAN interface:

1. Set the IP address on the instrument, using the appropriate set of instructions:

    - instrument IP address for a computer on Local Area network or IP address for computer cable (see: "Instrument IP Address for a Local Area Network Configuration" below).

    or

    - instrument IP address for a computer with a crossover cable (see: "Instrument IP Address for a Crossover Cable Configuration" on next page).

2. Run Connection Expert (see: "Run Connection Expert" on page 50).

Instrument IP Address for a Local Area Network Configuration

This section provides information on setting the instrument IP address when your computer is on a Local Area Network.

To set the instrument IP address for a LAN configuration:

1. If your computer is connected to a Local Area Network, have your network administrator assign an IP address for your instrument hardware that will work with your computer. (The network administrator can also tell you if you need to set Subnet Masks.)
   a. Set the IP address on the measurement hardware.

      - **PSA**: On the PSA, press **System > Config IO > IP address,** type the new address using the number keypad, and press **Enter**.

      - **X-Series Signal Analyzer**: On the analyzer, press **System > Show > System** to find the IP address. To change the IP address, refer to the LAN Interface configuration documentation provided with the analyzer.

      - **Series 6000/7000 Oscilloscopes**: On the *Series 6000A/7000A* Oscilloscopes, verify the I/O Controller is set to LAN. If it is not set to LAN, press **Utility > I/O > Controller XX** (where XX is either GPIB, LAN or USB), use the Entry knob labeled with a circular arrow to point the screen arrow to LAN, and press the Controller button. For the *Series 6000L* Oscilloscopes, see scope documentation.

   b. Click in the Subnet Mask box.

      Accept the default numbers that appear for the subnet mask.
      Click **OK** and close all dialog boxes.

   c. If you are prompted to reboot your computer, do so now.

2. Be sure that both the instrument and your computer are connected to the LAN.

3. Cycle power on the measurement hardware.

4. Continue with "Run Connection Expert" on page 50.

Instrument IP Address for a Crossover Cable Configuration

This section provides information on setting the instrument IP address when your computer is connected to the instrument using a crossover cable.

To set the instrument IP address for a crossover cable configuration:

1. If your computer is connected to a Local Area Network and you will be connecting directly to the hardware using a crossover cable, perform these

steps:

a. Determine the IP address for your computer. Click **Start > Run.** Type cmd and click **OK**. At the DOS prompt, type ipconfig and press **Enter**. If an IP address is not listed, or if the address is 0.0.0.0, go to step d. If a non-zero IP address is listed, leave it and continue with the next step.

b. Set the IP address on the instrument so that the first 3 sections of the IP address are the same as the computer's IP address and the last section is different than the computer's. (For example, if the computer IP address is 192.192.192.25, set the hardware IP address to 192.192.192.26.)

    To change the PSA IP address, press **System > Config I/O > IP address**, type the new address using the number keypad, and press **Enter**.
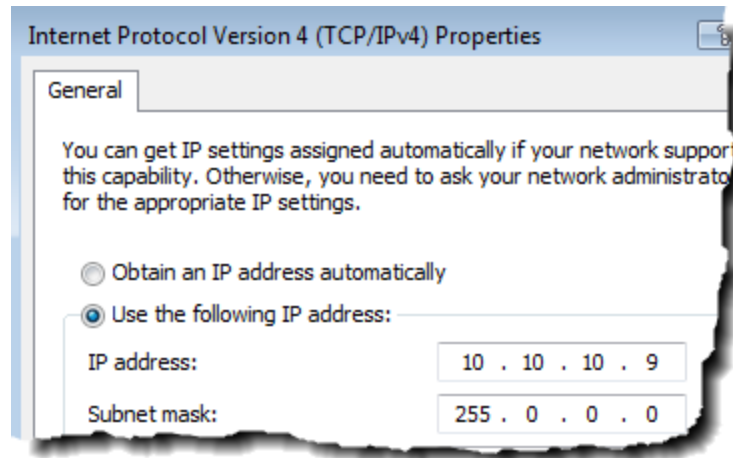
c. Continue with step e.

d. Find the IP address for the hardware (for the PSA, press **System > Config I/O > IP address**). Set the IP address for the computer so that the first 3 sections are the same as the instrument and the last section is different than the instrument. (For example, if the hardware IP address is 10.10.10.10, set the computer address to 10.10.10.9.)

    For Windows XP, click **Start >** right click **My Network Places > Properties >** right click **Local Area Connection > Properties > Internet Protocol (TCP/IP) > Properties > Use the following IP address**.
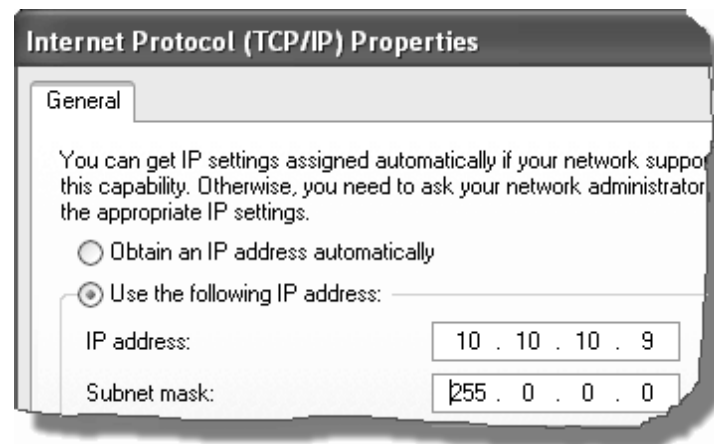
    -or-

For Windows 7, click **Start > Control Panel > View network status and tasks > Local Area Connection > Properties.** Select **Internet Protocol Version 4**, then click **Properties > Use the following IP address**.

Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network support this capability. Otherwise, you need to ask your network administrato for the appropriate IP settings.

○ Obtain an IP address automatically

◉ Use the following IP address:

IP address: 10 . 10 . 10 . 9

Subnet mask: 255 . 0 . 0 . 0

Enter the IP address in the box, using the periods (.) to separate the sections.

e. Click in the Subnet Mask box.

Accept the default numbers that appear for the subnet mask.

Click **OK** and close all dialog boxes.

f. If you are prompted to reboot your computer, do so now.

2. Connect the crossover cable between the computer and the instrument.

3. Cycle power on the measurement hardware.

4. Continue with Run Connection Expert below.

Run Connection Expert

1. Run the Agilent IO Libraries Suite Connection Expert tool.

Click the **IO Control** icon in the Windows application task bar, then click **Agilent Connection Expert**. (Or click **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert.)**

2. Add an instrument.

Auto discover cannot be done on LAN devices so you must manually add the instrument.

a. Click on **LAN** in the *Instrument I/O on this PC* section.

b. Click **Add an instrument** in the *Task Guide* section. The Add LAN Instrument window will open.

You can browse for the instrument to be added and select the check box.

If the instrument is not listed, click Add Address. Enter the hostname or select **IP address** and enter the IP address of the instrument.
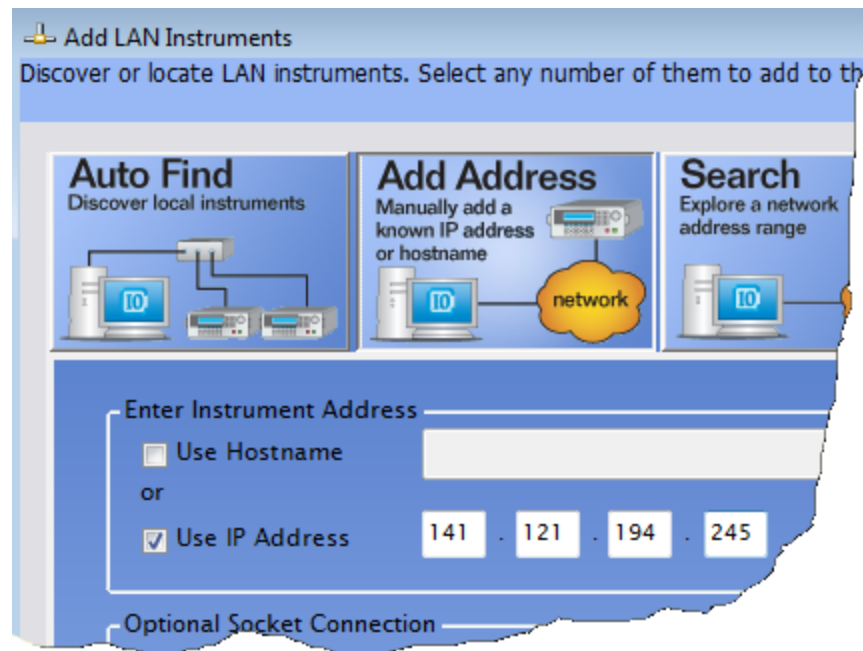
c. Click **OK.**

Connection Expert will automatically configure the interface and instruments and will assign names and other default configuration settings.

3. To verify that the computer recognized the instrument, expand **LAN** in the *Instrument I/O on this PC* section. Connection Expert will list all instruments and their addresses. A green checkmark is shown to verify the instrument is on and connected properly.
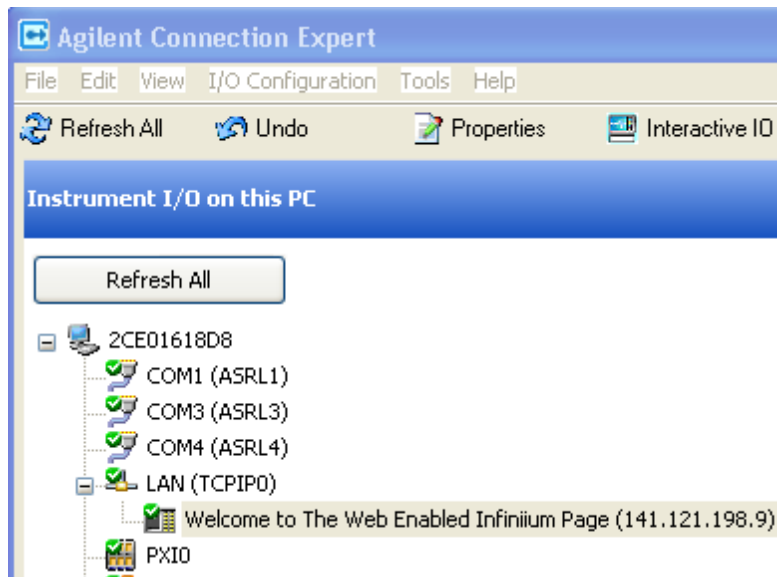
NOTE   If you setup a LAN connection, then turn off or disconnect the hardware, the 89600B looks for the hardware when started. This slows down startup. To speed up startup, use Connection Expert to remove the LAN setup or choose to ignore the instrument.

NOTE   When the VSA software locates an instrument, it locks onto the instrument so only the VSA software can communicate with it. This will prevent Agilent IO Libraries from any communication with these instruments and cause the green checkmark to become a red X in Connection Expert. You can disconnect the instrument by selecting **Control > Disconnect** in the VSA software. Select Refresh in Connection Expert and the green checkmark will be shown.

If you will also be communicating with measurement hardware via GPIB, continue on .

Configuring the USB/GPIB Interface

This procedure is used to configure the USB/GPIB interface for all measurement hardware except the Agilent Infiniium oscilloscope. If your measurement hardware is an Agilent Infiniium oscilloscope, skip this chapter and follow the instructions in the "Configuring Infiniium Windows XP Scopes" on page 59.

For details on setting up the 82357 USB/GPIB Interface, see the *82357 USB/GPIB User's Guide* in the Agilent IO Libraries Suite Documentation. Click the **Agilent IO Control** icon in the task bar. Click **Documentation > Interface Guides** > and then select **82357 USB/GPIB Users Guide**. (Or click **Start > (All) Programs > Agilent IO Libraries Suite > Documentation > Interface Guides > 82357 USB/GPIB Users Guide**.)

To configure the USB/GPIB interface:

1. Plug the 82357 USB cable into a USB port on your PC. Do not connect to your GPIB instrument at this time.

2. Observe the 3 LEDs on the E8237A. Initially, only the red FAIL LED should be on. After the Found New Hardware Wizard runs, all 3 LEDs should be ON. If any LED is off after 20 seconds, stop and refer to the *82357 USB/GPIB User's Guide* in the Agilent IO Libraries Suite Documentation for information.

3. If the **Agilent 82357 USB/GPIB Interface Detected** dialog box appears, click **OK** or **Accept**. (If you want to change any of the settings, refer to the 82357 documentation for instructions.) (The graphic below is a sample from a Windows XP system.)

4. Connect one or more instruments to the GPIB connector on the 82357.

> **NOTE**   On the *Series 6000A/7000A* Oscilloscopes, verify the I/O Controller is set to GPIB. If it is not set to GPIB, press **Utility > I/O > Controller *XX*** (where *XX* is either GPIB, LAN, or USB), use the Entry knob labeled with a circular arrow to point the screen arrow to **LAN**, and press the **Controller** button.
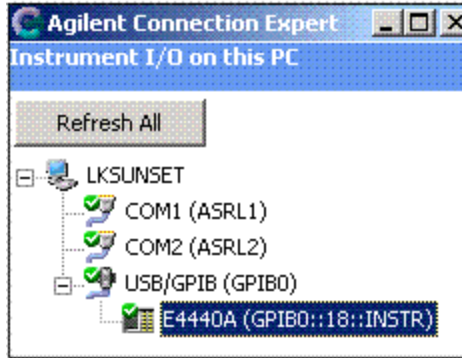> For the *Series 6000L* Oscilloscopes, see scope documentation.

Run Connection Expert

1. Run Connection Expert.

   Click the **IO Control** icon in the task bar or click **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert**.

Connection Expert will automatically detect and configure the interface and instruments. It will also assign names and other default configuration settings.

2. To verify that the computer recognized the instrument, expand **USB/GPIB (GPIB1)** in the *Instrument I/O on this PC* section. Connection Expert lists all instruments and their addresses. A green checkmark is shown to verify the instruments are on and connected properly. To troubleshoot problems, refer to the Troubleshooting chapter in the 82357 User's Guide.

| NOTE | When the VSA software locates an instrument, it locks onto the instrument so only the VSA software can communicate with it. This will prevent Agilent IO Libraries from any communication with these instruments and cause the green checkmark to become a red X in Connection Expert. You can disconnect the instrument by selecting **Control > Disconnect** in the VSA software. Select **Refresh** in Connection Expert and the green checkmark will be shown. |

Configuring the GPIB Interface

This procedure is used to configure the GPIB interface for all measurement hardware except the Agilent Infiniium oscilloscope. If your measurement hardware is an Agilent Infiniium oscilloscope, skip this chapter and follow the instructions in .

> **NOTE** The purpose of this chapter is to guide you through the specific setup required to get your computer and instrument configured properly. For more detailed information on IO configuration, refer to the documentation for the IO Libraries Suite (click the **IO Control** icon, then select **Documentation**).

For more information about GPIB interfaces, see *Connectivity* in the Documentation section of the Agilent IO Libraries Suite. You can find this when you click on the **IO Control** icon in the task bar and then select **Documentation**. (Or click **Start > (All) Programs > Agilent IO Libraries Suite > Documentation.**)

To configure the GPIB interface:

1. If you are configuring a GPIB connection for measurement hardware that is currently configured as a LAN connection on this computer, you must first remove the LAN configuration. Then cycle power on the hardware before continuing with the GPIB configuration.

2. Connect your GPIB instruments to the computer's GPIB interface. Power on the PC and the instruments.
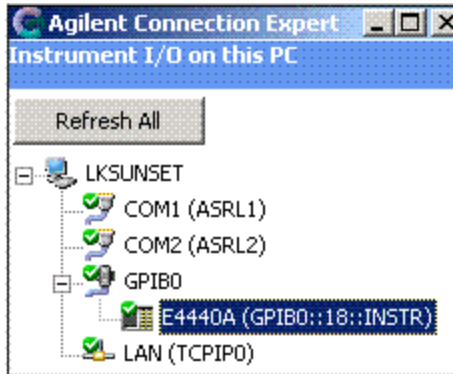
> **NOTE** On the *Series 6000A/7000A* Oscilloscopes, verify the I/O Controller is set to GPIB. If it is not set to GPIB, press **Utility > I/O > Controller *XX*** (where *XX* is either GPIB, LAN, or USB), use the Entry knob labeled with a circular arrow to point the screen arrow to **LAN**, and press the **Controller** button.
> For the *Series 6000L* Oscilloscopes, see scope documentation.

Run Connection Expert

1. Run Connection Expert.

    Click the **IO Control** icon in the task bar, then click **Agilent Connection Expert**, or click **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert.**

    Connection Expert will automatically detect and configure the interface and instruments and will assign names and other default configuration settings.

2. To verify that the computer recognized the instrument, expand **GPIB0** in the *Instrument I/O on this PC* section. Connection Expert will list all instruments and their addresses. A green checkmark will be shown to verify that the instrument is on and connected properly.

NOTE When the VSA software locates an instrument, it locks onto the instrument so only the VSA software can communicate with it. This will prevent Agilent IO Libraries from any communication with these instruments and cause the green checkmark to become a red X in Connection Expert. You can disconnect the instrument by selecting **Control > Disconnect** in the VSA software. Select Refresh in Connection Expert and the green checkmark will be shown.

Configuring the USB Interface

This procedure is used to configure USB interfaces except the Agilent 82357 USB/GPIB Interface. If you are using the Agilent 82357 USB/GPIB Interface, go to "Configuring the USB/GPIB Interface" on page 53.

The instructions in this section assume that the USB interface is installed in your PC and is working.

NOTE   The purpose of this chapter is to guide you through the specific setup required to get your computer and instrument configured properly. For more detailed information on GPIB IO configuration, refer to the documentation for the IO Libraries Suite (click the **IO Control** icon, then select **Documentation > Connectivity**).

To configure the USB interface:

Connect your USB instruments to the USB interface in the computer. Power on the PC and the instruments.

On the Series 6000A/7000A Oscilloscopes, verify the I/O Controller is set to USB. If it is not set to USB, click **Utility > I/O > Controller *XX*** (where *XX* is either GPIB, LAN or USB), use the Entry knob labeled with a circular arrow to point the screen arrow to **USB** and click the **Controller** button. For the Series 6000L Oscilloscopes, see scope documentation.
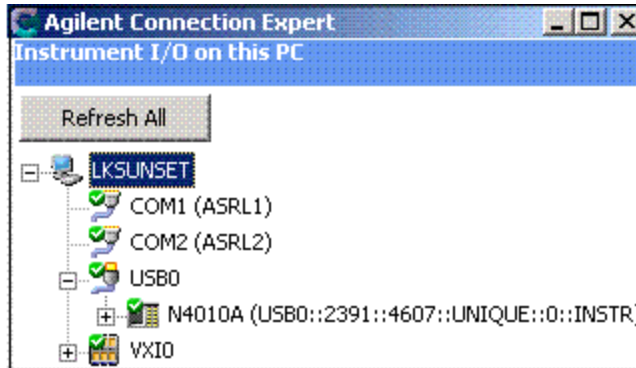
Run Connection Expert

1. Run Connection Expert.

   Click the **IO Control** icon in the task bar, then click **Agilent Connection Expert**, or click **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert.** Connection Expert will automatically detect and configure the interface and instruments and will assign names and other default configuration settings

2. To verify that the computer recognized the instrument, expand **USB0** in the *Instrument I/O on this PC* section. Connection Expert will list all instruments

and their addresses. A green checkmark will be shown to verify that the instrument is on and connected properly.

NOTE When the VSA software locates an instrument, it locks onto the instrument so only the VSA software can communicate with it. This will prevent Agilent IO Libraries from any communication with these instruments and cause the green checkmark to become a red X in Connection Expert. You can disconnect the instrument by selecting **Control > Disconnect** in the VSA software. Select **Refresh** in Connection Expert and the green checkmark will be shown.

5 Configuring Infiniium Windows XP Scopes

Introduction

This chapter includes networking information for configuring Agilent Infiniium scopes, running the Windows XP operating system, and a corresponding PC running the VSA software.

Refer to Application Note 5990-6819EN (Infiniium Oscilloscopes with 89600B VSA Software) for a list of supported Agilent Infiniium scopes and the required infiniium firmware revisions.

> **NOTE** If you are installing the VSA software directly in the Agilent Infiniium scope (Windows XP only), see: "Installing 89600B Software in an Agilent Infiniium XP Scope" on page 22.

Before configuring your Infiniium scope, be sure you have installed the VSA software on the PC you are using with the scope.

For any connection type, there are up to three possible steps:

1. Configure Infiniium Networking

   - "Configuring Windows XP Infiniium Networking for Non-DHCP Network" on page 62

   - "Configuring Windows XP Infiniium Networking for DHCP Network" on page 63

   - "Configuring Windows XP Infiniium Networking for Crossover Cable Network" on page 64

2. Configure PC Networking

   - "Configuring PC Networking for Crossover Cable Configuration" on page 65

3. Configure Agilent IO Config Software for GPIB and LAN

   - "Configuring PC Agilent IO Config for GPIB Connection" on page 66

   - "Configuring PC Agilent IO Config for LAN Connection" on page 67

   See "Summary of Connection Types " on the facing page for additional information in determining the sections you need to complete based on your connection type. Check with your network administrator to determine your network type.

Summary of Connection Types

Connection Type	Infiniium Networking	PC Networking	PC Agilent IO Config Software
GPIB to GPIB	N/A	N/A	"Configuring PC Agilent IO Config for GPIB Connection" on page 66
USB to GPIB	N/A	N/A	"Configuring the USB/GPIB Interface" on page 69
LAN using a crossover cable	"Configuring Windows XP Infiniium Networking for Crossover Cable Network" on page 64	"Configuring PC Networking for Crossover Cable Configuration" on page 65	"Configuring PC Agilent IO Config for LAN Connection" on page 67
LAN with DHCP	"Configuring Windows XP Infiniium Networking for DHCP Network" on page 63	N/A	"Configuring PC Agilent IO Config for LAN Connection" on page 67
LAN without DHCP	"Configuring Windows XP Infiniium Networking for Non-DHCP Network" on next page	N/A	"Configuring PC Agilent IO Config for LAN Connection" on page 67

Configuring Windows XP Infiniium Networking for Non-DHCP Network

Complete the following procedure to configure your Windows XP Infiniium scope for networking via a non-DHCP (Dynamic Host Configuration Protocol) network.

To configure Windows XP Infiniium networking for a non-DHCP network:

1. You will need an IP Address, Gateway Address and a Subnet Mask from your Network Administrator.

2. On your Infiniium, quit the scope application if it is running.

3. Open the **Control Panel (Start > Control Panel)**. Open **Network Connections**. (If you are in Category view, click Network and Internet Connections and then select Network Connections.)

4. Click **Local Area Connection** and then **Properties** to display the Local Area Connection Properties dialog box.

5. Select **Internet Protocol (TCP/IP)** on the connection list and click **Properties** to display the Internet Protocol (TCP/IP) Properties dialog box.

6. Select **Use the following IP address** and enter the IP Address, Subnet mask, and Default gateway address provided by your Network Administrator.

7. Click **OK** in the Internet Protocol (TCP/IP) Properties dialog box.

8. Click **OK** in the Local Area Connection Properties dialog box. If Windows prompts you to reboot your Infiniium, click **Yes**. If not, close all open dialog boxes.

9. After the Infiniium reboots, the instrument is ready for LAN control over the LAN interface. Go to "Configuring PC Agilent IO Config for LAN Connection" on page 67.

Configuring Windows XP Infiniium Networking for DHCP Network

If your network provider uses DHCP, Windows XP will automatically retrieve a dynamic IP Address from the DHCP server. No configuration for the Infiniium is necessary. Continue to "Configuring PC Agilent IO Config for LAN Connection" on page 67.

Configuring Windows XP Infiniium Networking for Crossover Cable Network

Complete the following procedure to configure Windows XP Infiniium Networking for a Crossover Cable.

To configure Windows XP Infiniium networking for a crossover cable:

1. You need to create IP Addresses for both the Infiniium and your PC. Both addresses must have the first 3 sections the same and the last one different. For example, the PC IP address can be 192.168.0.2 and the Infiniium IP address 192.168.0.1.

2. On your Infiniium, quit the scope application if it is running.

3. Open the **Control Panel (Start > Control Panel)**. Open **Network Connections.** (If you are in Category view, click **Network and Internet Connections** and then select **Network Connection**.)

4. Click **Local Area Connection** and then **Properties** to display the Local Area Connection Properties dialog box.

5. Select **Internet Protocol (TCP/IP)** from the connection list and click **Properties** to display the Internet Protocol (TCP/IP) Properties dialog screen.

6. Select **Use the following IP address** and enter the IP Address for the Infiniium you created in step 1 (192.168.0.1 in this example), and type a subnet mask of 255.255.255.0.

7. Click **OK** in the Internet Protocol (TCP/IP) Properties dialog box.

8. Click **OK** in the Local Area Connection Properties dialog box. If Windows prompts you to reboot your Infiniium, click **Yes**. If not, close all open dialog boxes.

9. After the Infiniium reboots, the instrument is ready for LAN control over the LAN interface. Continue to "Configuring PC Networking for Crossover Cable Configuration" on the facing page.

Configuring PC Networking for Crossover Cable Configuration

Complete the following procedure to configure a PC for a Crossover Cable configuration.

To configure PC networking for a crossover cable configuration:

1. On your PC, open the **Control Panel (Start > Control Panel)**.

2. For Windows XP, click **Network Connections > Local Area Connections > Properties**.

   For Windows 7, click **View network status and tasks > Local Area Connection > Properties**.
   This will display the Local Area Connection Properties dialog box.

3. For Windows XP, select **Internet Protocol (TCP/IP)** and click **Properties**.

   For Windows 7, select **Internet Protocol Version 4** and click **Properties**.
   This will display the Internet Protocol (TCP/IP or Version 4) Properties dialog screen.

4. Select **Use the following IP address** and enter the IP Address for the PC you created in step 1 of "Configuring Windows XP Infiniium Networking for Crossover Cable Network" on previous page (this example uses 192.168.0.2.), and enter a subnet mask of 255.255.255.0.

5. Click **OK** in the Internet Protocol (TCP/IP or Version 4) Properties dialog box.

6. Click **OK** or **Close** in the Local Area Connection Properties dialog box. If Windows prompts you to reboot your PC, click **Yes**. If not, close any open dialog boxes.

7. After your PC reboots, the PC is ready for setting up the Agilent IO Config software. Go to "Configuring PC Agilent IO Config for LAN Connection" on page 67.

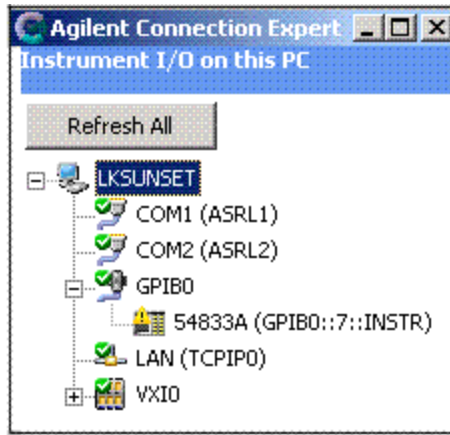# Configuring PC Agilent IO Config for GPIB Connection

The VSA Software will automatically install the Agilent IO Libraries Suite on your PC if they are not already installed. These instructions assume that your computer has a GPIB card installed and operable.

To configure PC Agilent IP Config for a GPIB connection:

1. On the PC with the 89600B software, select: **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert**

   Connection Expert will automatically detect and configure the interface and instruments. It will also assign names and other default configuration settings.

2. To verify that the computer recognized the instrument, expand **GPIB0** in the *Instrument I/O on this PC* section. Connection Expert will list all instruments and their addresses.

NOTE   Agilent Connection Expert will not find the Infiniium scope if the scope application is not running.

NOTE   When the VSA software locates an instrument, it locks onto the instrument so only the VSA software can communicate with it. This will prevent Agilent IO Libraries from any communication with these instruments and cause the green checkmark to become a red X in Connection Expert. You can disconnect the instrument by selecting **Control > Disconnect** in the VSA software. Select Refresh in Connection Expert and the green checkmark will be shown.

Configuring PC Agilent IO Config for LAN Connection

The VSA Software automatically installs the Agilent IO Libraries Suite on your PC if they are not already installed.

To configure PC Agilent IO Config for a LAN connection:

1. On the PC with the VSA software, select: **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert**.

2. Add an instrument.

   Auto discover cannot be done on LAN devices so you must manually add the instrument.
   a. Click on **LAN** in the *Instrument I/O on this PC* section.

   b. Click **Add an instrument** in the *Task Guide* section. The LAN selection should be highlighted but if not, highlight it.

   c. Click **Add Address** in the Add LAN Instruments dialog box

   d. Select **Use IP address** in the LAN instrument dialog box and enter the IP address of the instrument.

   e. Click **Test Connection**. If the dialog box displays a "Could not connect" error, try changing Instrument identification to ***IDN query**.

   f. Click **OK**.

3. To verify that the computer recognized the instrument, expand **LAN** in the *Instrument I/O on this PC* section. Connection Expert lists all instruments and their addresses.
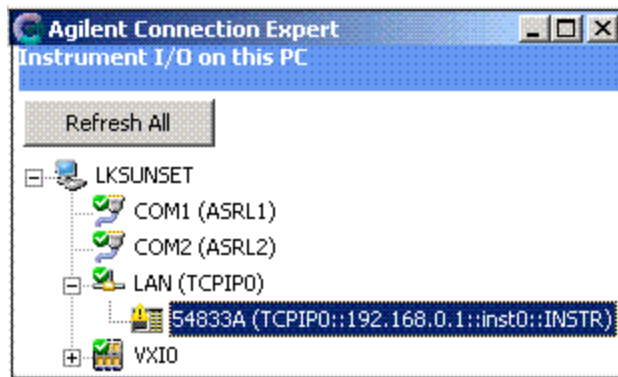
NOTE   Agilent Connection Expert can not find the Infiniium scope if the scope application is not running.
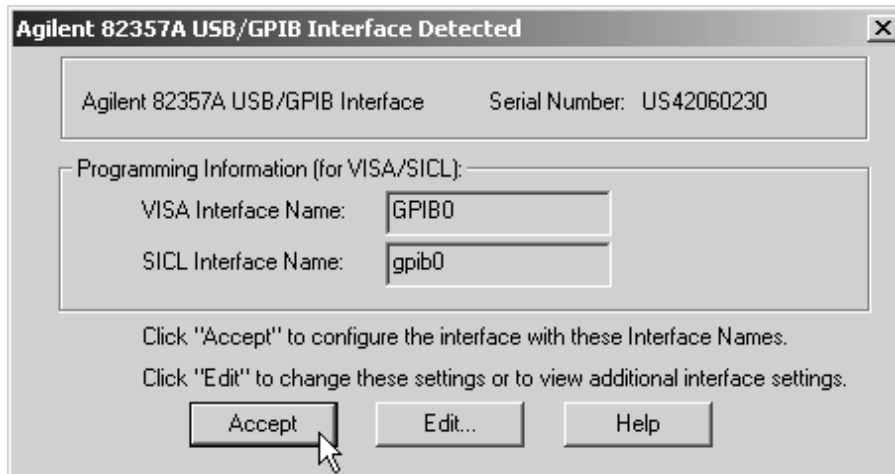
NOTE   When the VSA software locates an instrument, it locks onto the instrument so only the VSA software can communicate with it. This will prevent Agilent IO Libraries from any communication with these instruments and cause the green checkmark to become a red X in Connection Expert. You can disconnect the instrument by selecting **Control > Disconnect** in the VSA software. Select Refresh in Connection Expert and the green checkmark will be shown.

Configuring the USB/GPIB Interface

For details on setting up the 82357 USB/GPIB Interface, see the *82357 USB/GPIB User's Guide* in the Agilent IO Libraries Suite Documentation. Click the **Agilent IO Control** icon in the task bar and select **Documentation > Interface Guides > 82357 USB/GPIB Users Guide**. (Or click **Start > (All) Programs > Agilent IO Libraries Suite > Documentation > Interface Guides > 82357 USB/GPIB Users Guide.**)

To configure the USB/GPIB interface:

1. Plug the 82357 USB cable into a USB port on your PC. Do not connect to your GPIB instrument at this time.

2. Observe the 3 LEDs on the E8237A. Initially, only the red FAIL LED should be on. After the Found New Hardware Wizard runs, all 3 LEDs should be ON. If any LED is off after 20 seconds, stop and refer to the *82357 USB/GPIB User's Guide* in the Agilent IO Libraries Suite Documentation for information.

3. If the *Agilent 82357 USB/GPIB Interface Detected* dialog box appears, click **OK** or **Accept**. (If you want to change any of the settings, refer to the 82357 documentation for instructions.)


4. Connect one or more instruments to the GPIB connector on the 82357.

5. Run Connection Expert.

   Click the **IO Control** icon in the task bar or click **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert**

Connection Expert will automatically detect and configure the interface and instruments. It will also assign names and other default configuration settings.

6. To verify that the computer recognized the instrument, expand **USB/GPIB (GPIB1)** in the *Instrument I/O on this PC* section. Connection Expert will list all instruments and their addresses. To troubleshoot problems, refer to the Troubleshooting chapter in the *82357A User's Guide*.
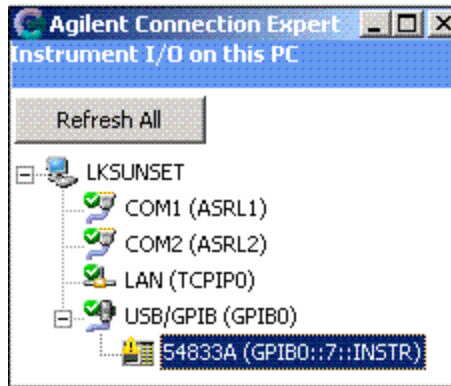
NOTE   Agilent Connection Expert will not find the Infiniium scope if the scope application is not running.

NOTE   When the VSA software locates an instrument, it locks onto the instrument so only the VSA software can communicate with it. This will prevent Agilent IO Libraries from any communication with these instruments and cause the green checkmark to become a red X in Connection Expert. You can disconnect the instrument by selecting **Control > Disconnect** in the VSA software. Select Refresh in Connection Expert and the green checkmark will be shown.

6 Configuring Agilent N7100 Series

Introduction

The Agilent N7100 Series is a modular hardware system that enables the hardware configuration to be changed by adding and removing Agilent N7100 Series peripheral modules or peripheral components (such as antennas) to and from the system. Systems can be controlled with the Agilent 89600B VSA software.

Agilent N7100 Series Systems:

Agilent N7100 Series peripheral modules are the next generation of modular hardware for selected Test & Measurement (T&M) applications such as MIMO.

- Agilent N7109A Multi-Channel Signal Analysis System

Agilent N7100 Series Mainframe and Peripheral Modules:

The Agilent N7100 Series consists of a mainframe and peripheral modules.

- Agilent N7125A Mainframe is an air-cooled 21-slot chassis that provides rugged and modular packaging for 3U Rack Unit size Agilent N7100 Series peripheral modules.

- Agilent N7140A CPU Module is a single-slot module used as a Slot-1 System Controller or as a DSP Module in Slots 2 to 18.

- Agilent N7145A FPGA Processing Module is a single-slot, multi-purpose digital signal processing (DSP) module with hardware that consists primarily of a Virtex-5 FPGA, on-board SD and QDR RAM, along with external connections for LVDS and RS-232. This module comes with an FPGA image that supports different T&M applications such as MIMO.

- Agilent N7130A Option 062 V/UHF 2-Channel Receiver Module, 20 MHz to 6 GHz is a 2-slot, dual-channel receiver + ADC, capable of providing 40 MHz IF bandwidth from 20 MHz to 6 GHz. The V/UHF 2-Channel Receiver Module has a built-in analog-to-digital converter (ADC) that is capable of independent or multi-module phase-coherent operation.

NOTE   You can view and download the latest information for the Agilent N7109A Multi-Channel Signal Analysis System at http://www.agilent.com/find/N7109A.

Software Configuration with Agilent N7109A

This section presents an overview of the process for installing and configuring the Agilent 89600B VSA software that supports Agilent N7109A Multi-Channel Signal Analysis System configurations.

If the Agilent N7109A Multi-Channel Signal Analysis System was integrated at the factory, it is ready to operate with the Agilent 89600B VSA software.

No software needs to be installed on the personal computer or the Slot-1 System Controller.

To configure hardware, refer to the *Agilent N7100 Series Installation and Configuration Guide* (p/n N7100-90001).

Connect Instruments to VSA Software

You can connect the Agilent N7109A Multi-Channel Signal Analysis System to the VSA using the one of the following procedures:

- "Connect to an Instrument on a DHCP Network" below

- "Using Diagnostics & Configuration to Connect, Find, and Identify" on page 76

NOTE   If there is an error in any of the steps of these procedures, refer to"Troubleshooting" on page 85.

Connect to an Instrument on a DHCP Network

1. Click **Start > (All) Programs > Agilent 89600B VSA *xx.y* > N7100 Series > IO Connections** (where *xx.y* is the VSA version number).

2. Click **Add Instrument**.

3. Select the **Agilent N7100** instrument then click **OK**.

4. Click **Discover**.

5. From the displayed list on the *N7100 Series LAN Discovery* dialog box, select an instrument, then click **Identify**.

Serial Number	Host Name	IP Address	Gateway	Subnet Mask	ID	Version	Location	Contact
U550260109	192.168.1.130	192.168.1.130	192.168.1.1	255.255.255.0	00173C0108DA	0.20.0.10120413	Agilent Technologies, Building 3U	
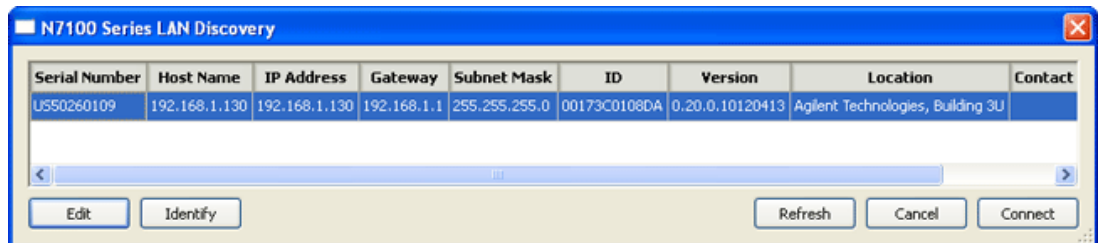
An LED on the N7100 Series instrument blinks for ten seconds to indicate communication and then turns solid green indicating normal operation. On the Agilent N7109A Multi-Channel Signal Analysis System, the LED can only be viewed by opening the front cover; the LED is then viewable on the front, bottom, left corner.

6. On the *Add LAN Instrument* dialog box:
   a. Select **IP Address**.

   b. Enter the IP Address as shown in the *N7100 Series LAN Discovery* dialog box for the identified instrument.

   c. Click **Test Connection**.
      If the instrument is successfully connected, a message similar to the following is displayed along with a green check mark.
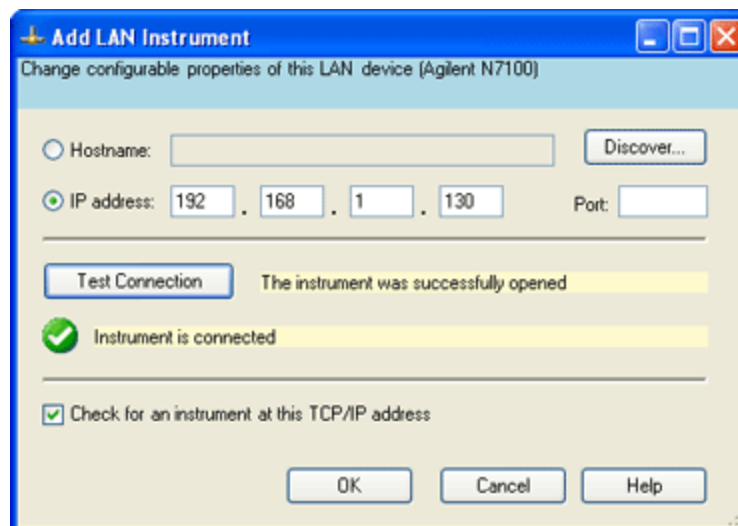
   d. Click **OK** to check for an instrument at this TCP/IP address.

7. Click **Start > (All) Programs > Agilent 89600B VSA *xx.y* > Vector Signal Analysis** (where *xx.y* is the VSA version number).

8. Click **Utilities > Hardware > Analyzer** and move the cursor to hover over the various analyzer selections in the drop-down list.

9. Select the Analyzer that displays as the N7100 analyzer. (In this example, Analyzer2 is the N7100, but it could be different depending on the equipment in your system.
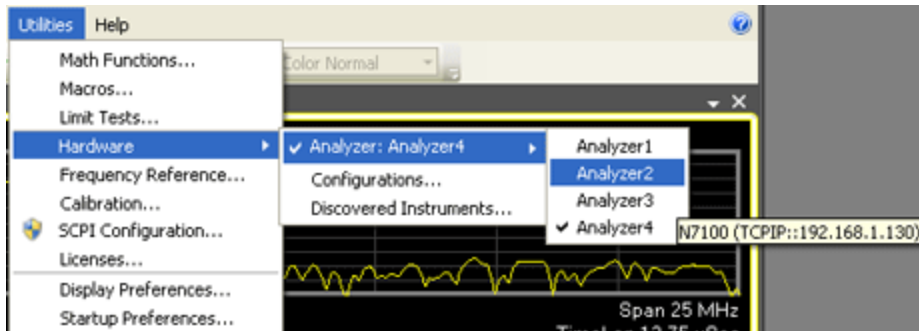
10. If there is no N7100 Analyzer selection:

a. Click **Utilities > Hardware > Configurations.**

b. Click **Add new configuration**. (This is the green plus sign on the left of the dialog box.)

c. In the New Hardware Configuration window, select **Agilent N7100 Analyzer**, then select **">"** to move it under Configuration. Select an instrument to use.

d. Enter a unique name for your analyzer and click **OK**. This makes it easier to find your instrument when making future connections.

e. Click **Utilities > Hardware > Analyzer** and move the cursor to hover over the various analyzer selections in the drop-down list.

f. Select the Analyzer that displays as the N7100 analyzer. (In this example, Analyzer2 is the N7100, but it could be different depending on the equipment in your system.)

11. At this point, the Agilent N7109A Multi-Channel Signal Analysis System hardware should be communicating with the Agilent 89600B VSA software and can be used to perform measurements.

Using Diagnostics & Configuration to Connect, Find, and Identify

This section describes how to use the Diagnostics & Configuration selection to connect, find, and identify an instrument.

| NOTE | Ensure that the Agilent 89600B VSA software is closed before running any tests. |

Click **Start > (All) Programs > Agilent 89600B VSA** *xx.y* **> N7100 Series > Diagnostics & Configuration** (where *xx.y* is the VSA version number). If you have never connected to an instrument, the *N7100 Series LAN Discovery* window opens and you need to click **Cancel** to display the *Agilent N7100 Series Configuration Tool*.

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- "Hardware Tab " on page 80

- "System Tab " on page 82

- "Configuring LAN Settings for a Selected Device " on page 83
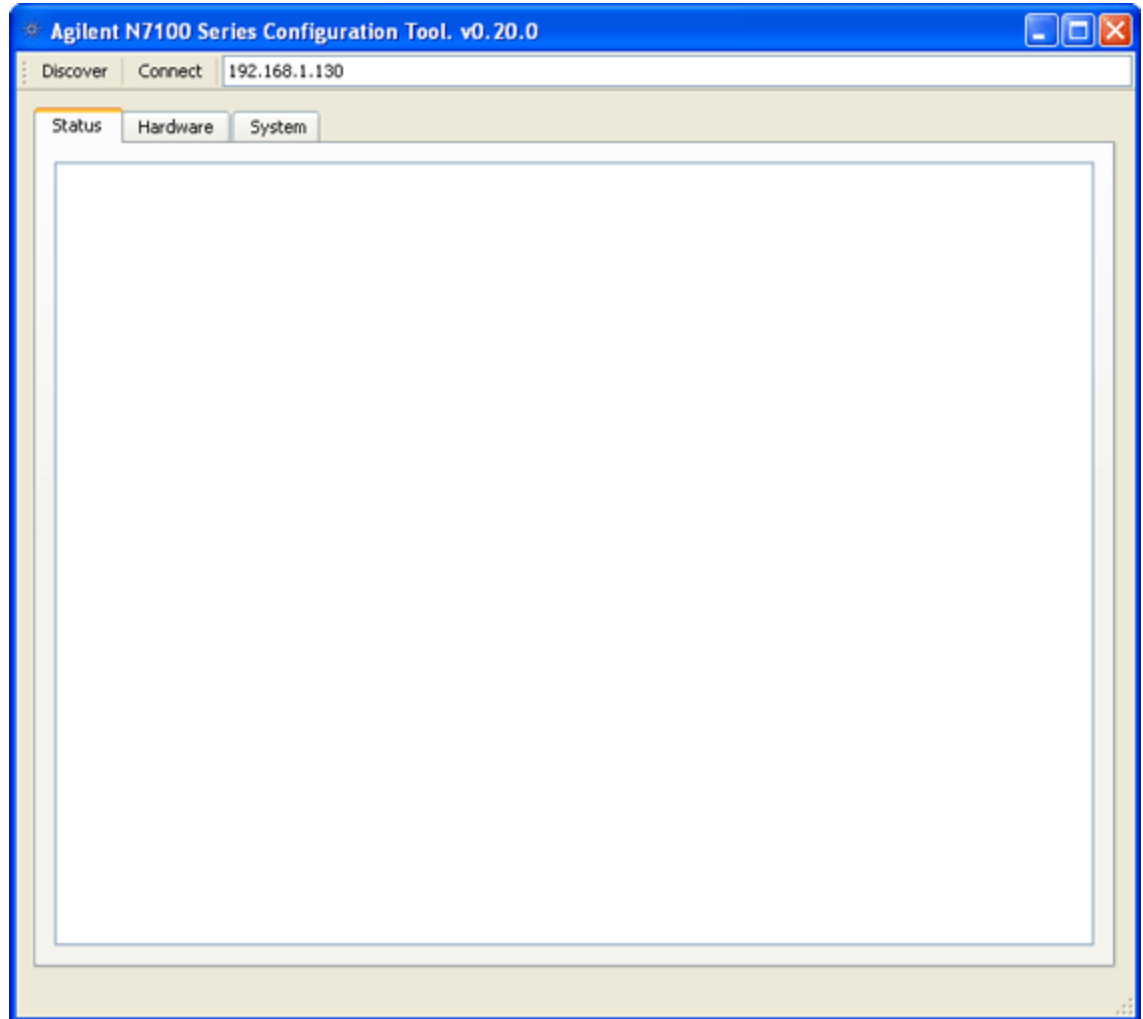
Connecting to Instruments (Connect)

If the currently displayed IP Address is correct, click **Connect** and the device with the currently displayed IP address is connected.

Finding Instruments (Discover)

Click **Discover** and the N7100 Series LAN Discovery tool searches the local LAN connection looking for devices and DHCP servers.

A list of the devices that it finds are then displayed.
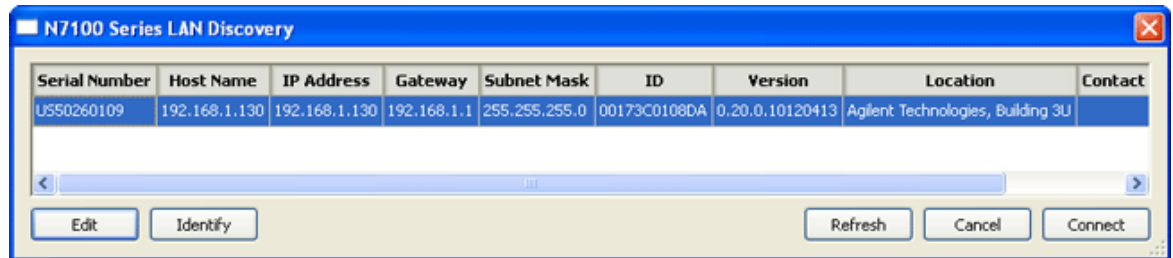
Identifying Instruments

From the displayed list, select an instrument, then click**Identify**.

An LED on the device should blink to indicate communication.

On the Agilent N7109A Multi-Channel Signal Analysis System, the LED can only be viewed by opening the front cover; the LED is then viewable on the front, bottom, left corner.

Status Tab
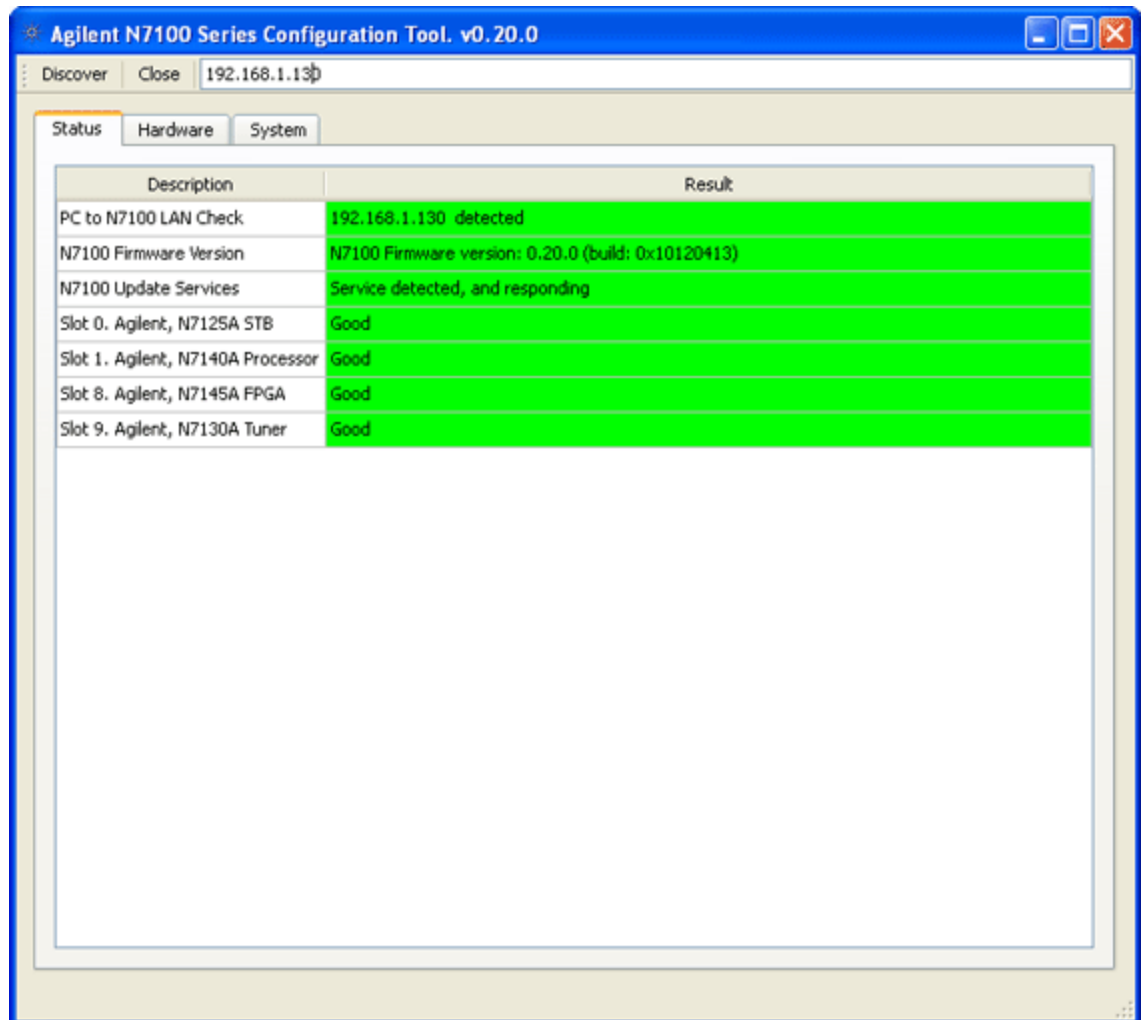
Clicking **Connect** will test out the connections to the Agilent N7109A Multi-Channel Signal Analysis System from your personal computer and check the startup state of the hardware.

● If all boxes are not green, you must resolve the problem.

● If the problem is with a hardware module, more information can be found on the "Hardware Tab " on next page and "System Tab " on page 82.

Hardware Tab

Update Temperatures - use to update the temperature readings of each of the modules in the system and to display the new reading in the Temperature column.

Module Name - displays the name of the Agilent product

Slot / ID - displays the slot number position of the Agilent product

Serial Number - displays the serial number of the Agilent product

Options - displays the options of the Agilent product

Startup Status - displays the status of the Agilent product after it runs a self-test

Temperature - displays the last measured temperature of the Agilent product; it is updated by selecting Update Temperatures.

Version Information - displays the version of FPGA code being used by the Agilent product
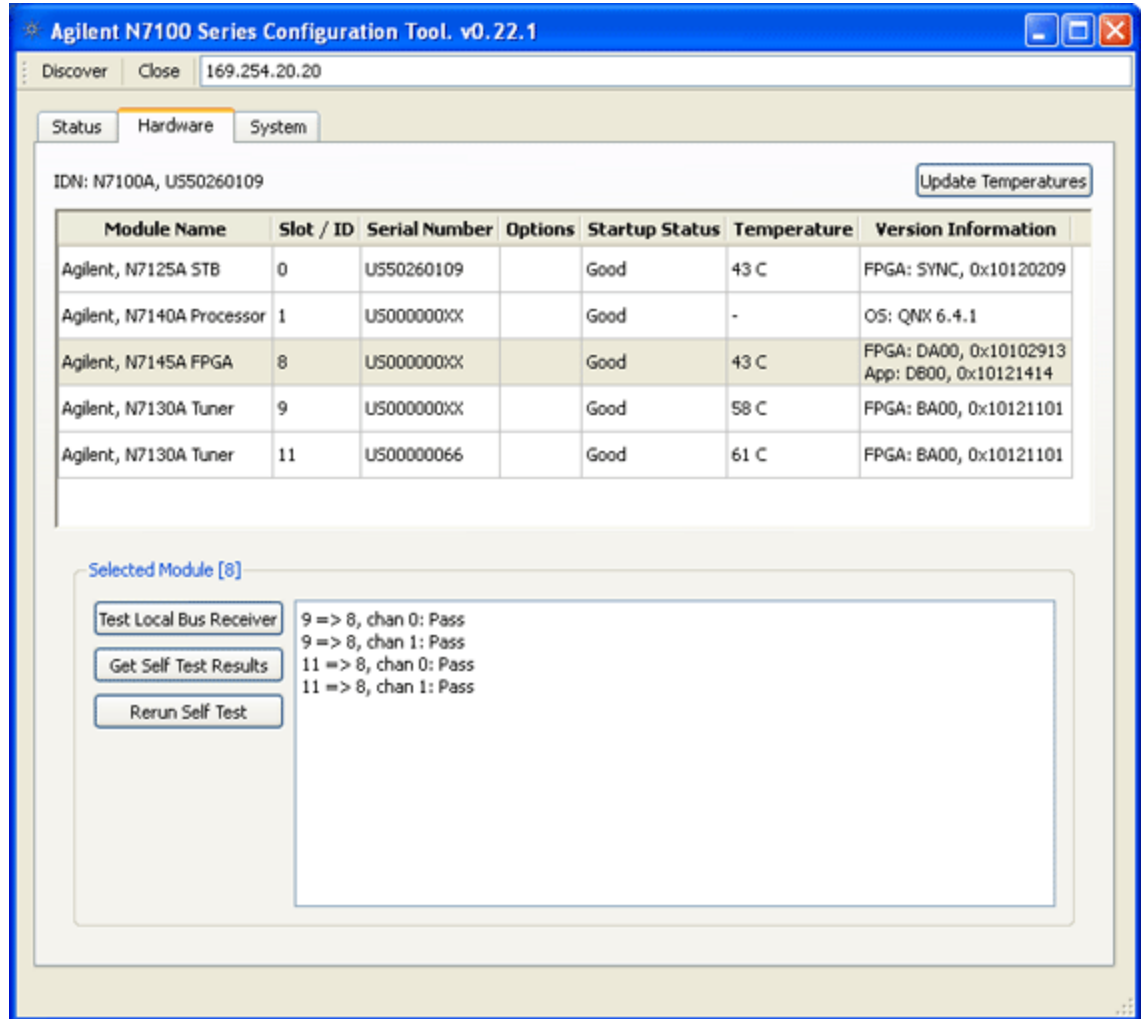
> **NOTE** The Agilent 89600B VSA software must be closed before running any tests because it accesses the same local bus lanes that are used by the following test routines.

Test Local Bus Receiver - displays the results of testing the local bus. For example, in a configuration select the Agilent N7145A FPGA Processing Module from the list of hardware and click **Test Local Bus Receiver**.

In the previous figure, note that the Agilent N7145A FPGA Processing Module is in Slot-8. The results displayed by clicking this button as 9=>8, chan 0:Pass and 9=>8, chan 1:Pass indicates that data transferred properly from channel 0 and channel 1 of the V/UHF 2-Channel Receiver Module positioned in Slot-8. Also, 11=>8, chan 0:Pass and 11=>8, chan 1:Pass indicates that data transferred properly from channel 0 and channel 1 of the V/UHF 2-Channel Receiver Module positioned in Slot-11.

Get Self Test Results - displays the results from the last self test.

Rerun Self Test - reruns the self test and displays (overwrites) the results of any previous self test results.

System Tab
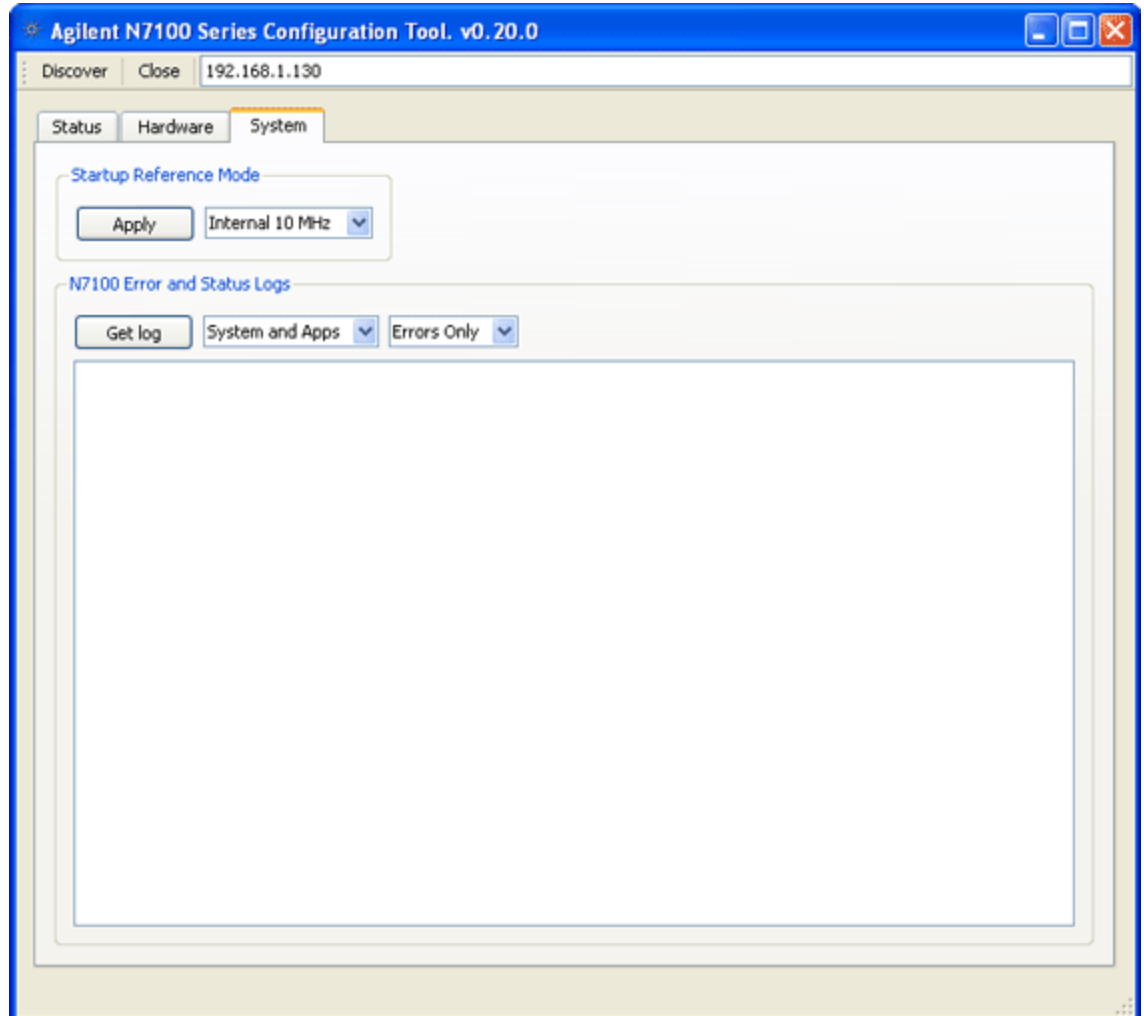
Startup Reference Mode

- **Internal 10 MHz (Default Setting)** - use for the Agilent N7109A Multi-Channel Signal Analysis System.

Instrument Logs

- **Get Log** - use to retrieve the instrument log. The information that is returned is dependent on the selections of the drop-down menus.

- **System and Apps / System Only / Apps Only** - use to select the type of entries to be displayed from the instrument log. You can include both system and application entries, only system entries, or only application entries.

- **All / Errors Only** - use to select either All entries or only Error entries are to be displayed from the instrument log.

Configuring LAN Settings for a Selected Device

Overview of DHCP Networking

- **Router** - a specialized computer (that acts as a Default Gateway), running software that enables data to move from one network to another.

- **Internet Host** - a machine/application connected to the Internet that has an Internet Protocol address (IP address).

- **IP Address** - a group of four numbers, with each group separated by a period (dotted-decimal notation), that is used to uniquely identify every device on a network (such as the Internet). IP addresses must be unique on the network in which they exist.

- **DHCP** - Dynamic Host Configuration Protocol is a client-server set of rules created to enable the dynamic assignment of IP addresses to devices. DHCP reduces the work required by network administrators and prevents IP address conflicts caused by two devices trying to use the same IP address.

- **DHCP Client** - is an Internet host using DHCP to obtain configuration parameters such as an IP address.

- **DHCP Server** - is an Internet host that returns configuration parameters to DHCP Clients. The DHCP Server has a pool of IP addresses from which it draws addresses and then leases them to each DHCP Client device as it boots up and connects to the network. The DHCP Server leases the IP addresses for a period of time set by the network administrator. During the period of the lease, the DHCP Server will not assign that IP address to any other device. When the lease expires, the DHCP Client must either renew the lease or release the IP address.

To configure LAN settings, click **Edit** on the N7100 Series LAN Discovery dialog box.

> **NOTE**   In order to change the IP Address Mode, the Agilent N7109A Multi-Channel Signal
> Analysis System must be rebooted when the *IP Address Mode* is changed!
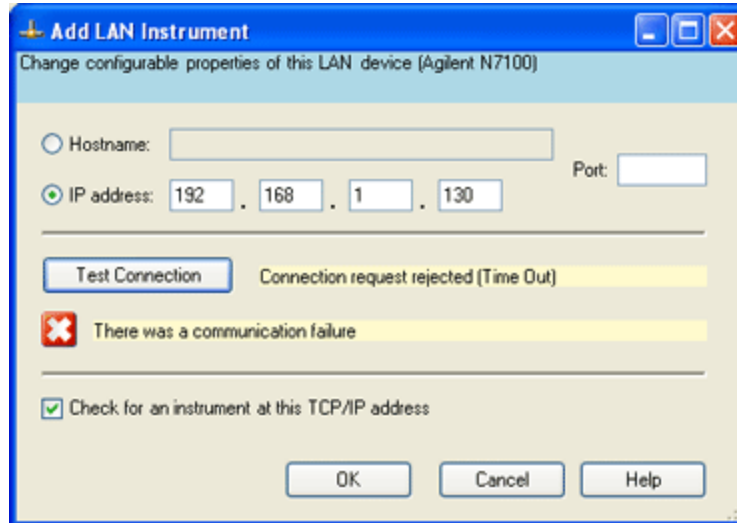
IP Address Mode

- **DHCP with Auto IP Fallback** - (Default Setting). In this IP address mode, a DHCP Server is used to assign IP addresses to each device.
  - If a DHCP Server is not found, it switches (falls back) to Auto IP.

- **Auto IP** - Without a DHCP Server, the device will use Auto IP.
  Auto IP is a client-server set of rules created to enable the automatic assignment of IP addresses to devices that are not using a DHCP server. Auto IP is not the same as DHCP, but also prevents IP address conflicts caused by two devices trying to use the same IP address.

- **Static IP** - Care must be used when setting a device to Static IP because a device may be set to an IP address that conflicts with another device at the same IP address. It is highly recommended that you contact your network administrator before setting a device to a Static IP address.

- **Hostname** - a hostname is an alias for the IP Address. It is assigned to a computer and is used in place of the IP Address - this may make it easier for humans. A computer connected to the Internet may or may not have a hostname, but it must have an IP Address.

- **IP Address** - a group of four numbers, with each group separated by a period (dotted-decimal notation), that is used to uniquely identify every device on a network (such as the Internet). IP addresses must be unique on the network in which they exist.

- **Subnet Mask** - are used to segment IP addresses from one large network into many smaller ones.

- **Default Gateway** - a specialized computer (your local Router), connected to more than one network, running software that allows a device to move data from one network to another. It is used to forward the data from the interface it receives data on, to another interface that retransmits the received data onto another interface serving another network.
  The default gateway is typically the IP address of the local router connected to the local network.

- **Location** - this field may be left empty. It can be used to enter a description of where the device is physically located.

- **Contact** - this field may be left empty. It can be used to enter the name or phone number of the device owner.

Troubleshooting

If there is a problem with *Test Connection*, a message similar to the following is displayed along with a red X mark.

Verify that you entered a valid IP address and try again. You may need to contact your network administrator for a list of valid IP addresses.

If there is a problem when clicking **OK** to check for an instrument at the TCP/IP address, a message similar to the following is displayed.
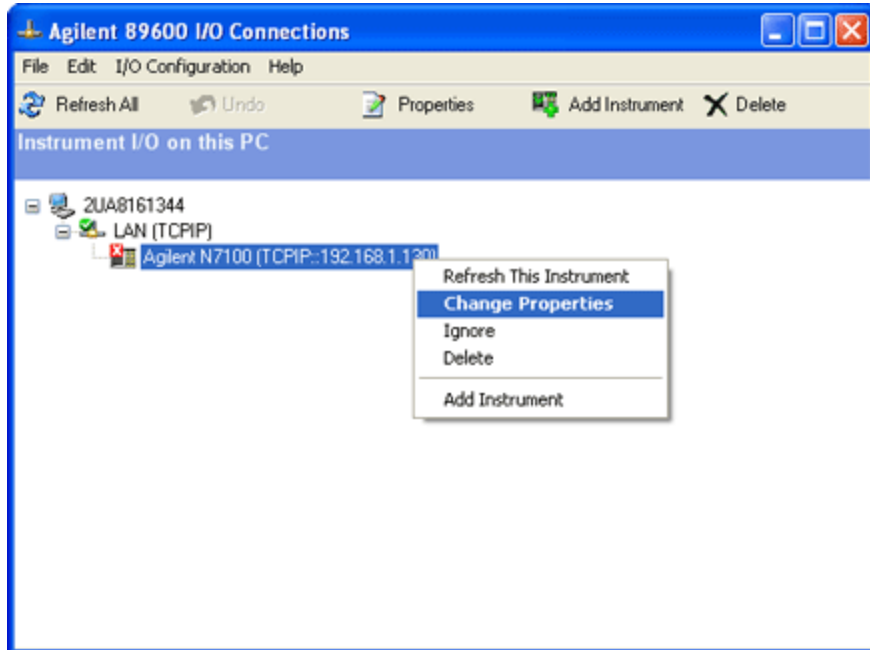
- To correct the problem, point the cursor to the problem instrument with a red X, right-click the mouse to expose a drop-down menu, and click **Change Properties**.

- Verify that you entered a valid IP address and try again. You may need to contact your network administrator for a list of valid IP addresses.

If there is a problem when starting the VSA software.

- The VSA software cannot communicate with the hardware that was added and is warning that it is going to start in Simulation mode.

- Verify that all cable connections are still made, power is on, and that you entered a valid IP address and try again. See "Connect Instruments to VSA Software" on page 74.

7 Configuring Logic Analyzers

Introduction

This chapter includes information related to the Agilent 89600B VSA's link to selected Agilent Logic Analyzers. This capability is available with 89600B VSA software.

The 89600B VSA can capture and analyze time series data on a digital bus using either an Agilent 1680, 1690, 16800, or 16900 series Logic Analyzer as a data source. The Agilent 1680, 1690, 16800, and 16900 series Logic Analyzers all use the same Logic Analyzer software. The Logic Analyzer link to the 89600B VSA is available with Logic Analyzer software revision 3.20 and higher.

Configurations

16900 Series Logic Analyzers

The 16900 series Logic Analyzer application runs on any PC running Windows XP Professional. The PC can be embedded in the 16900 series Logic Analyzer mainframe, or the PC can be connected to the Logic Analyzer mainframe via a LAN.

> **NOTE** The Logic Analyzer application version 3.20 or higher supports both Windows XP Professional Service Pack 1 and Windows XP Professional Service Pack 2.

The 16900 series Logic Analyzer application can be configured to run online or offline. The online configuration acquires data from a digital device using the measurement hardware in the Logic Analyzer mainframe. The offline configuration uses data previously recorded and saved by the Logic Analyzer. Offline analysis does not require a connection to the Logic Analyzer mainframe.

The 89600B VSA application runs on any PC running Windows XP Professional or Window 7. The 89600B VSA application runs on either the 16900 series Logic Analyzer mainframe or on a separate PC. The 89600B VSA works with the 16900 series Logic Analyzer whether the 16900 series Logic Analyzer is online or offline.

Configurations for linking the Agilent 16900 series Logic Analyzer to the Agilent 89600B VSA are:

- Logic Analyzer application and VSA application both running on the Logic Analyzer mainframe. From a speed standpoint, this is generally the highest performance configuration.

- Logic Analyzer application running on the Logic Analyzer mainframe. VSA application running on a separate PC. The VSA application communicates with the Logic Analyzer via the LAN interface.

> **NOTE** The PC and the Logic Analyzer mainframe must both be members of the same domain or workgroup. If the PC and the Logic Analyzer are members of the same workgroup, you must log on to both the PC and the Logic Analyzer using the same user name. If the Logic Analyzer is a member of a workgroup, and uses Windows XP Professional, make sure that it does not use simple file sharing. Click **Start > My Computer > Tools > Folder Options > View** and clear **Use simple file sharing (Recommended)** if currently selected.

- Logic Analyzer application and VSA application both running on the same PC. The Logic Analyzer application communicates with the Logic Analyzer mainframe via the LAN interface.

1680 and 16800 Series Logic Analyzers

The 1680 and 16800 series Logic Analyzer application runs on any PC running Windows XP Professional. The PC can be embedded in the 1680 or 16800 series Logic Analyzer mainframe, or the PC can be connected to the Logic Analyzer mainframe via a LAN.

| NOTE | The Logic Analyzer application version 3.20 or higher supports both Windows XP Professional Service Pack 1 and Windows XP Professional Service Pack 2. |

The 1680 and 16800 series Logic Analyzer application can be configured to run online or offline. The online configuration acquires data from a digital device using the measurement hardware in the Logic Analyzer mainframe. The offline configuration uses data previously recorded and saved by the Logic Analyzer. Offline analysis does not require a connection to the Logic Analyzer mainframe.

The 89600B VSA application runs on any PC running Windows XP Professional or Windows 7. The 89600B VSA application runs on either the 1680 or 16800 series Logic Analyzer mainframe or on a separate PC. The 89600B VSA works with the 1680 or 16800 series Logic Analyzer whether the 1680 or 16800 series Logic Analyzer is online or offline.

Configurations for linking the Agilent 1680 or 16800 series Logic Analyzer to the Agilent 89600B VSA are:

- Logic Analyzer application and VSA application both running on the Logic Analyzer mainframe. From a speed standpoint, this is generally the highest performance configuration.

- Logic Analyzer application running on the Logic Analyzer mainframe. VSA application running on a separate PC. The VSA application communicates with the Logic Analyzer via a LAN interface.

> **NOTE**   The PC and the Logic Analyzer mainframe must both be members of the same domain or workgroup. If the PC and the Logic Analyzer are members of the same workgroup, you must log on to both the PC and the Logic Analyzer using the same user name. If the Logic Analyzer is a member of a workgroup, and uses Windows XP Professional, make sure that it does not use simple file sharing. Click **Start > My Computer > Tools > Folder Options > View** and clear **Use simple file sharing (Recommended)** if currently selected.

- Logic Analyzer application and VSA application both running on the same PC. The Logic Analyzer application communicates with the Logic Analyzer mainframe via a LAN interface.

1690 Series Logic Analyzers

The 1690 series Logic Analyzer application runs on any PC running Windows XP Professional.

> **NOTE**   The Logic Analyzer application version 3.20 or higher supports both Windows XP Professional Service Pack 1 and Windows XP Professional Service Pack 2.

> **NOTE**   Unlike the 1680, 16800, and 16900 series Logic Analyzers, the 1690 series Logic Analyzer does not have an embedded PC in the Logic Analyzer mainframe.

The 1690 series Logic Analyzer mainframe must be connected to a PC via an IEEE 1394 Firewire interface.

The 1690 series Logic Analyzer application can be configured to run online or offline. The online configuration acquires data from a digital device using the measurement hardware in the Logic Analyzer mainframe. The offline configuration uses data previously recorded and saved by the Logic Analyzer. Offline analysis does not require a connection to the Logic Analyzer mainframe.

The 89600B VSA application runs on any PC running Windows XP Professional or Windows 7. The 89600B VSA application works with the 1690 series Logic Analyzer whether it is online or offline.

Configurations for linking an Agilent 1690 series Logic Analyzer to an Agilent 89600B VSA are:

- Logic Analyzer application and VSA application both running on the same PC. The Logic Analyzer application communicates with the Logic Analyzer mainframe via the IEEE 1394 interface. From a speed standpoint, this is generally the highest performance configuration.

- Logic Analyzer application and VSA application running on separate PCs. The Logic Analyzer application communicates with the Logic Analyzer mainframe via the IEEE 1394 interface. The VSA application communicates with the Logic Analyzer application via the LAN interface.

NOTE   The two PC's must be members of the same domain or workgroup. If the PC's are members of the same workgroup, you must log on to both PC's using the same user name.

Connecting to a Network

If either the Logic Analyzer application or the VSA application requires access to the Logic Analyzer mainframe via a LAN, you must:

- Configure the Logic Analyzer mainframe firewall to enable applications to access it.

- Set up a direct LAN connection between the host computer and the Logic Analyzer mainframe using a CAT5 crossover LAN cable or set up the Logic Analyzer mainframe to communicate via your intranet using a standard CAT5 LAN cable.

- Install the Logic Analyzer COM Automation client software on your remote computer.

    NOTE   The PC and the Logic Analyzer mainframe must both be members of the same domain or workgroup. If the PC and the Logic Analyzer are members of the same workgroup, you must log on to both the PC and the Logic Analyzer using the same user name. If the Logic Analyzer is a member of a workgroup and uses Windows XP Professional, make sure that it does not use simple file sharing. Click **Start > My Computer > Tools > Folder Options > View** and clear **Use simple file sharing (Recommended)** if currently selected

Follow the instructions in the Logic Analyzer help topic "Setting Up for COM Automation" to properly set up your network connection and configure the firewall. To access the "Setting Up for COM Automation" information, start the Logic Analyzer application and click **Help > Help Topics > COM Automation > Setting Up for COM Automation**.

The preferred method for installing the Logic Analyzer COM Automation client software is to install the Logic Analyzer software on the remote computer. Installing the Logic Analyzer software automatically installs the COM Automation client. This gives you the benefit of having Logic Analyzer offline analysis capability and the COM Automation client set up on each computer you use to link to the Logic Analyzer. For a free copy of the latest Logic Analyzer software, go to *http://www.agilent.com/find/logic*.

If you would prefer to not install the Logic Analyzer software on your remote computer, you can install just the Logic Analyzer COM Automation client software. The Logic Analyzer COM Automation client software is available on any system that has the Logic Analyzer software installed. The file name is SetupLACOM.exe. The file is located at `C:\Program Files\Agilent Tech-nologies\Logic Analyzer\SetupLACOM.exe`. For additional information

on installing the Logic Analyzer COM Automation client software, refer to "Setting Up for COM Automation" in the Logic Analyzer online help.

For information on configuring the 89600B VSA LAN interface, see "Configuring the LAN interface" on page 47.

89600B I/O Connections

Agilent 89600B I/O Connections is a software utility that helps you to quickly connect and configure your LAN-connected Logic Analyzer instruments, verify operation, and troubleshoot connectivity problems. The 89600B I/O Connections software is installed with the 89600B VSA software. To start the 89600B I/O Connections utility, click **Start > (All) Programs > Agilent 89600B VSA *xx.y* > Logic Analyzer > IO Connections** (where *xx.y* is the VSA version number).

An explorer pane appears when you start the 89600B I/O Connections utility. The explorer pane is a graphical representation of your test system and its status. The following screen shot is of an 89600 I/O Connections explorer pane.
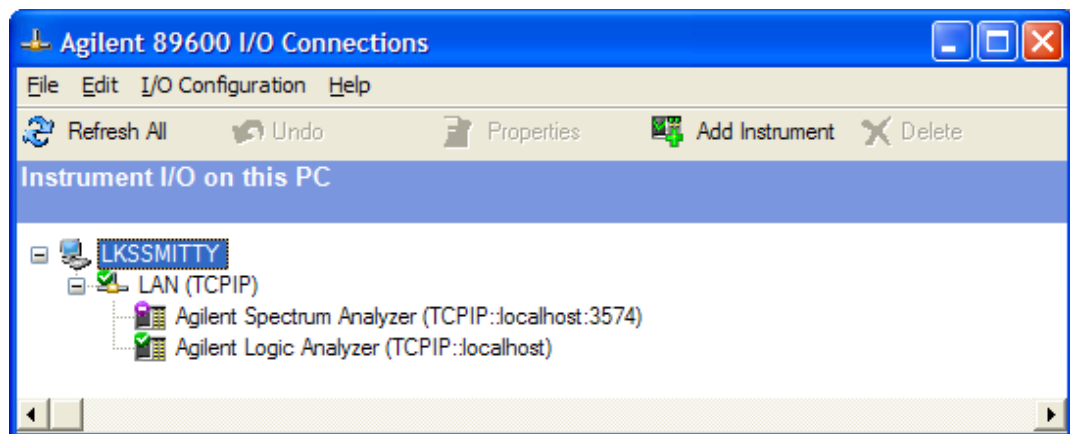
Adding an Instrument

You can use the Agilent 89600B I/O Connections utility to add an instrument in any of the following ways.

- Click **Add Instrument** on the toolbar.

- Right-click anywhere in the Explorer Pane, then click **Add Instrument**.

- From the menu bar, click **I/O Configuration > Add Instrument**.

When the *Add Instrument* dialog box appears, select **Agilent Logic Analyzer** and click **OK**.

When the *Add LAN Instrument* dialog box appears, configure your Logic Analyzer in one of the following ways.

- If you know the hostname of the Logic Analyzer, select **Hostname** and enter the Logic Analyzer hostname.

- If you know the IP address of the Logic analyzer, select **IP address** and enter the IP address of the Logic analyzer.

Click **Test Connection**, verify the connection works and click **OK**.

For additional information on the Agilent 89600B I/O Connections utility, refer to the 89600B VSA online help. To get access to the online help, start the 89600B VSA application, then click **Help > Show Help**. Information about the Agilent 89600B IO Connections is located under **Measurement Platforms > Measurement Hardware > IO Connections for Logic Analyzers and Spectrum Analyzers**.

8 Troubleshooting

Troubleshooting a Licensing Problem

If you have an option 200 license installed but only the Demo license is being used, you should check that your license meets the minimum license version that is required by the software.

To check that your license meets the minimum license version requirement:

1. Start the 89600B VSA. Click **Start > (All) Programs > Agilent 89600B VSA** *xx.y* **> Vector Signal Analysis**.

    ...where *xx.y* is the VSA version number.

2. View the *Minimum License Version Required*. Click **Utilities > Licenses > Status** tab.

3. View the *Version* number of your installed option 200 license. Click **Agilent License Manager** from the License window.

4. If the 89601B option 200 software *Version* number listed in the Agilent License Manager is less than the *Minimum License Version Required* number listed in the License Status tab, then you need a new license to run this software. For example, if the installed license is version 2011.0101 and the minimum license version required is 2011.0701, then you need to order a subscription renewal product.

Troubleshooting a Lost Connection to the Network License Server

This information only applies to systems that use a floating license server and a floating license client.

If two to three minutes after starting the 89600B VSA software, a License Warning message window appears that says *Lost connection to network license server for the following*, you may have a firewall incompatibility. Every two to three minutes, the 89600B VSA software will connect to the license server to check the floating license status. Some third party firewall applications treat this as a port scan attack and will lock out the client. This problem can be fixed by turning off any third party firewall software that resides on the server. This is not an issue with the Windows firewall.

Troubleshooting a LAN Interface Problem

If the 89600B software cannot find your measurement hardware, the problem may be in the LAN interface.

To troubleshoot the LAN interface:

1. Close all 89600B applications. To verify that all applications are closed, run Task Manager.
   a. Right click an empty space in the task bar or press Alt-Ctrl-Delete.

   b. Click **Task Manager > Applications.**

   c. If there are any *89600B* applications listed, highlight them and click **End Task.**

   d. Click the **Processes** tab.

   e. If there are any *Agilent.SA.Vsa.*.EXE* processes in the list, highlight them and click **End Task.**

2. Confirm that your PC can communicate with the instrument.
   a. Open a Command Prompt window: for Windows XP, click **Start > (All) Programs > Accessories > Command Prompt.**

   b. Type **ping** *hostname* and press **Enter**, where *hostname* is the IP address or hostname for the instrument. (For instructions on finding the IP address or hostname, see "Instrument IP Address for a Crossover Cable Configuration" on page 48.)

   If you are successful, continue with step 3 If you are not successful, continue with the next sub-step.

   c. Make sure that the PC is on and the LAN cable is connected to the PC and the instrument.

   d. If you are connecting directly from the PC to the instrument, verify that you are using a crossover LAN cable.

   e. Cycle power on the instrument.

   f. Verify that the subnet mask is set appropriately. For detailed instructions, see: "Instrument IP Address for a Crossover Cable Configuration" on page 48.

3. Confirm that VISA Assistant can find and communicate with the LAN instrument.

4. After you have confirmed that Interactive IO can find the instrument, verify that Interactive IO can send a SCPI query (if the instrument supports SCPI).
   a. Restart Interactive IO if necessary.

   b. Click **Connect** and check the resource name.

   c. Click **Send & Read**.

   d. If there is an error or an incorrect response, try sending a device clear first. Click **Device Clear**. If this does not help, cycle power on the instrument and try step c. again.

5. Start an 89600B application. Look for any error dialog boxes at startup stating that the instrument does not have the proper options or firmware.

6. Verify that the instrument is in the list under **Utilities > Hardware > Configurations.**

LAN Interface Problem With an Infiniium Oscilloscope

If you are having trouble communicating directly over the LAN with an Infiniium Oscilloscope, check that the M libraries on the scope are configured correctly (Click **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert**).

M libraries configuration

VISA Name	SICL Name
GPIB0	hpib7
GPIB1	inst0
TCPIP0	lan

To configure the M libraries (Win XP firewall must be off):

1. On the Infiniium scope, minimize the scope application. Click **Start > (All) Programs > Agilent IO Libraries Suite > Agilent Connection Expert**.

2. Select Internal Instrument in the *Instrument I/O on this PC* and click **Change properties**. Set the following parameters: SICL Interface ID - hpib7, VISA Interface ID - GPIB0, and Logical unit - 7. Press **OK**.

3. Select Internal Instrument in the *Instrument I/O on this PC* and click **Change properties** again. Set the following parameters: SICL Interface ID - inst0, VISA Interface ID - GPIB1, and Logical unit - 8. Press **OK**.

4. Select TCPIP in the *Instrument I/O on this PC* and click **Change properties**. Set the following parameters: SICL Interface ID - lan, VISA Interface ID - TCPIP0, Logical unit - 30 and Default Protocol - Auto. Press **OK**.

5. Select n/a LAN Server in the *Instrument I/O on this PC* and click **Change properties**. Click the **Defaults** button and press **OK**.

6. Close the Agilent Connection Expert dialog box.

You must reboot the scope after closing the Agilent Connection Expert dialog box.

Troubleshooting Interference With Other Devices or Instruments

When you start an 89600B VSA, the software attempts to identify other instruments and devices connected to the computer. This can cause the following problems:

- Instruments and devices get reset when you start the 89600B VSA even if the instrument/device is not controlled by 89600B.

- Errors occur on instruments or devices not controlled by 89600B when you start the 89600B VSA.

To eliminate these problems, you can instruct the 89600B software to exclude specific devices from the identification process. To do this, edit the file:

`C:\Program Files\Agilent\89600B VSA` *xx.y*`\89601B VSA\VsaComponents\VsaVisaTemplate.txt`

...where *xx.y* is the VSA version number

List the addresses of the devices you want to exclude, then save the file as:

`C:\Program Files\Agilent\89600B VSA` *xx.y*`\89601B VSA\VsaComponents\VsaVisaConfig.txt`

...where *xx.y* is the VSA version number

Troubleshooting the Display Driver

This section provides display driver troubleshooting information.

Problem

The symbol location shape, such as the dots, on the constellation trace displays do not show properly.

Possible Cause

The display driver may not be functioning properly.

Solution

Use this procedure to correct the display driver:

1. Update the display driver:
   Contact your PC manufacturer to see if a newer version of the display driver is available. If there is, update the driver and verify if the problem is fixed.

2. Reconfigure the display driver settings:
   If the latest display driver does not fix the problem, try decreasing the hardware acceleration.

   (Windows XP Instructions) Click **Start > Control Panel > Display > Settings > Advanced > Troubleshoot**, then decrease the hardware acceleration value, click **OK > OK**.

9 Setting Up a Floating License Server

Floating License Overview

Use the information in this chapter to set up a floating license server for the 89600B software and to add license files to an existing server. You must set up the license server and your 89600B license (.lic) file before you can run any of the 89600B VSA software that require floating licenses. Floating licenses require a server computer (to manage license control) and client computers (to obtain a license from the server computer) for running the 89600B software. Note that the server computer and client computer can be the same PC.

The following operating systems are supported for use as 89600B license servers.

- Windows XP Professional SP3

- Windows Server 2003

- Windows Server 2008

- Windows 7 Professional, Ultimate, or Enterprise (32-bit or 64-bit)

NOTE   If you will not be running 89600B application software on this PC, install only the License Services and no other part of the 89600B software.

These are the basic steps for setting up your license server, which are described in the rest of this chapter.

1. "Installing License Services" on the facing page.

2. "Redeeming a Floating License " on page 109

3. "Setting Up a Floating License Server" on previous page

4. "Starting Your License Server" on page 112

5. "Creating a License File for the Client PCs" on page 114

Installing License Services

The 89600B VSA software uses the FLEXnet Publisher software for all floating software security configurations. The 89600B setup program installs the FLEXnet Publisher software and the Agilent License Manager software.

Installing license services does the following:

- Creates the *drive:*`\Program Files\Agilent\licensing` folder to contain your license files, where *drive* is typically C:.

- Installs the FLEXnet Publisher software in *drive:*`\Program Files\Agilent\CDF\Bin` folder.

- Installs the Agilent License Manager software in *drive:*`\Program Files\Agilent\Agilent License Manager`.

To install license services:

On the server you only need to install License Services.

1. Insert the Agilent 89600B VSA Software installation DVD.

2. If the installation utility does not start automatically, click **Start > Run**, and type:

   drive:\autoplay.exe

   ...where *drive* represents the drive containing the installation DVD. Click **OK.**

3. When the Agilent 89600B Installation Manager window opens, please read the Readme information.
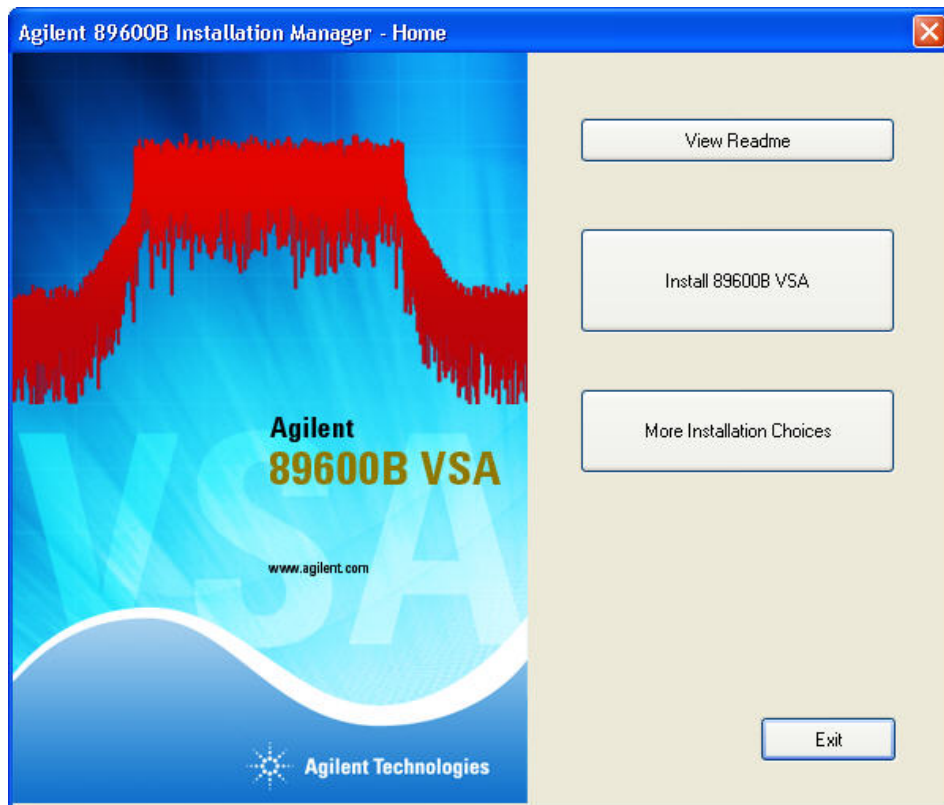
4. After you read the Readme file, close it and click **Install 89600B VSA**. Continue through the InstallShield Wizard until you reach the *Select Products and Features* window.

5. In the *Select Products and Features* window, uncheck *Agilent 89601B VSA* and make sure that *Licensing Services* is checked then continue with the InstallShield Wizard to complete the installation.

6. After the installation is complete, follow the next procedure to redeem your floating license.

Redeeming a Floating License

Before performing these steps, you must have installed the 89600B License Services as described in "Installing License Services" on page 107.

1. Collect the Software License Entitlement Certificates for all copies of the 89600B software and each software option that you purchased. The Software License Entitlement Certificates are printed on gray parchment and are shipped in the Installation Materials envelope.

2. Obtain the license Host Name and Host ID from the computer that you installed the Licensing Services software on.

   a. Click **Start > (All) Programs > Agilent > Agilent License Manager**.

   b. The license Host Name (Server Name) and Host ID (Model Number, Serial Number) are needed in the next step.

   > **NOTE**   For a PC, the default model number is PCSERNO.

3. Go to the Agilent Software Manager website at http://www.agilent.com/find/softwaremanager and follow the instructions to register and assign your licenses.

   - If you have not registered, you will need to register using your email address and a password. Remember your password as you will need to go back to this website to manage your licenses. For example, to restore your license if you hard drive crashes.

   - When registering a license, the requested Order Number and Certificate Number are located on the top of your Software License Entitlement Certificate.

   - When assigning a license, the requested Host Name (Server Name) and Host ID (Model Number, Serial Number) are from the Agilent License Manager in step 2 above. If you are accessing the website from the same PC that the Licensing Services software was installed on, you can simply copy and paste the Host Name and Host ID into the website form.

   - If your order includes 89601BN-200 you will also be activating your Update Service subscription at this website.

4. After you finish using the Agilent Software Manager website, check your email for your license file, then follow the next procedure to install the license.

Installing Your Floating License File

When you receive your license (.lic) file, you must install it on the server PC. If your licenses will be served by a central server, have your system administrator install the license (.lic) file on the license server computer.

To install your floating license file:

When you receive the email containing your license file, follow these steps to install it on the server.

1. Place the license file either on a network-connected drive or on a drive that is directly connected to the server.

2. Start the Agilent License Manager by clicking **Start > (All) Programs > Agilent > Agilent License Manager**.

3. In Agilent License Manager, click **File > Install**.

4. An *Install License File(s)* window appears. In this window, browse to the location where you saved the license file. Select the license file, and then click the **Open** button.

   > **NOTE**   The license will not appear in the Tree View until you configure and start the License Server and perform a *View > Refresh (localhost)* in the Agilent License Manager or restart the Agilent License Manager.
   > For details on other ways to install licenses, see *Installing Licenses* in the Agilent License Manager Help (click **Help > Agilent License Manager Help** from within the Agilent License Manager utility).

5. Follow the next procedure to start your license server.

Starting Your License Server

The information in this section shows you how to start your license server.
To start your license server:

1. Start the Agilent License Manager by clicking **Start > (All) Programs > Agilent > Agilent License Manager**.

2. From the License Manager, open the LMTOOLS dialog box by clicking **Tools > Launch FLEXnet License Tools**.

3. Click the **Config Services** tab and enter the following to configure a new FLEXnet license service:

    a. In **Service Name**, clear the field and enter:
       `FLEXnet License Manager CDF`

    b. In Path to the lmgrd.exe file, enter:
       `C:\Program Files\Agilent\CDF\Bin\lmgrd.exe`

    c. In Path to the license file, enter:
       `C:\Program Files\Agilent\licensing`

    d. In Path to the debug log file, enter:
       `C:\Program Files\Agilent\CDF\Bin\flex.log`

    e. Select the **Use Services** check box.

    f. Select the **Start Server at Power Up** check box.

    g. Click **Save Service**.

4. Click the **Start/Stop/Reread** tab, then click **Start Server**.

5. To verify the status of the server, click the **Server Status** tab then click **Perform Status Enquiry**. You should see your licenses in the window at the bottom of the tab.

6. To view the licenses in the Agilent License Manager, click **View > Refresh (localhost)**.

NOTE   From the Agilent License Manager, click **Help > FLEXnet License Administrator Guide** for more information about the FLEXnet License Tools.

7. Follow the next procedure to create a license file for the client PCs.

Creating a License File for the Client PCs

The client license file redirects licensing requests to your license server.

1. Create the client license file by copying the SERVER, VENDOR, and USE_ SERVER lines from the license to a text file.

2. If the client PC is in a different domain than the server computer, then you need to have the server computer's full domain name in the SERVER line (e.g., if the SERVER host name is *mycomputer*, change it to *mycomputer.mycompany.com*).

3. Save the file with a *.lic* extension (for example, *license.lic*).

4. Install this file on each client PC. See .

Adding License (.lic) Files

If you have been running the Agilent License Manager and receive updated License Files from Agilent, you can add the new licenses to the Agilent License Manager.

To add license (.lic) files:

1. Place the license file either on a network-connected drive or on a drive that is directly connected to the server.

2. Start the Agilent License Manager by clicking **Start > (All) Programs > Agilent > Agilent License Manager**.

3. In Agilent License Manager, click **File > Install**.

4. An *Install License File(s)* window appears. In this window, browse to the location where you saved the license file. Select the license file, and then click the **Open** button.

5. Open LMTOOLS by clicking **Tools > Launch FLEXnet License Tools**.

6. Force the FLEXnet license server to reread the license file by clicking the **Start/Stop/Reread** tab, then click **ReRead License File**.

7. Verify that the license server is working. Click the **Server Status** tab, then click **Perform Status Enquiry**.

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