

# **VXIPLUG&PLAY SOFTWARE KIT NI-VISA™ FOR SOLARIS 1.x/2.x SUN AND GSUN FRAMEWORKS**

Thank you for purchasing a National Instruments *VXIplug&play*-compliant controller. To be compliant with *VXIplug&play* specifications, a VXI controller must provide the VISA I/O driver library standardized by *VXIplug&play*. VISA ensures that your controller can run all *VXIplug&play*-compatible software now and in the future, while NI-VXI and NI-488.2 ensure that your controller can run the installed base of drivers and applications. The NI-VXI and/or NI-488.2 driver software are included with your controller, and the documentation that accompanies your controller describes how to install and use them. This *VXIplug&play* software kit includes NI-VISA, which is the National Instruments implementation of VISA, and related documentation. This document describes how to install your NI-VISA software.

The NI-VISA software in this kit is compatible with both the SUN and GSUN frameworks for both Solaris 1.x and Solaris 2.x. With NI-VISA installed on your computer, you can run any *VXIplug&play* software that is compatible with these frameworks. This includes instrument drivers and executable soft front panel software included with *VXIplug&play*-compatible instruments from a variety of vendors.

Please also see the `readme.txt` file included with your software for the most up-to-date information about this release of NI-VISA.

# Components

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The *VXIplug&play* software kit contains the following software and documentation components.

## Software

- VISA 1.1 Shared Object
- VISA 1.1 GPIB-VXI Component
- VISA 1.1 Support Files for LabVIEW and LabWindows®/CVI for Solaris 1.x or 2.x
- VPP-6 Compliant Solaris Installer
- HyperHelp Runtime Environment

## Documentation

- *NI-VISA Programmer Reference Manual*
- *NI-VISA User Manual*

# Supported Application Development Environments

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This release of NI-VISA for Solaris 1.x and Solaris 2.x supports the following Application Development Environments (ADEs):

- LabVIEW version 4.x
- LabWindows/CVI version 3.1
- gcc version 2.6.3
- acc versions SC 1.0 and SC 2.0.1 (Solaris 1.x only)
- cc version SC 3.0.1 (Solaris 2.x only)



**Note:** *Although NI-VISA has been tested and found to work with these ADEs, other ADEs or higher versions of the ADEs listed in the previous section may also work.*

# Installation Procedures

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The NI-VISA installer not only installs the NI-VISA software but also prompts you to install the LabWindows/CVI Run-Time Engine and the VISA support files for LabVIEW and/or LabWindows/CVI. The LabWindows/CVI Run-Time Engine is required, but you need to install the VISA support files only if you want to use LabVIEW and/or LabWindows/CVI as VISA application development environments (ADEs). If you installed NI-VISA prior to installing these ADEs, you must rerun the NI-VISA installer and install the support files in the directory where you installed LabVIEW and/or LabWindows/CVI.

If LabVIEW and/or LabWindows/CVI is already installed on your system, complete the steps in this order:

1. Install your NI-VXI/NI-488.2 driver software.
2. Install your NI-VISA software.
3. Install the HyperHelp Runtime Environment or verify that you have at least version 5.0 on your system.

If you performed these steps before installing LabVIEW and/or LabWindows/CVI but you do intend to use these ADEs, you can install them at this time. You must then rerun the NI-VISA installer so that you can install the VISA support files for LabVIEW and/or LabWindows/CVI.

The preferred method is to ensure that LabVIEW and/or LabWindows/CVI is installed before your driver software. The remainder of this section describes the installation steps in detail.

## Step 1. Install Your NI-VXI/NI-488.2 Driver Software

The installation method varies depending on the type of controller you purchased, as shown in the following table. Refer to the documentation that came with your controller for detailed installation instructions.

Controller	Installation
VXI-SB2020 MXI controller	Install the NI-VXI for Solaris software.
GPIO-VXI/C controller or any National Instruments GPIO board that has a Solaris driver	Install the NI-488.2 for Solaris software.

If you plan to use NI-VISA with only the serial ports on your computer, you do not need to install NI-VXI or NI-488.2.

## Step 2. Install Your NI-VISA Software

This section describes how to install the NI-VISA software on your controller. You must be logged on as super-user (you need root privileges to install this software). If you are using Solaris 1.x, refer to the next section, *Installing NI-VISA on Solaris 1.x*. If you are using Solaris 2.x, refer to the *Installing NI-VISA on Solaris 2.x* section.

### Installing NI-VISA on Solaris 1.x



**Note:** *The NI-VISA driver for Solaris 1.x requires that the kernel configuration include the semaphore and shared memory components.*

#### Installing from Floppy Disk

1. Type the following command to change to a temporary directory:

```
cd /tmp
```

2. Type the following command to copy the install script from the NI-VISA diskette:

```
tar xvf /dev/rfd0c INSTALL
```



**Note:** *The device name shown in this code example may be different for your system. Please refer to your system's user guide or system administrator for the correct device name. If it is different, modify the `INSTALL` script to reflect the correct device name.*

3. Type the following command to execute the install script:

```
./INSTALL
```

Follow the instructions as prompted.

4. Type the following command to remove the install script:

```
rm INSTALL
```

5. Add the following environment variables to your shell setup file as shown in the following example for `csh`. The following commands assume that you installed NI-VISA into `/usr/vxipnp`:

```
setenv VXIPNPPATH /usr/vxipnp
```

```
setenv LD_LIBRARY_PATH /usr/vxipnp/sun/bin
```



**Note:** *If your shell setup file already contains the `LD_LIBRARY_PATH` variable, you need to append `/usr/vxipnp/sun/bin` to the end of the statement. The required commands may vary from those shown in the previous section if you are not using `csch`.*

## Installing from CD

1. Type the following command to change to the VISA directory on the CD-ROM:

```
cd /cdrom/visa/solaris1
```



**Note:** *The device name shown in this code example may be different for your system. Please refer to your system's user guide or system administrator for the correct device name.*

2. Type the following command to execute the install script:

```
./INSTALL
```

Follow the instructions as prompted.

3. Add the following environment variables to your shell setup file as shown in the following example for `csch`. The following commands assume that you installed NI-VISA into `/usr/vxipnp`:

```
setenv VXIPNPPATH /usr/vxipnp
```

```
setenv LD_LIBRARY_PATH /usr/vxipnp/sun/bin
```



**Note:** *If your shell setup file already contains the `LD_LIBRARY_PATH` variable, you need to append `/usr/vxipnp/sun/bin` to the end of the statement. The required commands may vary from those shown in the previous section if you are not using `csch`.*

## Installing NI-VISA on Solaris 2.x

### Installing from Floppy Disk

1. Type the following command to change to a temporary directory:

```
cd /tmp
```

2. Type one of the following commands to copy the install script from the NI-VISA diskette:

- If you are *not* running volume management:

```
tar xvf /dev/diskette INSTALL
```

- If you *are* running volume management:

```
tar xvf /vol/dev/rdiskette0/unlabeled INSTALL
```



**Note:** *The device name shown in this code example may be different for your system. Please refer to your system's user guide or system administrator for the correct device name. If it is different, modify the `INSTALL` script to reflect the correct device name.*

3. Type the following command to execute the install script:

```
./INSTALL
```

Follow the instructions as prompted.

4. Type the following command to remove the install script:

```
rm INSTALL
```

5. Add the following environment variables to your shell setup file as shown in the following example for `cs`. The following commands assume that you installed NI-VISA into `/opt/vxipnp`:

```
setenv VXIPNPPATH /opt/vxipnp
```

```
setenv LD_LIBRARY_PATH /opt/vxipnp/sun/bin
```



**Note:** *If your shell setup file already contains the `LD_LIBRARY_PATH` variable, you need to **append** `/opt/vxipnp/sun/bin` to the end of the statement. The required commands may vary from those shown in the previous section if you are not using `cs`.*

## Installing from CD

1. Type the following command to change to the VISA directory on the CD-ROM:

```
cd /cdrom/visa/solaris2
```



**Note:** *The directory name shown in this example may be different for your system, depending on whether you are running volume management. Please refer to your system's user guide or system administrator for the correct device name.*

2. Type the following command to execute the install script:

```
./INSTALL
```

Follow the instructions as prompted.

3. Add the following environment variables to your shell setup file as shown in the following example for `csh`. The following commands assume that you installed NI-VISA into `/opt/vxipnp`:

```
setenv VXIPNPPATH /opt/vxipnp
```

```
setenv LD_LIBRARY_PATH /opt/vxipnp/sun/bin
```



**Note:** *If your shell setup file already contains the `LD_LIBRARY_PATH` variable, you need to append `/opt/vxipnp/sun/bin` to the end of the statement. The required commands may vary from those shown in the previous section if you are not using `csh`.*

## Step 3. Install the HyperHelp Runtime Environment



**Note:** *If you have installed LabVIEW version 4.x on your system, the HyperHelp Runtime Environment was installed for you, so you may omit this step.*

This section describes how to install the HyperHelp Runtime Environment file. You must install this file to access the NI-VISA online help. To install the file, complete the following steps:

1. Identify the directory in which you want to install HyperHelp, and switch to that directory.

For example, if you want to install HyperHelp under the `/usr` directory, enter the following command:

```
cd /usr
```



**Note:** *For Solaris 1.x the recommended directory is `/usr`. For Solaris 2.x the recommended directory is `/opt`.*

The HyperHelp installation procedure creates a `hyperhelp` subdirectory in the current working directory.

2. Type the following command to insert the HyperHelp media into your installation device and copy the HyperHelp archive files:

```
tar xvf /dev/rfd0
```



**Note:** *The device name shown in this code example may be different for your system. Please refer to your system's user guide or system administrator for the correct device name.*

Repeat this procedure for all HyperHelp runtime environment and configuration diskettes.

3. Type the following commands to uncompress and unzip the HyperHelp files:

```
uncompress *.Z  
./gunzip.arch *.gz
```

where *arch* represents your platform name (sol1 or sol2).

The `gunzip` utility is distributed under the terms of the GNU General Public License solely for the purpose of uncompressing the HyperHelp files. In accordance with the terms of the license, to obtain source code for `gunzip`, send an e-mail to [support@bristol.com](mailto:support@bristol.com).

4. Type the following command to unarchive each file that ends with the `.tar` extension:

```
tar xvf filename.tar
```

5. Set the `HHHOME` environment variable to the location of the HyperHelp files. Add the following corresponding lines to your login file:

**C Shell Users:**

```
setenv HHHOME install_dir/hyperhelp
```

**Korn Shell or Bourne Shell Users:**

```
HHHOME=install_dir/hyperhelp;export HHHOME
```

6. Add `$HHHOME/bin` to your `PATH` environment variable.



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