



OptiInstrument 4.0 Release Notes

IMPORTANT

- Before installing OptiInstrument, make sure that **NI-VISA.NET Runtime** is installed on the system. When installing the NI-VISA, select the NI-VISA.NET Runtime option.
- Users can install NI-VISA from the following link
<https://www.ni.com/en-ca/support/downloads/drivers/download.ni-visa.html#346210>.

Note: The NI-VISA is a large package, it may take long time to download/install.

Installation Notes:

- When starting the installation process of OptiInstrument software, the popup message shown in Fig.1 offers the user a choice to quit the installation process if the NI-VISA.NET Runtime package is not installed on the same computer or continue the installation if the package is installed. However, the error message shown in Fig. 2 appears when users launch OptiInstrument application while **NI-VISA package is not installed**. Users need to install NI-VISA Runtime package, then **run the batch file reactivate_x64.bat as an administrator** to allow launching OptiInstrument software. The file is located at the following location:

C:\Program Files\Optiwave Software\OptiInstrument 3\bin

- OptiInstrument 4.0 includes an option to install OptiInstrument samples either during installation or **at** any other time. The **default** installation location **of** the samples' folder is **C:\Users\User Name\Documents\OptiInstrument 4.0 Release**

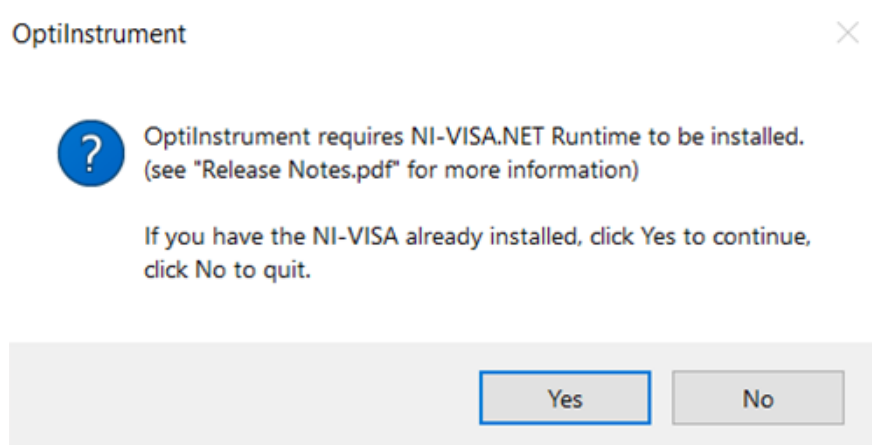


Fig. 1 OptiInstrument installation popup message

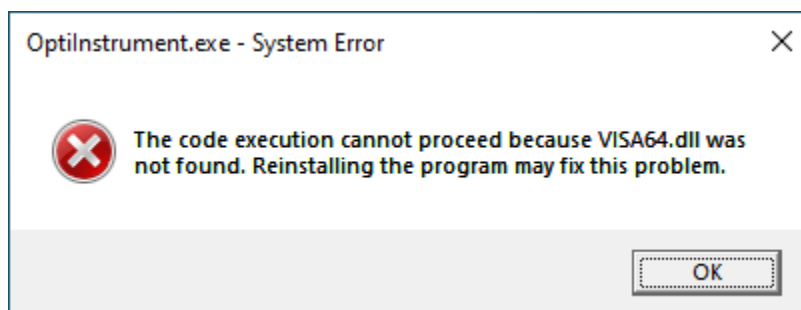


Fig. 2 OptiInstrument installation error message when NI-VISA Runtime is not preinstalled

Minimum Hardware and Software Requirements

- OptiInstrument requires the following minimum/recommended system configuration:
- Minimum PC configuration: PC with Pentium processor (E6, G Series) or equivalent.
- 8GB RAM.
- OptiInstrument requires the following third-party software packages to be installed:
- NI-VISA (NI-VISA.NET Runtime).
- Recommended PC configuration: PC with a clock speed > 2 GHz with 2-4 cores (e.g., Intel i3, i5, i7) and 16GB RAM or more.
- Operating Systems: Microsoft Windows 8.1/10/11(**64-bit only!**)
- **Microsoft is shelving Windows 7**; we will not support Windows 7 starting this release. However, the software might run under Windows 7, but we do not guarantee it and we will not be able to provide technical support for bugs/crashes.
- 2 GB free hard disk space.
- 1280 x 1024 graphic resolution

Application Execution

- **Administrators**: when installing OptiInstrument for users with Restricted User Profile, install the sample files in a folder where these users have Read/Write access. By default, the sample files are installed in the current user's Document folder. OptiInstrument requires the read/write file access and will not work with read-only files.
- For the OptiInstrument Help feature to function properly, Adobe Acrobat Reader must be installed. To get the latest version please visit the Adobe website at <http://www.adobe.com/>.
- Some computers are configured in power saving mode to go to Hibernation or Sleep mode when they are not in use. It is recommended to disable this feature, especially when running unattended lengthy simulations. Typically, after the








simulation is complete, the computer idles and eventually goes to Hibernation. This causes the licensing platform drivers to invalidate the license. When the computer wakes up and resume its execution, OptiInstrument software will issue a message that the license is not available and terminate, losing the simulation results in the process. Please disable the computer hibernation feature to avoid this problem.

OptiInstrument Software Release Overview

The updated user-friendly graphical user interface (GUI) of **OptiInstrument 4.0** Software is shown in Fig. 3. New icons have been added to the GUI to enable new capabilities of the software as described below.

Icons Removed/Added:

1. The **Screenshot** button  located in the **Display** window is used for equipment capture that support this feature.
2. The **Load JSON file(s)**  button located in the **Display** window is used to load single or multi-JSON file for displaying in the Display window. The multi-files can be loaded one-by-one or altogether from the directory that holds them.
3. The **Clear display panel** button  located in the **Display** window is used to clear the displayed waveform in the Display window.
4. The **Remove Python File** button  located in the **Logic controls** pane is used to delete the loaded **Custom Python file**.
5. The **Load Python File** button  located in the **Logic controls** pane is used to load Python file that has API or sequence of commands to control the equipment.

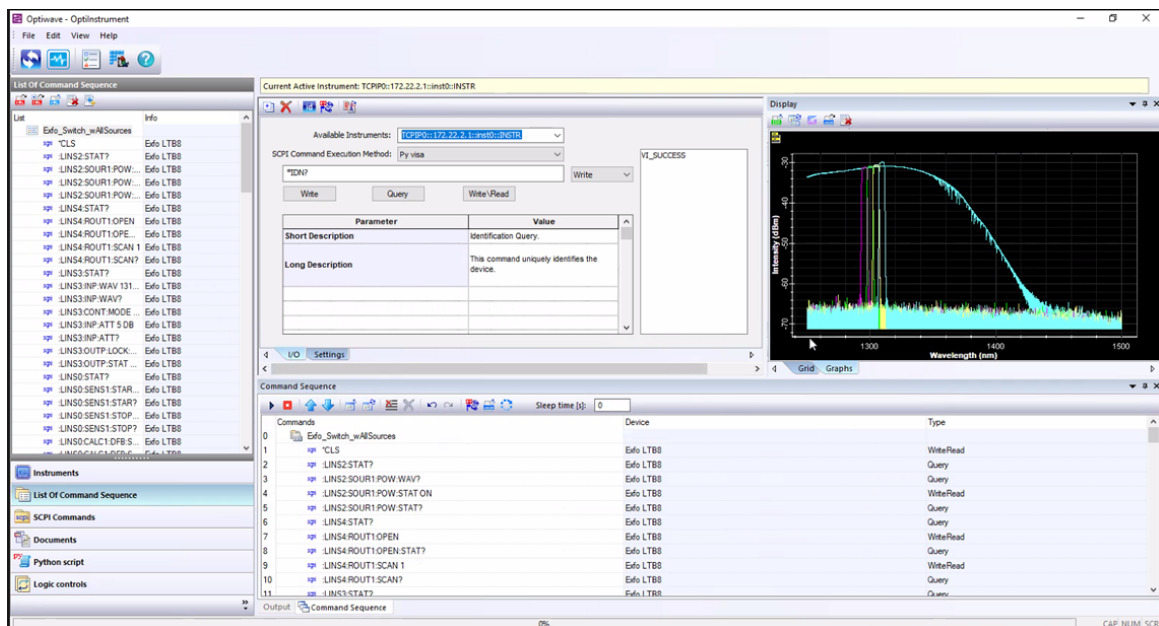


Fig. 3 OptiInstrument GUI



The **Display Waveform Setup** popup window has been redesigned to allow the following:

1. Capturing data from the newly added EXFO **CTP-10** test equipment to measure IL, PDL and RL of different modules.
2. Loading **User Raw Data Acquisition and Processing Python File**. This feature enables users to use a python file template to calibrate the raw capture data on the file without the need to modify the source code of OptiInstrument.
3. Entering **End Termination Character** for the commands in the sequence where we support **Line Feed (\n)**, **Carriage Return (\r)** or **End of line (\r\n)**.
4. Selecting the **Data type** (ASCII or Byte)
5. Selecting the data capture **Method type** (Default, Y Format, XY Format, Eye). The **Default** selection is used for the supported equipment in OptiInstrument Example library.

The Single Command Window has a new addition to its functions. Users can choose either Py VISA or NI VISA for **SCPI Command Execution**. This feature enables supporting wider range of equipment in the market.

New control and helpers are added to the **Logic controls** pane. As well as the **Custom Python files** loading feature is added to the pane. The **try** and **accept** logic statements are added to help debugging the SCPI sequence especially when a crash in the script is expected. A **statement** helper is also added to enable user adding pause and sound effects to the command script.

OptiInstrument 4.0 New Examples

OptiInstrument 4.0 Software has many new examples that are created using commercial instruments CTP-10 and LTB-8 from EXFO and High-power laser temperature controller from OS-Tech in addition to the old examples of Rigol and EXFO. The new examples created for LTB-8 are dedicated to the remote setup at EXFO's lab in Quebec City. Users could have access to the setup after arranging with EXFO demo team. The examples in OptiInstrument Example Library are organized in subdirectories for each vendor. Each example has a readme file that describes the setup and the instrument(s) and/or card(s) used in the example as well as the result file(s). The sequence of SCPI commands of each example is saved in an XML file that can be loaded into the **List of Command Sequence** pane of OptiInstrument software GUI. Make sure that the location of cards in the LTB-8 matches the script. Else, please edit the related commands in the sequence to match correctly the location of the cards in the LTB-8 equipment.

Newly Added Directories and Examples

1. EXFO LTB-8 Remote Equipment Setup

- i. 4CH DEMUX Broadband to OSA Command Prompt



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- ii. 4CH DEMUX IL calculation
 - 1. IL Calculation Using a Parser with Output JSON File
 - 2. IL Calculation Using Single File No Output File
 - 3. JSONfiles
- iii. Broadband source to OSA
- iv. QSFP Transceiver BER test
- v. QSFP Transceiver TX to OSA

2. EXFO CTP-10

3. OS-Tech High Power Laser Temperature Controller

4. User Raw Data Acquisition and Processing Custom Files

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