



Vitrek 95x Instrument Driver v2.0

Release Notes

Overview

| | |
|---------------------------------------|---------------------------------------|
| Instrument Driver Technologies | LabVIEW Plug and Play (project-style) |
| Manufacturer | Vitrek LLC |
| Operating System | Windows 10 |
| Supported Language: | LabVIEW 2010 |
| Interface(s) supported: | Serial RS232, Ethernet |
| Model(s) Tested: | 951i |
| Firmware Revision(s) Tested: | v2.38 |

The Vitrek 95x Instrument Driver and LabVIEW SDK includes LabVIEW Virtual Instruments (VIs) that can be used for controlling most of aspects of the Vitrek 95x Hipot tester. The 95x LabVIEW SDK consists of multiple VIs that control the 95X hardware by issuing instrument-specific 95x string commands and receiving responses when appropriate. These commands and responses are relayed to and from the 95x hardware through the communication interface (e.g serial RS232, Ethernet). More information on any of the supported 95x commands can be obtained from the *Vitrek 95x Operating manual*. In addition, the document *95x VI Finder.pdf* in this SDK lists 95x supported commands together with the corresponding LabVIEW VIs that call them.

Installation

Unzip the ZIP file into a folder called “Vitrek 95x” on your hard drive.

The main components of the SDK are located in two folders. The *Examples* folder contains two small LabVIEW applications that perform a complete measurement sequence on the instrument. The *Public*

folder contains elemental sub-VIs – many of which are called by the applications in the *Examples* folder.

Required Software

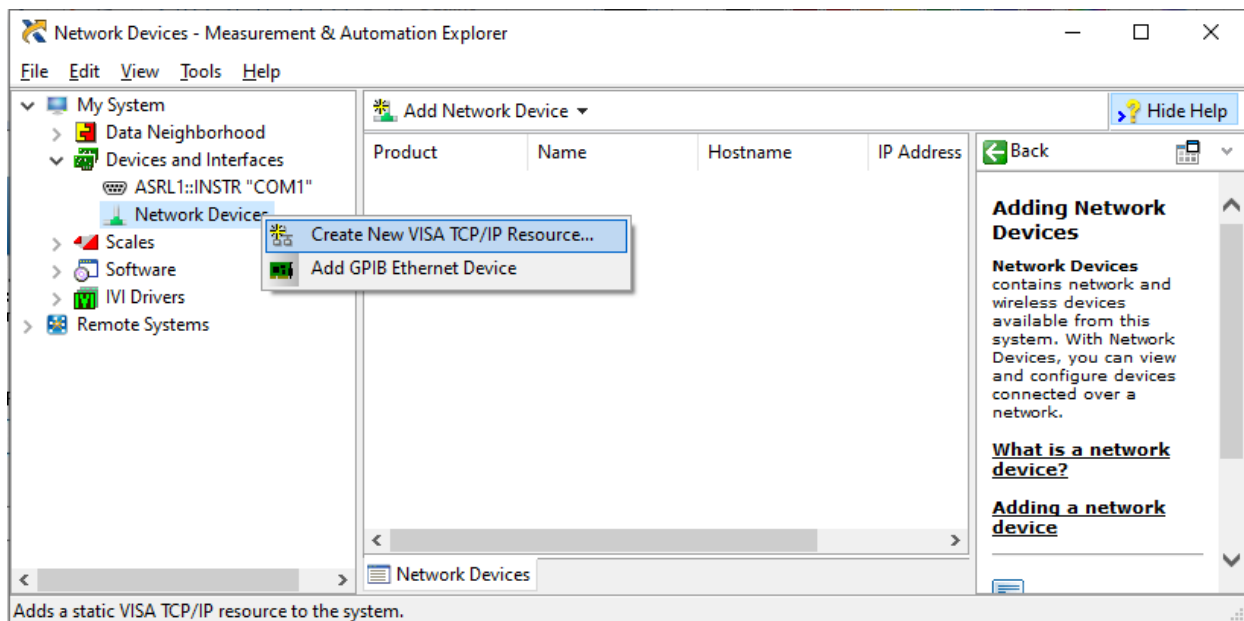
A VISA driver is required for this instrument driver to operate correctly. The VISA driver can be downloaded from the National Instruments download web site.

Refer to the *LabVIEW Help* for more information about software requirements. You access the *LabVIEW Help* by selecting *Help/LabVIEW Help*.

Ethernet Interface

In order to use the ethernet interface with LabVIEW, a VISA resource name for the ethernet port must be created. Please follow the following steps to create the VISA Resource Name:

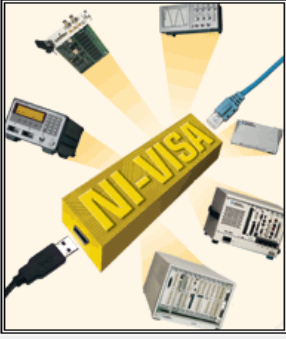
- Run NI Measure and Automation Explorer (NI MAX).
- Under Devices and Interfaces. Right click on Network Devices and choose Create New Visa TCP/IP Resource.



- In the dialog box that is opened, choose “Manual Entry of Raw Socket”, and click Next

Create New ... ? X

Choose the type of LAN resource you want to add. NATIONAL INSTRUMENTS



Choose the type of TCP/IP resource you wish to add.

☐ Auto-detect of LAN Instrument
Use this option to select from a list of VXI-11 LAN/LXI instruments detected on your local subnet.

☐ Manual Entry of LAN Instrument
Use this option if your VXI-11 LAN/LXI instrument is on another network.


☒ Manual Entry of Raw Sockets
Use this option to communicate with an Ethernet device over a specific port number.

< Back Next > Finish Cancel

- Enter the IP address and the port number that have been assigned for the Vitrek 95x then click Next.

Create New ... ? X

Enter the LAN resource details. NATIONAL INSTRUMENTS



Enter the TCP/IP address of your VISA network resource in the form of xxx.xxx.xxx.xxx, the hostname of the device, or a computer@some.domain

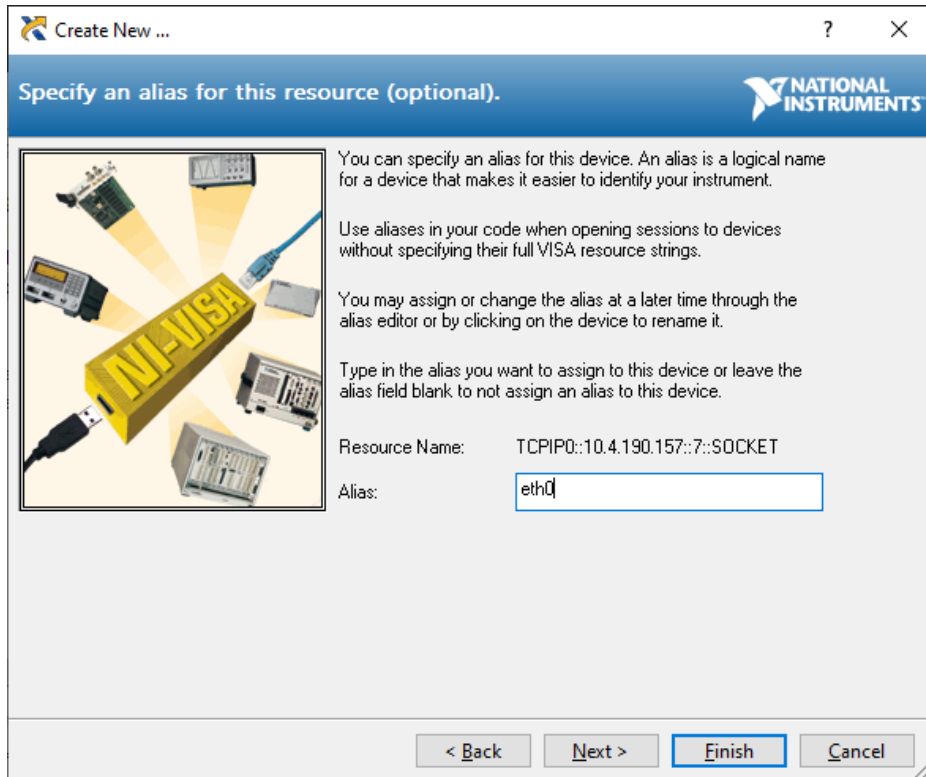
Hostname or IP address
10.4.190.157

Port Number
10733

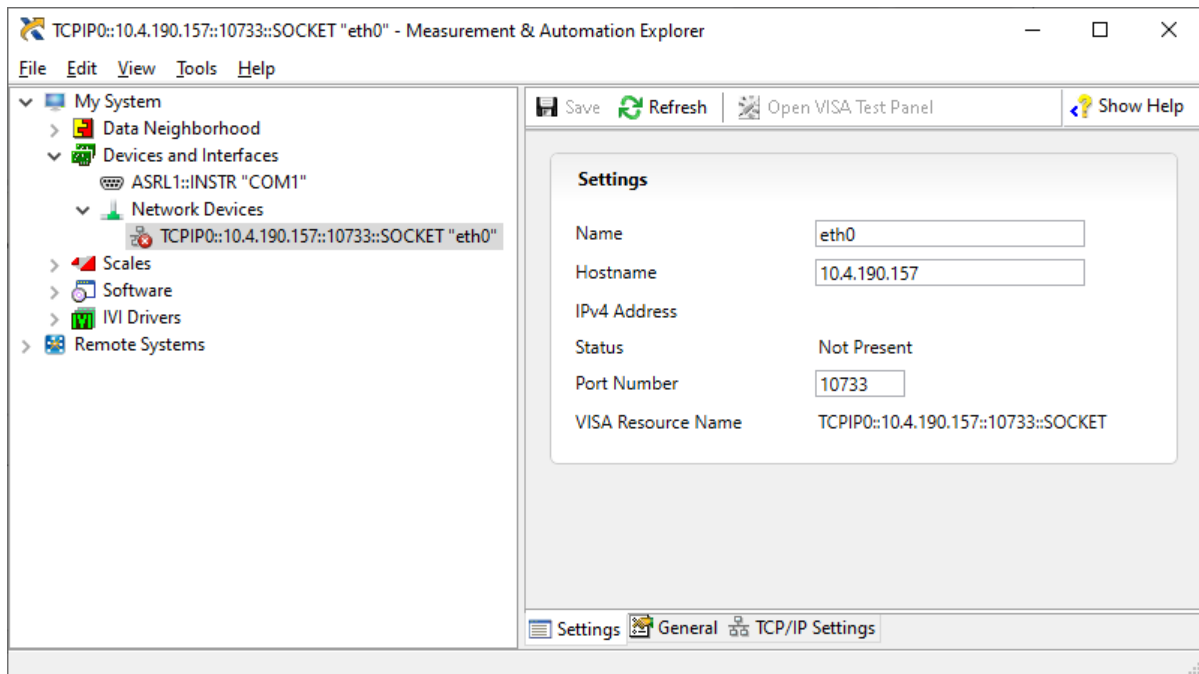
Validate

< Back Next > Finish Cancel

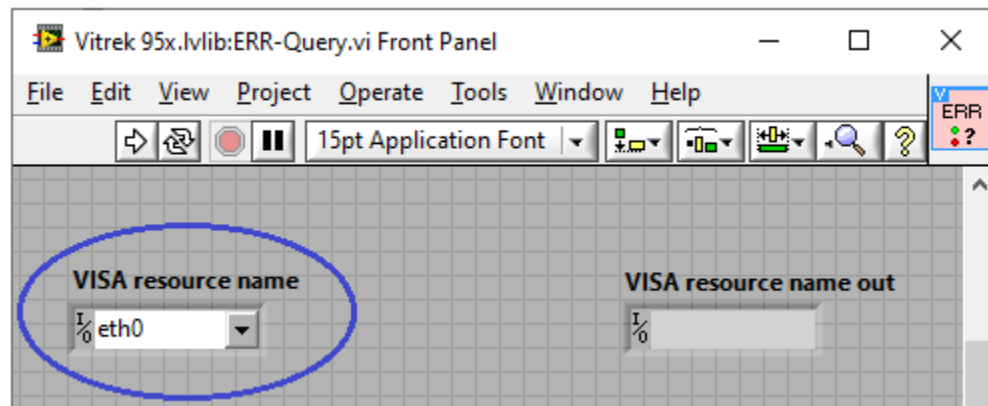
- A Visa Resource Name will be created and shown in the next dialog box under “Resource Name”.
- An alias for the resource name can be created as well. This allows you to use a shorter alias name instead of the Visa Resource Name.



- Click Finish to complete.



To connect to Vitrek 95x instrument using ethernet, you must use the VISA resource name created above (either the full name or the alias) in the Vitrek LabVIEW VIs.



LabVIEW Function Palette

In order to enable the Vitrek VIs on the LabVIEW Functions palette, copy the *Vitrek 95x* folder to wherever your LabVIEW installation is.

For example, if your LabVIEW installation is in

"C:\Program Files\National Instruments LabVIEW 2010" you would copy the contents of the *Vitrek 95x* folder to "C:\Program Files\National Instruments\LabVIEW 2010\instr.lib\Vitrek 95x".

Important note:

- The folder name under “C:\Program Files\National Instruments\LabVIEW 2010\instr.lib\” must be “*Vitretek 95x*”. Otherwise, the Vitrek palette will not work.

If you have both 32-bit and 64-bit versions of LabVIEW installed and you want to have the palettes enabled under both, you will need to copy the contents of the *Vitretek 95x* folder to the installed locations of both 32-bit LabVIEW and 64-bit LabVIEW.

The Vitrek palette items will appear on the LabVIEW Functions palette in *Instrument I/O \ Instr Drivers*.

Note that without enabling the function palette, you can still use all the Vitrek VIs by using the LabVIEW *Open File* menu.

Example VIs

The following VIs that found in the *Examples* folder can be used a starting point for a custom VI designed by the user.

ExampleDCW_Test

This simple example VI first configures a Vitrek 95x to run the DCW test. While the test is running, the Leakage current will be monitored. Upon completion of the test, a graph of Leakage Current vs time will be displayed on the screen.

File Saving example

This folder contains multiple VIs for a more complex *FileSaving* example that allows the user to configure and run two test sequences.

- The first sequence performs three tests: DCW, DCI and DCEZ.
- The second sequence performs three tests: ACW, ACI and ACEZ.

Upon completion of the tests, the results will be saved as many text (.TXT) files into hard disk drive so that they can be viewed and analyzed later.

The result .TXT files are saved in the following format: *X-Y-TestResult.TXT*

X: Test Sequence (Ex: 1, 2, ...)
Y: Test Step (Ex: 1, 2, ...)
TestResult: One or many test results (Ex: Voltage, Leakage ...)

Example:

The file *1-2-LeakageGraph.TXT* is the Leakage result of the test step 2 of the test sequence 1. And the contents of the file are the Leakage Current versus time:

Time (s) Leakage (A)

| | |
|------|-------|
| .025 | 0.011 |
| .050 | 0.023 |
| .075 | 0.038 |

The Leakage Current data can be imported then plotted in Excel.

Known Issues

- If you call the *SWITCHES.vi* without a switch device connected, then the 95x instrument may be left in an undetermined state.

Revision History

Version 1.0

- First version

Version 2.0

- Added Ethernet support and a new example.
- Update VI icons and context help.