After installing the GPIB (either 82341C or 82350 A/B) board in the computer, it is necessary to install or upgrade the corresponding driver and configuration software, located in the “\GPIB” directory on the Agilent ChemStation CD-ROM or the Agilent GP-IB Libraries for Instrument control CD-ROM. To install the I/O Libraries proceed according to the steps described in this note.

The Agilent ChemStation A.10.01 and greater requires version L.02.01.00 of the I/O Libraries. These libraries are supported under both Windows 2000 Professional and Windows XP Professional.

Be sure to follow the correct installation description.

Contents:

Configuring the Agilent 82341C or Agilent 82350 GPIB Interface Drivers under Windows 2000 Professional 2
Configuring the Agilent 82341C or Agilent 82350 GPIB Interface Drivers under Windows XP Professional 12
Upgrading Existing IO Libraries 22
Working with your Agilent IO Libraries 27
What has been changed by the Installation? 27
Troubleshooting 28
Configuring the Agilent 82341C or Agilent 82350 GPIB Interface Drivers under Windows 2000 Professional

Installing New IO Libraries

1. Turn the Computer ON. As Windows 2000 Professional starts, the Found New Hardware Wizard will start. At this moment, select Cancel. (See Figure 2)

Figure 1  Found New Hardware Wizard opens
Agilent IO Libraries L.02.xx or higher
Configuring the Agilent 82341C or Agilent 82350 GPIB Interface Drivers under Windows 2000 Professional

2 Using the Windows Explorer, locate and start ‘iolibs.exe’ in the \GPIB directory of your ChemStation CD-ROM. Follow the instructions in the installation Wizard. This will install the Standard Interface Control Library (SICL) on your computer, update the registry and add a new Program Group called “Agilent I/O Libraries”.

The InstallShield Wizard opens and starts the IO Libraries installation.
3 When the title screen appears (see Figure 4), click **Next** to go the License Agreement screen and then click **Yes** to accept the licenses terms and to display the Readme Information.

![Installation screen IO Libraries](image)

**Figure 4** Installation screen IO Libraries

4 Click **Next** to display the Select Type of Installation screen.
5 Choose installation option Full Installation, for an installation of both the SICL libraries and VISA components. The System will go to the next screen and display the current settings. (see Figure 5)

![InstallShield Wizard](image)

**Figure 5** Installation options

6 By default SICL is installed in C:\Program Files\Agilent\IO libraries. VISA is installed by default in C:\Program Files\VISA\winnt. Click Next if you accept the default setting, or go back to set the directory you want via
Agilent IO Libraries L.02.xx or higher
Configuring the Agilent 82341C or Agilent 82350 GPIB Interface Drivers under Windows 2000 Professional

Custom Installation option. By clicking **Next** the IO Libraries will be installed.

7 The IO Libraries has been successful installed now. Finish the installation without viewing the Readme file and without running the IO Config. Leave the screen with **Finish** and reboot the system.

8 As Windows 2000 starts after power cycling, the **Found New Hardware Wizard** will start again. This time click **Next** (See **Figure 6**)

**Figure 6**  Found New Hardware Wizard
9 Select **Option 2** and click **Next** (See **Figure 7**).

**Figure 7**  Install Hardware Device Drivers
Click **Next** and the installation will start. (See Figure 8).

**Figure 8** Select a Device Driver
11 Select Finish. (See Figure 9)

![Figure 9](image)

12 Start the IO Config Utility by clicking in the Icon and choose Run IO Config.

13 From the list of available interface types choose the appropriate one, i.e. either 82341 GPIB if you have an Agilent 82341C GPIB board installed or 82350 PCI GPIB in case you have the Agilent 82350 board installed (see Figure 10)
14 Select **Configure**. The configuration utility, now attempts to detect the selected GPIB interface in the PC in order to assign the correct resources to the card.
15 Set the SICL Interface Name to \texttt{hp82341}, the Bus Address to 30 and the System Controller flag as shown in Figure 11. Please note that the appearance of the dialog slightly differs depending on the type of GPIB board installed.

\textbf{NOTE}

You need to type in the SICL interface name hp82341 with lower case letters for both cards.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{configuring_gib_cards.png}
\caption{Configuring GPIB Cards}
\end{figure}

16 Select OK. The configured GPIB board should now be listed under Configured Interfaces in the Interface Configuration Screen. Close the window by clicking OK. The installation is complete. Note that you must re-start to initialize the IO Libraries.
Installing New IO Libraries

1. Turn the Computer ON. As Windows XP Professional has started, the user is notified about new detected hardware via tool tip in the right corner of the task bar. The Found New Hardware Wizard will start some while later. At this moment, select Cancel. (See Figure 12)

2. Using the Windows Explorer, locate and start ‘iolibs.exe’ in the \GPIB directory of your ChemStation CD-ROM. Follow the instructions in the installation Wizard. This will install the Standard Interface Control Library.
Configuring the Agilent 82341C or Agilent 82350 GPIB Interface Drivers under Windows XP Professional

(SICL) on your computer, update the registry and add a new Program Group called “Agilent I/O Libraries”.

The InstallShield Wizard opens and starts the IO Libraries installation.

![Install Shield Wizard]

**Figure 13**  Install Shield Wizard

3 When the title screen appears, click **Next** to go the License Agreement screen and then click **Yes** to accept the licenses terms and to display the Readme Information.
4 Click Next to display the Select Type of Installation screen.
5 Choose installation option **Full Installation**, for an installation of both the SICL libraries and VISA components. The System will go to the next screen and display the current settings.

![InstallShield Wizard](image)

**Figure 15** Installation options

6 By default SICL is installed in C:\Program Files\Agilent\IO libraries. VISA is installed by default in C:\Program Files\VISA\winnt. Click **Next** if you accept the default setting, or go back to set the directory you want via...
Custom Installation option. By clicking Next the IO Libraries will be installed.

7 The IO Libraries has been successful installed now. Finish the installation without viewing the Readme file and without running the IO Config. Leave the screen with Finish and reboot the system.

8 As Windows XP Professional starts after power cycling, a tool tip will notify about new hardware and the Found New Hardware Wizard will start again. Select Option 2 and click Next. (See Figure 16)
9 Select **Option 2** and click **Next** (See **Figure 17**).

![Figure 17 Install Hardware Device Drivers](image-url)
Select 82350 PCI and click **Next**. (See Figure 18). The installation of the device driver will start.

![Figure 18 Select a Device Driver](image)
11 Select **Finish**. (See Figure 19).

12 The user will get a notification by the taskbar that the hardware is installed and ready to use. Also the IO Config Utility will be placed now in the taskbar.

13 Start the IO Config Utility by clicking in the Icon and choose **Run IO Config**.

14 From the list of available interface types choose the appropriate one, i.e. either **82341 GPIB** if you have an Agilent 82341C GPIB board installed or **82350 PCI GPIB** in case you have the Agilent 82350 board installed (see Figure 20)
Agilent IO Libraries L.02.xx or higher
Configuring the Agilent 82341C or Agilent 82350 GPIB Interface Drivers under Windows XP Professional

15 Select Configure. The configuration utility, now attempts to detect the selected GPIB interface in the PC in order to assign the correct resources to the card.
16 Set the SICL Interface Name to **hp82341**, the Bus Address to **30** and the **System Controller** flag as shown in Figure 21. Please note that the appearance of the dialog slightly differs depending on the type of GPIB board installed.

**NOTE**

You need to type in the SICL interface name hp82341 with lower case letters for both cards.

![Configuration screens for GPIB cards](image)

Figure 21  Configuration screens for GPIB cards

17 Select **OK**. The configured GPIB board should now be listed under **Configured Interfaces** in the Interface Configuration Screen. Close the window by clicking OK. The installation is complete. Note that you must re-start to initialize the IO Libraries.
Upgrading Existing IO Libraries

Upgrading IO Libs under Windows 2000 / XP

The upgrade of the IO Libraries is the same for Windows 2000 Professional and Windows XP Professional systems.

1. Using the Windows Explorer, locate and start `iolibs.exe` in the \GPIB directory of your ChemStation CD-ROM. Follow the instructions in the installation Wizard. This will install the Standard Interface Control Library (SICL) on your computer, update the registry and add a new Program Group called “Agilent I/O Libraries”.

   The InstallShield Wizard opens and starts the IO Libraries installation.

![InstallShield Wizard](image)

Figure 22  Install Shield Wizard
2 An upgrade screen appears that shows the current version installed and the new version that will be installed. (see Figure 23)

![Upgrade screen](image)

**Figure 23** Upgrade screen
3 When the upgrade screen appears, click **Next** to go the License Agreement screen and then click **Yes** to accept the licenses terms, click **Next** to display the Readme Information and click **Next** again to get to the current settings.

4 By clicking **Next** the system will install the SICL libraries and VISA components.

![InstallShield Wizard](Image)

**Agilent IO Libraries have been successfully installed.**

- You must run Agilent IO Config before you can use the IO Libraries. After installation, Agilent IO Config is available from the IO icon on the taskbar.
- View Readme.
- Run IO Config.

To configure IO hardware that requires a shutdown, click ‘Finish’, power down your computer, install the hardware, reboot and then run IO Config.

To configure IO hardware that does not require a shutdown, plug it in. If it does not auto-configure, check the ‘Run IO Config’ box and then click ‘Finish’ and configure the hardware.

![Figure 24](Image)

**Figure 24** SICL libraries and VISA components

5 Select **Run IO Config** to check configuration of the interface card (see Figure 24)

6 The installed interface card appears already in the Configured Interface List. Please verify VISA Name GBPI0 and SICL Name hp82341. Otherwise select the configured interface and enter via **edit**. (see Figure 25)
If necessary set the SICL Interface Name to **hp82341**, the Bus Address to **30** and the **System Controller** flag as shown in figure. Please note that the appearance of the dialog slightly differs depending on the type of GPIB board installed.

**NOTE**

You need to type in the SICL interface name hp82341 with lower case letters for both cards.
When installation is complete, leave the screen with **OK**. Note that you must re-start to initialize the IO Libraries.
Working with your Agilent IO Libraries

What has been changed by the Installation?

Depending on the installation option you selected, SICL and/or VISA were installed and several program icons were created. In addition, an Agilent IO Libraries Control was created.

During installation, the Agilent IO Libraries program group was created.

Figure 27 Agilent IO Libraries program group
Troubleshooting

Missing files during installation

During installation it might be possible that the system is looking for some IO installation files which are not copied during the installation process. In case of these the system will ask you to manually locate the files during the installation process.

1. The manual process might take place during the installation of the driver, after choosing **next** to start installation (see **Figure 28**)

![Figure 28 - Driver Installation Screen](image-url)
2 The wizard asks for the file `agtgpibclass.dll` as shown in Figure 29.

![Figure 29](image1.png)  
**Figure 29** Searching for file

3 Browse to C:\windows\system32\ and click **OPEN**. (See **Figure 30**)

![Figure 30](image2.png)  
**Figure 30** file Location
4 Select **OK** as shown in Figure 31

![Figure 31 Choosing file](image)
5 The wizard asks for the file `agt82350.sys` when an Agilent 82350 card is installed as shown in Figure 32.

![Figure 32](image1.png)

**Figure 32** Searching for file `agt82350.sys`

6 Browse to `C:\windows\system32\drivers\` and click OPEN. (See **Figure 33**)

![Figure 33](image2.png)

**Figure 33** File location
7 Select **OK** as shown in **Figure 34**

![Figure 34](image)

**Figure 34** select file
8 After the driver installation is completed press **Finish**, the configuration of the driver can be done using the IO Config Utility described in the installation procedures.

![Figure 35 Finishing installation](image.png)
Problems with Plug and Play option

Operation systems using Plug and Play may show problems during the installation of the appropriate drivers for the GPIB (PCI) cards.

In order to overcome plug and play related problems please follow the steps to install the card successfully.

1. If already installed, uninstall the Agilent IO Libraries from Control Panel, Add/Remove Programs.

2. Remove the GBIB Interfaces (if installed) listed under the Device Manager and shutdown the computer.
   For Windows 2000: Control Panel, double-click System, Hardware Tab, Device Manager, GPIB Interfaces
   For Windows XP: Control Panel, double-click System, Hardware Tab, Device Manager, GPIB Interfaces

3. Physically remove the GPIB card from the computer’s PCI Interface.

4. Restart the computer and log on to the system. Install the Agilent IO Libraries revision L.02.01. Do not configure the card this time and shutdown the computer.

5. Install the GPBI card again and turn on the computer - the new hardware found wizard will indicate that a PCI card is found. Select the second choice
to search from a list of known devices and there select the option for Agilent Technologies, since the IO Libraries are already installed.

6 If the new hardware wizard does not run, then check the device manager to verify that the GPIB interfaces is listed and installed correctly.

installation procedures.

![Device Manager Windows 2000](image)

**Figure 36** Device Manager Windows 2000

7 To configure the GPIB card please follow the instructions stated in the first sections of this booklet. Continue by step 12 (Windows 2000)/step 13 (Windows XP).

“Start the IO Config Utility by clicking in the Icon and choose **Run IO Config**.