Agilent IO Libraries Read Me

Version L.02.01.00
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General Information

This IO Libraries package supports Windows® 98, Windows Me, Windows NT®, Windows 2000 and Window XP Professional.

After you have installed the Agilent IO Libraries, you can double-click on the 'IO Readme' icon in the 'Agilent IO Libraries' folder to view the latest information about the Agilent IO Libraries.

These information and troubleshooting files are in HTML format and reside in the 'readme' subdirectory of the main IO Libraries installation directory. If you have installed the IO Libraries in the default location, these files are located in:

C:Program FilesAgilentIO Libraries

These files are also present in the 'readme' subdirectory on the Agilent IO Libraries CD-ROM.

Note that you must have a web browser installed on your computer to view these files.

Electronic manuals are also included on the CD-ROM in the 'Manuals' subdirectory. Setup options also allow you to install these manuals on the hard drive. They are installed in the 'Manuals' subdirectory of the main IO Libraries installation directory.

To view the electronic manuals that are included with IO Libraries you will need Adobe® Acrobat® Reader version 3.01 or later installed on your computer. You can obtain the latest Acrobat Reader from Adobe's web site at:

http://www.adobe.com/products/acrobat/readstep2.html (Note: This link opens a new browser window.)

Adobe Acrobat Reader can also be installed from the IO Libraries CD-ROM. Double-click on the icon in the 'Adobe' subdirectory of the CD-ROM to install it.

New Features and Changes

- Support for 82350B 5V PCI GPIB interface has been added.

Fixes

- A problem in the sicl32.bas file for Visual Basic that caused the functions igpibllo, igpibpulseifc, iserialbreak and ivxiwaitnormop to fail was fixed.

Issues

- On Windows NT 4.0, this version of the Agilent IO Libraries requires the following be installed to supply Microsoft® DLL's that are not present on a bare Windows NT 4.0 installation:
  - Service Pack 6 or later -- oleacc.dll.
  - Microsoft Internet Explorer version 4.0 or later -- shlwapi.dll.
- Use of the %F (file pointer) SICL format specifier is not recommended.
  - The %F specifier uses a file pointer returned from an fopen call. If this pointer is opened in an application and passed to a DLL (as it is will be to Sicl32.dll when calling ipriintf or iscanf), it will only be valid if both the application and the DLL load the same copy of the runtime libraries. Sicl32.dll is built using the Microsoft mult-threaded DLL version of the runtime libraries. Since we routinely upgrade to newer versions of Microsoft Visual C as we develop new versions of the IO Libraries, applications which use the %F format specifier that were compiled to work with one version of the IO Libraries will fail (usually with an access violation) when run under a newer version.
- The 82357 USB to GPIB converter will fail to install correctly on Windows 98SE systems if USBSCAN.SYS is not present.
  - USBSCAN.SYS is a Microsoft driver that is required for 82357 operation, but it may not be installed on some Windows 98 systems.
  - If USBSCAN.SYS is not present on your system, after installing the IO Libraries and then plugging in an 82357, the 'Adding New Hardware' wizard will prompt you for the location of USBSCAN.SYS. This file is present on the Windows 98SE installation disk.
  - For more detailed instructions on this topic, refer to the 82357 USB/GPIB Troubleshooting Guide topic in the Troubleshooting Guide
- 82341C GPIB cards and E2075A GPIO cards are not supported on Windows Me.
  - Due to Windows configuration manager changes made by Microsoft, these ISA cards are very difficult to configure and can cause the computer to hang during the configuration process. Refer to the html troubleshooting page for more information.
- The 82341D GPIB card is not supported on Windows 2000.
  - Note, however, that the 82341C card is supported.
- The Adaptec PCI to 1394 card which originally shipped with the E8491 VXI to 1394 interface is not supported on Windows 2000.
  - This original card was not OHCI compliant and only OHCI 1394 cards are supported on Windows 2000.
  - The E8491 is now shipping with an OHCI compliant card which is supported on Windows 2000.
- Beginning with the J.01.00 release, the default paths for IO Libraries and VISA have changed to:

'Program FilesAgilentIO Libraries' for SICL
'Program FilesVISA' for VISA

   If you are installing over a previous version of the IO Libraries, the directories will not be changed.

- We recommend downloading a Windows 2000 hotfix from Microsoft to resolve two known problems which affect the E8491.
- Block write and I-SCPI performance on the E8491 on Windows 2000 are significantly reduced due to the workaround for a memory leak in the 1394 driver.
- Performance problems and missed interrupts on Windows 2000 are possible due to a busy-acknowledge defect in the 1394 driver. This is known to affect some E8491 firmware downloads and some I-SCPI and VXIplug&play drivers.
- Microsoft has implemented a hotfix which solves both of these problems. Go to:

   http://www.microsoft.com (opens in a new browser window)

   and search for 'Q262814' to find the Knowledge Base article with information on obtaining the hotfix. If you have difficulty, contact Agilent Support for more information.

- The hotfix must be obtained from Microsoft. Microsoft does not allow Agilent to distribute Windows 2000 hotfixes.

- Microsoft has stated that this fix will be included in the Windows 2000 Service Pack 2 when it becomes available.
- The E8491 driver will sense the presence of the hotfix or Service Pack 2 and automatically switch to a higher performance mode if either is installed.
- We recommend downloading a Windows 98/Me hotfix from Microsoft to resolve a known Windows 98/Me IEEE 1394 problem which affects the E8491.
  - Performance problems and missed interrupts on Windows 98 and Windows Me are possible due to a busy-acknowledge defect in the 1394 driver. This is known to affect some E8491 firmware downloads and some I-SCPI and VXIplug&play drivers.
  - Microsoft has implemented a hotfix which solves this problem. You can find out more about this hotfix by going to:

    http://www.microsoft.com (opens in a new browser window)

  - and searching for Q252183 to find the Knowledge Base information on obtaining the hotfix. If you have difficulty, contact Agilent Support for more information.
  - The hotfix must be obtained from Microsoft. Microsoft does not allow Agilent to distribute Windows hotfixes.
- There is a memory leak in Windows 98 which may affect the IO Libraries operation.
  - We have observed a 4 Kb memory leak each time any program that dynamically links the Microsoft msvcrt.dll (even a program that does not do IO) is run and then exits on Windows 98. This DLL is the C runtime library supplied with Microsoft Visual Studio® and it is used by many products.
  - The IO Libraries dynamically link to msvcrt.dll so any program using SICL and / or Agilent VISA will exhibit this problem. If your application involves starting and stopping programs many times, you will eventually run out of memory. Windows 98 will gradually become sluggish and eventually quit. The only solution to this problem is to reboot.
  - We are reporting this defect to Microsoft but there is no resolution yet available.
  - Note: If in Microsoft Visual Studio, you choose 'Multithreaded DLL' in the 'Use run-time library:' box on the C/C++ Code Generation tab, your application will dynamically load msvcrt.dll.
- When three or more E8491's are connected to a single IEEE 1394 interface card, certain topologies may not work.
  - In certain topologies the E8491 hardware is not properly identified on the 1394 bus. This will result in inconsistent behavior when the VXI resource manager tries to configure instruments in the VXI card cages.
  - Behavior may include timeout errors while attempting to communicate with a particular instrument, and / or instruments appearing in cages where they are not actually located.
  - Try reversing the cable connections to the ports on the host interface card. In general, cable connections with longer chains of E8491's should be on lower host ports.
- Don't re-run setup too quickly.
  - After the IO Libraries Setup program exits, it takes several seconds to clean up and unload itself from memory. If Setup is re-run before this process is complete, you may see an error message or find that the re-installation does not behave as expected.
  - Be sure to wait until the 'InstallShield Wizard' box on the Windows task bar has disappeared before attempting to re-run the IO Libraries Setup.
- Installing on dual boot systems can cause problems.
  - Installing the IO Libraries on dual boot systems that share a common 'Program Files' directory between two operating systems is not recommended and may cause problems.
  - If the IO Libraries are installed in the same directory for both operating systems (e.g. 'Program FilesAgilentIO Libraries'), files for one OS may overwrite files for the other OS.
  - InstallShield uses a directory under 'Program Files' to log the name and location of files for later un-installation as well as the components that are currently installed. Uninstalling or modifying an installation on one OS may affect the files for the other OS rather that the currently booted OS, even if these files are installed in different directories.
- After installation on Windows 95 and Windows 98, Windows may fail to boot.
  - When adding paths to the PATH statement in Autoexec.bat, InstallShield does not recognize '@PATH' as a path statement. It will create a second 'SET PATH' statement. If there is a second PATH statement, it will replace the existing Windows PATH and end up removing the Windows directories from the PATH.

- o If Windows fails to boot with a message 'Cannot find WIN.COM, unable to continue loading Windows', you will need to edit the additional PATH statement in Autoexec.bat so the Windows directories are again included in the PATH.
  - From the DOS prompt type:

    'c:windowscommandedit c:autoexec.bat'.

    (Substitute the actual paths if you have a non-standard installation.)

  - Find the last 'SET PATH=...' statement and insert '%path%;' immediately after the equals sign. (e.g. 'SET PATH=%path%;...' and don't forget the semi-colon separator.)
  - Save the modified file and reboot. Windows should now boot normally.
- If the E8491 is very busy and an IEEE 1394 bus reset occurs, it may become unresponsive and require a reset of the E8491 and/or a reboot of the computer.
  - o This problem can occur when another 1394 device is added or removed while the E8491 is busy.

Contact Support

The Agilent IO Libraries support web page is:

http://www.agilent.com/find/iolib

For Telephone support:

- In the US, the phone number for support is 800-452-4844.
- In the Canada, the phone number for support is 877-894-4414.
- Outside the US and Canada, contact your country's Agilent support organization. A list of contact information for other countries is available on the Agilent website at:

    http://www.agilent.com/find/assist.

Downloading the Latest Version of the Agilent IO Libraries

You can download the latest released version of the Agilent IO Libraries from:

http://www.agilent.com/find/iolib

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