Agilent Technologies

User's Guide

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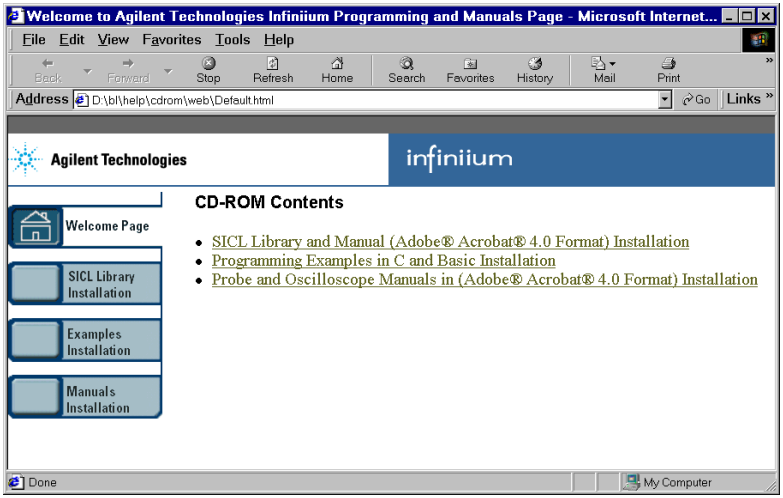


Probe and Oscilloscope Manuals, Example Programs, and SICL Library Installation Instructions

Contents

CD-ROM Contents

- ❏ SICL Library and SICL Manual (Adobe® Acrobat® 4.0).
- ❏ Programming Examples in C and Basic.
- ❏ Probe and Oscilloscope Manuals (Adobe® Acrobat® 4.0).

Installing and Configuring SICL Library

The CD-ROM contains the software for installing the SICL and VISA libraries. If you have already installed the libraries when you installed a GPIB interface card and you plan on using a GPIB interface to communicate with your Infiniium, you do not have to install these libraries. However, if you plan to use the LAN interface to communicate with your Infiniium, you should install these libraries.

It also contains the SICL manual in Adobe® Acrobat® 4.0 format.

Installing the SICL and VISA Libraries

Use the following instructions to install the libraries on a PC running Windows 95, Windows 98, Windows NT, or Windows 2000.

1. Insert the CD-ROM into the CD-ROM drive on your PC.
   The installation program window should appear. If it does not appear, double click on the install.exe program on the CD-ROM.
2. Click on the SICL Library Installation icon.
3. Click on Install Library.
4. Depending on your version of Browser, you may be prompted to either save the file to disk or to run from current location. Choose "Run this program file from its current location.
5. When the InstallShield dialog box appears, click Next.
6. Click Yes.
7. Click Next.
8. If you want to install the SICL library in the default directory click Next. Otherwise, use the Browse button to change the path and click Next.
9. If you want to install the VISA library in the default directory click Next. Otherwise, use the Browse button to change the path and click Next.
10. Click Next to install "Full SICL and Agilent VISA Installation".
11. A dialog box will appear asking the following question:
    Do you want to install Agilent E8491 IEEE 1394 to VXI support?
    Click Yes.
12. Click Next.
13. Select "Auto-configure all interfaces." and click Next.
14. Click Finish to complete the installation process.

Configuring the Interfaces

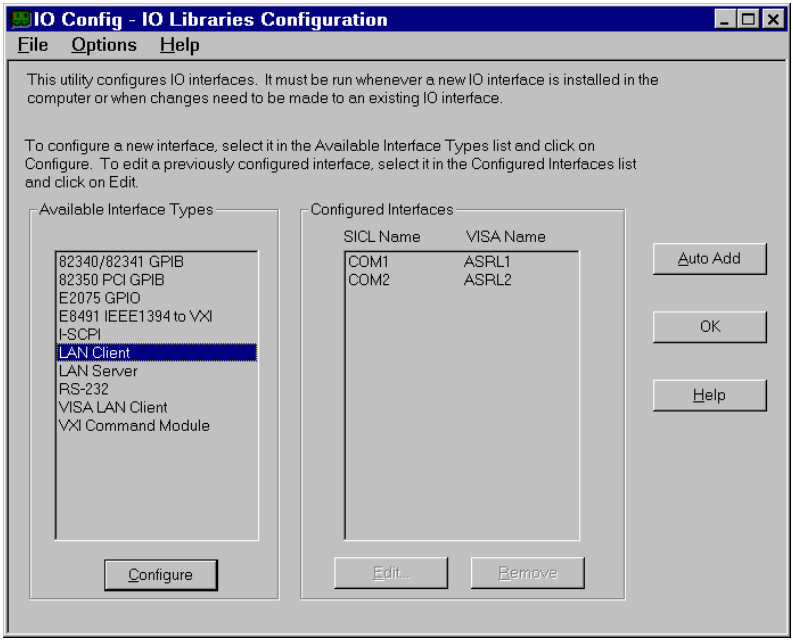
Use the following instructions to configure the interfaces for LAN use.

1 Run the IO Config (iocfg32.exe) program.

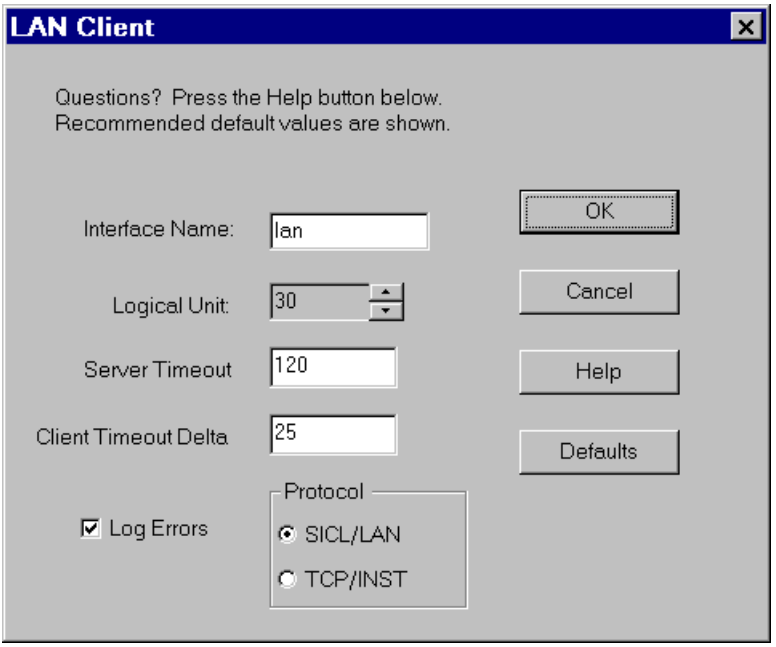
If you installed the libraries in the default directories, you will find this program in the following directory:

C:\Program Files\Agilent\IO Libraries\bin

2 Select LAN Client in the "Available Interface Types" list.

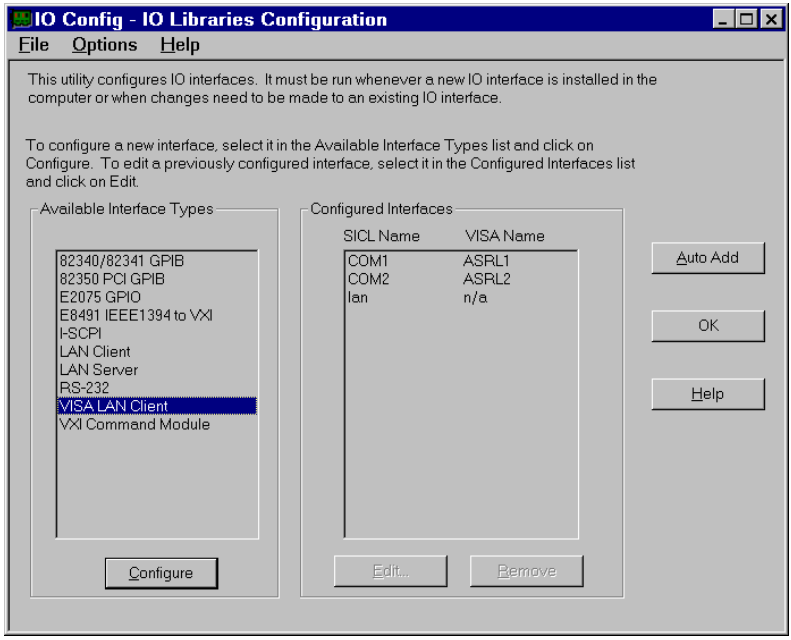


3 Click Configure.

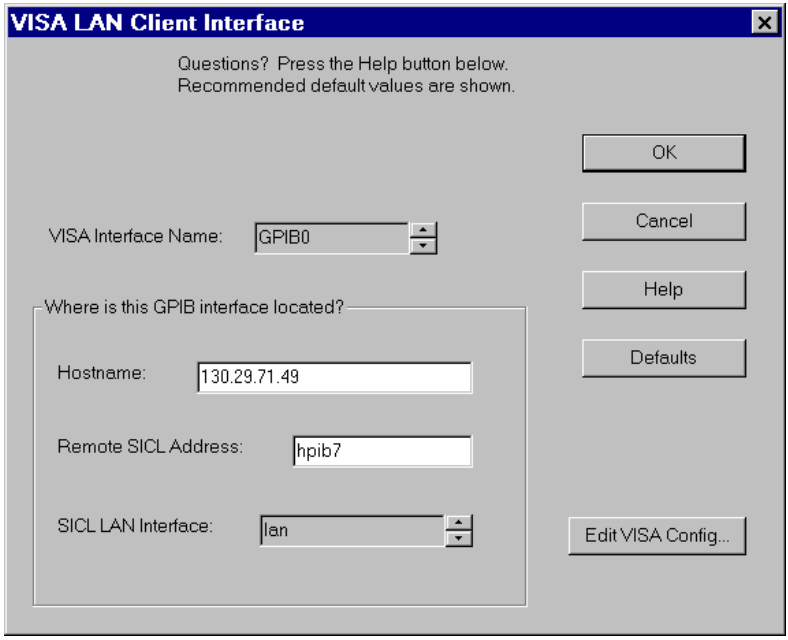


4 Click OK.
This configures a lan client used by the SICL library functions to communicate with Infiniium.

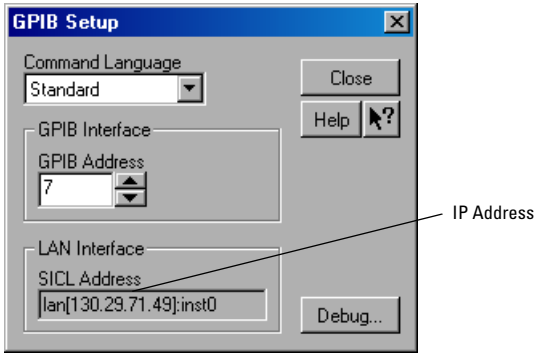
5 Select VISA LAN Client in the “Available Interface Types” list.



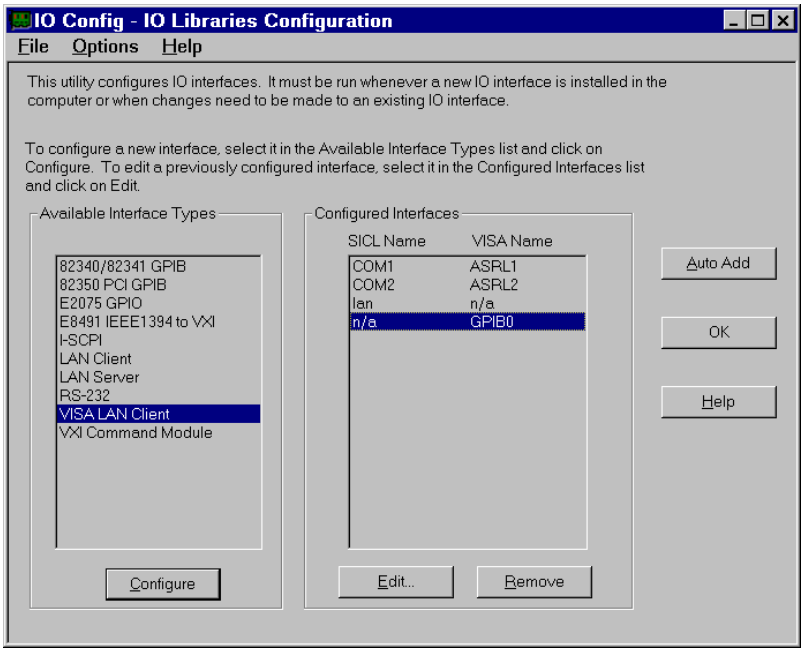
6 Click Configure.



7 In the "Hostname:" field enter the IP address of your Infiniium. You can find the IP address in the GPIB Setup dialog box on your Infiniium. The GPIB Setup dialog is located in the Utilities menu.



8 Click OK.



9 Click OK to close IO Config dialog box.

Programming Examples in C and Basic

This CD-ROM contains C and Basic sample programs for the Infiniium oscilloscope. The programs were developed using Microsoft Visual C++ version 1.52 (for 16-bit applications) and using Microsoft C++ 4.1 (for 32-bit applications). ANSI C and HP Basic for Windows and the Agilent 82341 GPIB interface card were used along with the Agilent Standard Instrument Control Library (SICL). This library includes routines for communicating with Infiniium using the LAN interface.

Also used was the National Instruments' AT/GPIB Plug-n-Play GPIB interface card (version 1.0 for Windows 95 and version 2.7.1 for Windows 3.1).

This CD-ROM also contains the Agilent SICL Library and an Adobe® Acrobat® file of the SICL manual.

C Example Programs Using SICL

The C examples were generated as QuickWin 16-bit applications and as 32-bit console applications. Compile and link the program file (init.c, learnstr.c, or gen_srq.c and srqagi.c) with the file sicl_IO.c.

These files require gpibdecl.h included on this disk and the sicl.h file that is included with the SICL libraries. For 16-bit applications, you must link to MSAPP16.LIB and SICL16.LIB, which are also included with the SICL libraries.

For 32-bit applications, you must link to SICL32.LIB. For more information on these libraries, see your SICL Libraries documentation.

C Example Programs Using National Instruments' Library

The C examples for Windows 3.1 were developed as QuickWin applications and as console applications for Windows 95. Compile and link the program files (init.c, learnstr.c, or gen_srq.c and srqnat.c) with the natl_IO.c file.

These files require gpibdecl.h which is included on this disk, and either windecl.h for Windows 3.1 applications or windows.h and decl-32.h for Windows 95 applications which are included with the National Instruments' software.

For Windows 3.1 applications, you must link to gpib.lib. For Windows 95 applications, link to gpib-32.obj. For more information on these libraries, see your National Instruments' documentation.

C Program Files

gpibdecl.h This file contains prototypes, constants, and global declarations for the example programs. The user MUST modify this file to indicate which interface card is being used, and for the National card which version of Windows is being run.

init.c This program shows how to initialize the oscilloscope, make automatic measurements, transfer data over the bus, convert the data, and store the data to the disk.

gen_srq.c This program initializes the oscilloscope to allow service requests, generates an SRQ, and demonstrates how to handle an SRQ.

srqagi.c This file contains the Service Request Handler code for the Agilent SICL Library.

srqnat.c This file contains the Service Request Handler code for the National Library.

learnstr.c This program demonstrates how to transfer a learn string from the oscilloscope, store it to a file, and re-store the learn string to the oscilloscope.

sicl_IO.c This file contains I/O calls to the Agilent GPIB interface using the Agilent SICL libraries for the 82341 interface card.

natl_IO.c This file contains I/O calls to run with the National Instruments' AT/GPIB Plug-n-Play GP-IB Interface card.

HP Basic Program Files

init.bas This program shows how to initialize the oscilloscope, make automatic measurements, transfer data over the bus, convert the data, and store the data to the disk.

srq.bas This program initializes the oscilloscope to allow service requests, generates an SRQ, and demonstrates how to handle an SRQ.

lrn_str.bas This program demonstrates how to transfer a learn string from the oscilloscope, store it to a file, and re-store the learn string to the oscilloscope.

This directory also contains simplified programming examples using HP Basic for Windows. These programs are included for reference only and are not discussed in any documentation.

min_init.bas This program initializes the oscilloscope, acquires data, and performs two automatic measurements.

graph.bas This program initializes the oscilloscope, acquires data, transfers the data across the bus and graphs it to the PC screen

Using the Agilent 82341 and the NI AT/GPIB Plug-n-Play Interfaces

To use the interface cards with HP Basic for Windows, be sure to declare the appropriate driver in the AUTOST file using the LOAD BIN command. See the Installing and Using Guide included with HP Basic for Windows for the appropriate driver configuration.

Probe and Oscilloscope Manuals

The probe and oscilloscope manuals are in Adobe® Acrobat® 4.0 format. If you have Adobe® Acrobat® installed on your PC, then clicking on one of the manuals links will launch Acrobat®. If you want to save the manual file to your to your hard disk, then right click on the manual's link and select Save Target As from the pop-up menu.

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