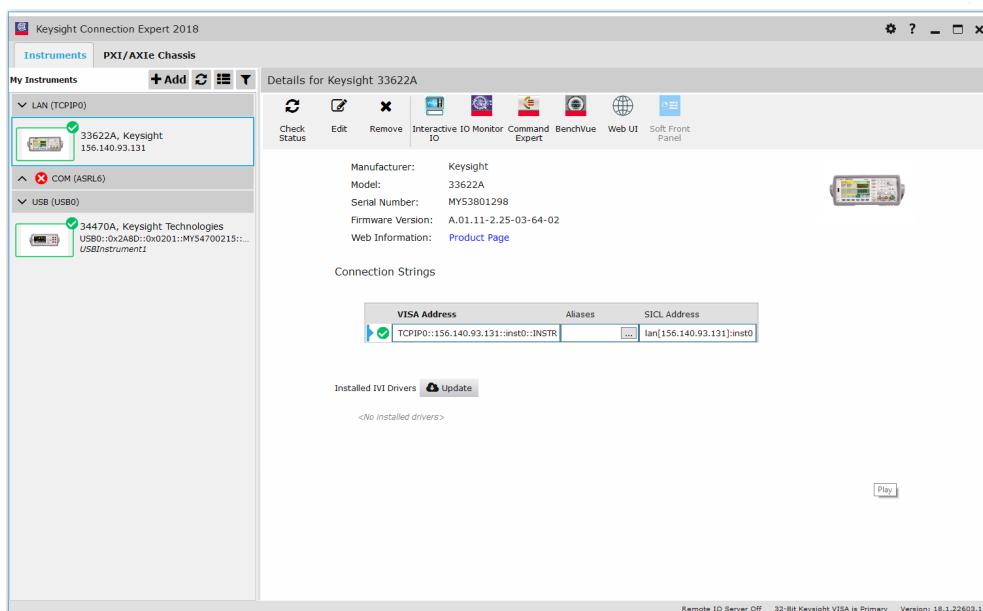


IO Libraries Suite 2020

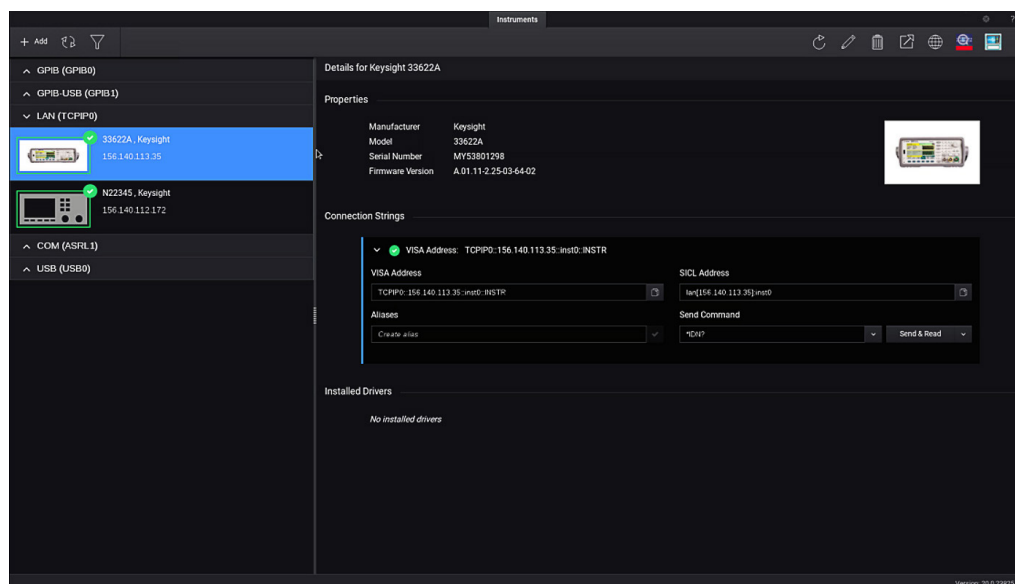


Accelerate Instrument Connection and Control with IO Libraries

- Automatically detects instruments connected to your PC and configures the interfaces.
- Enables instrument communication for a variety of development environments (Mathworks MATLAB, Python, NI LabVIEW, Microsoft Visual Studio and more).
- Compatible with most common instruments.
- The Windows product includes support for AXIe, PXI, GPIB, USB, Ethernet/LAN, RS-232, and VXI test instruments from a variety of vendors. (Linux information below.)
- Windows users can also download popular Keysight software such as BenchVue and Command Expert to work with IO Libraries.

IO Libraries for Linux

The Linux product includes support for GPIB, USB, Ethernet/LAN, and RS-232.



Getting Started is Easy!

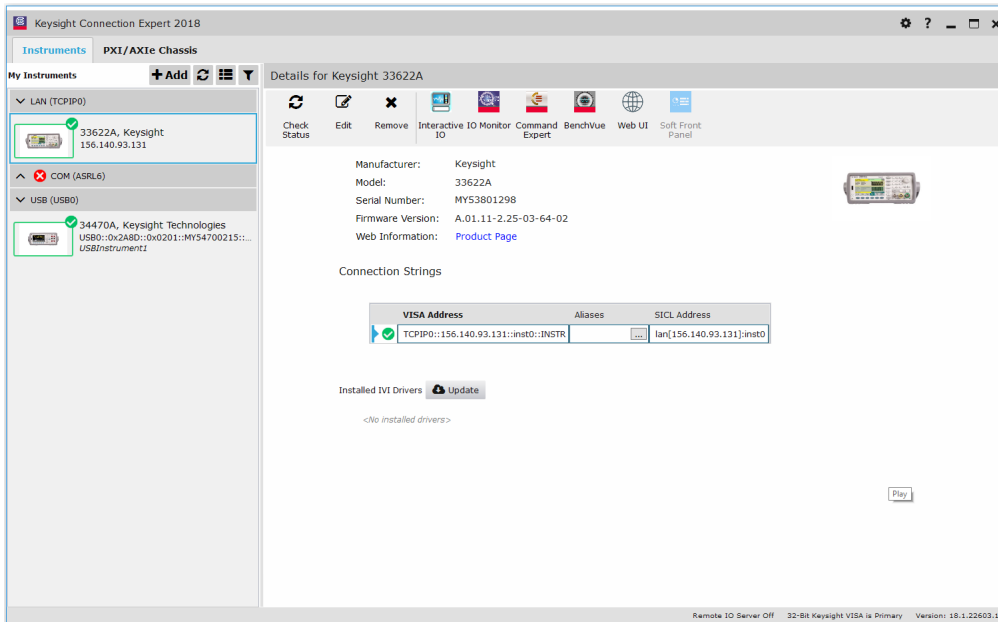


1. Install Keysight IO Libraries Suite software on your PC.
2. Connect the interface cables between your chassis and/or instruments, and your PC.
3. Detect interfaces, chassis, and instruments and configure them using Keysight Connection Expert.
4. In just minutes you have an error-free connection that simply works.



Fast and Easy Access to your Test and Measurement Equipment from your PC

Connection Expert is designed for ease of use in discovering and connecting instruments to your Windows or Linux PC. Quickly add new instruments or I/O interfaces, and access instrument Web UI's.



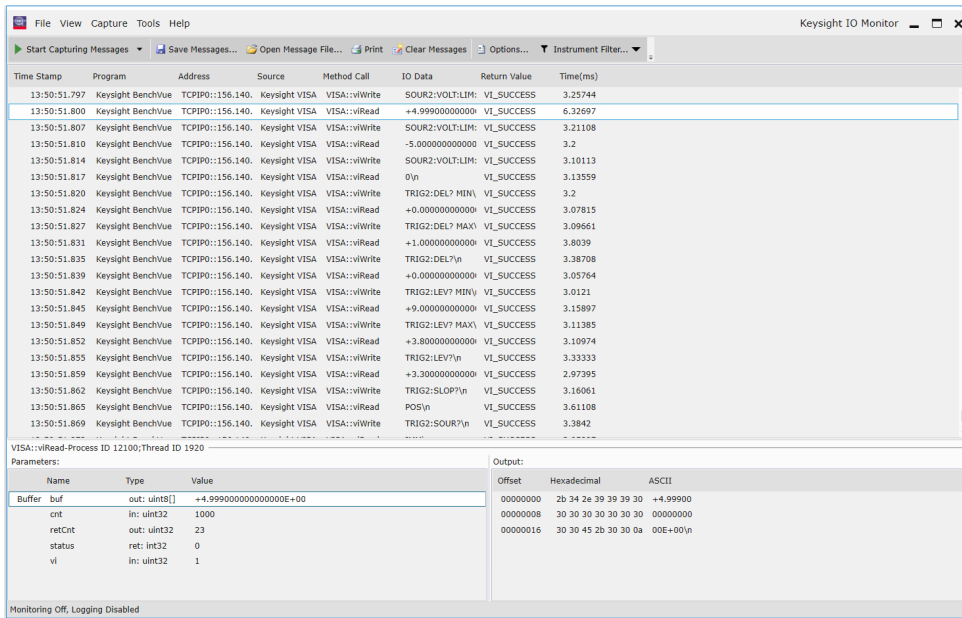
Connection Expert allows you to search for and verify instruments. In Windows you can also update IVI instrument drivers and soft front panels from the instrument properties. This will save you time and ensure that the most up-to-date driver is being used in your application.

Updates to the IO Libraries Suite software are available by going to www.keysight.com/find/iosuite, or by using a shortcut inside Connection Expert. Windows users can also enable automatic updates.

Save time with the bundled tools IO Monitor and Interactive IO, which can be launched from within Connection Expert.

IO Monitor, Interactive IO and Included APIs

- IO Monitor lets you monitor and trace instrument I/O traffic, greatly simplifying and speeding up the debugging process.



- Interactive IO lets you quickly send commands to instruments and read responses.
- Use the Keysight IO Libraries APIs to control your instruments or other devices from your custom automation software. APIs are available to support a wide variety of programming languages, hardware interface types, and industry-standard I/O library layers.
- Get up to 5x faster data transfers with the HiSLIP protocol for LAN-based instruments – HiSLIP speed is faster than any other current interface, and for some instruments can approach the theoretical limit of Gigabit LAN for TCP/IP connections. Easily convert an existing VXI-11 program to HiSLIP by simply changing the address string.

Quick Access to Test and Measurement Equipment from your PC

Support for modular instruments (Windows-only today, Linux coming soon) - Keysight VISA and Connection Expert support modular instruments such as PXI (PCI eXtensions for Instrumentation), AXIe (ATCA eXtensions for Instrumentation), and PCIe® (PCI EXPRESS®) devices. The PXI Resource Manager will discover and display both chassis and modules.



Specifications: Version 2020 and Later

Supported interfaces

GPIB: Standard IEEE 488.1, 488.2

USB: USBTMC-USB488

LAN/Ethernet: Standard LAN (with HiSLIP, LXI, VXI-11, SICL-LAN and sockets)

(Windows only) PXI, AXIe, PXI, PXIe, and PCIe devices

VXI: FireWire (Windows 7 and 10, 32/64-bit)

Supported development environments and supported I/O software

(Windows) .NET languages (VB.NET, C#): VISA.COM, VISA, Keysight 488, VISA.NET

C/C++/CLI: VISA.COM, VISA, Keysight 488

EXCEL VBA: VISA COM, VISA, SICL, Keysight 488

MATLAB: VISA

Python: PyVISA

LabVIEW: VISA, Keysight 488

(Linux) C/C++: VISA, SICL

I/O utilities

Connection Expert Automatically scans and configures your instrument I/O, helps you get connected quickly and easily and displays the status of your interfaces and instruments

Interactive IO Lets you quickly send commands to instruments and read response

IO Monitor Lets you monitor and debug I/O calls made on any of Keysight's supported buses

(Windows: SICL, VISA, VISA COM or Keysight IVI instrument drivers)

(Linux: SICL or VISA)

IO Control Provides easy access to the IO Libraries Suite utilities and documentation from the system tray

viFind32 Windows-only debug utility that uses VISA functions to find resources and 32-bit VISA implementations, listing them in a console window

viFind64 Debug utility that uses VISA functions to find resources and 64-bit VISA implementations, listing them in a console window

1. See the latest information on supported interfaces and operating systems for IO Libraries Suite 2020 at www.keysight.com/find/iosuite (Trials and Licenses tab). To identify which versions of IO Libraries support particular operating system and interface combinations, consult the information for the current and previous versions. Go to the Trials and Licenses tab, and click Details and Download, and then install the most recent version that fits your OS and instrument combination.

System Requirements: Keysight IO Libraries Suite 2020

Windows PC software: Operating system

- Windows 10 (32-bit and 64-bit), Home, Pro, Enterprise
- Windows 8 and 8.1 (32-bit and 64-bit), Pro, Enterprise
- Windows 7 SP1 (32-bit and 64-bit), Starter, Home Basic, Home Premium, Professional, Ultimate, Enterprise
- Windows Server 2008 R2 SP1 (64-bit), Standard and Enterprise
- Windows Server 2012 (64-bit), Standard

Linux PC software: Operating system

- 64-Bit Red Hat Enterprise Linux Desktop Workstation 7.1 to 7.6
- 64-Bit CentOS Desktop Workstation 7.1 to 7.6
- 64-Bit Ubuntu Desktop 16.04.x and 18.04.x (the following kernel releases):
 - 4.4.0-21-generic
 - 4.4.0-31-generic
 - 4.15.0-20-generic
 - 4.15.0-29-generic
 - 4.15.0-45-generic
 - 4.15.0-54-generic
 - 4.15.0-55-generic
 - 4.18.0-15-generic
 - 4.18.0-20-generic
 - 4.18.0-25-generic

PC hardware (Windows and Linux)

- Processor: 1 GHz, no support for Itanium64
- RAM: 1 GB minimum
- Hard disk space required: 2 GB
- Display: 1024 x 768 96 or 120 DPI
- Web connection for Internet download

Download Information

If you would like to install or upgrade to the latest version of IO Libraries Suite, download the free software at: www.keysight.com/find/iosuite.

The most recent versions are available for both Windows and Linux on the Trials and Licenses tab.

Windows users can also browse the Trials and Licenses tab for past versions compatible with specific operating systems or older instruments. In addition, Windows users can obtain a DVD ISO image for IO Libraries Suite by clicking a link on the Overview and Features tab.

Additional Windows Utilities that Work with IO Libraries

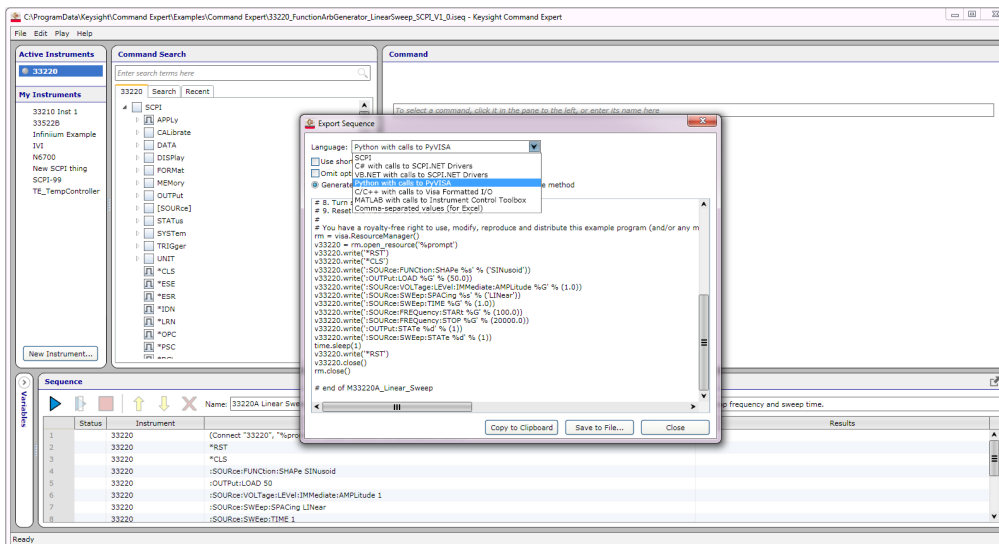
Windows IO Libraries users can also download other I/O utilities at www.keysight.com

For example, BenchVue software enables instrument control and simplified automation – no programming required. Download it at www.keysight.com/find/BenchVue



Command Expert is a no-cost software application that provides fast and easy instrument control in many PC application environments. Download it from:

www.keysight.com/find/commandexpert



Learn more at: www.keysight.com

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

