



PCIe/USB/TBT Automation Software Information

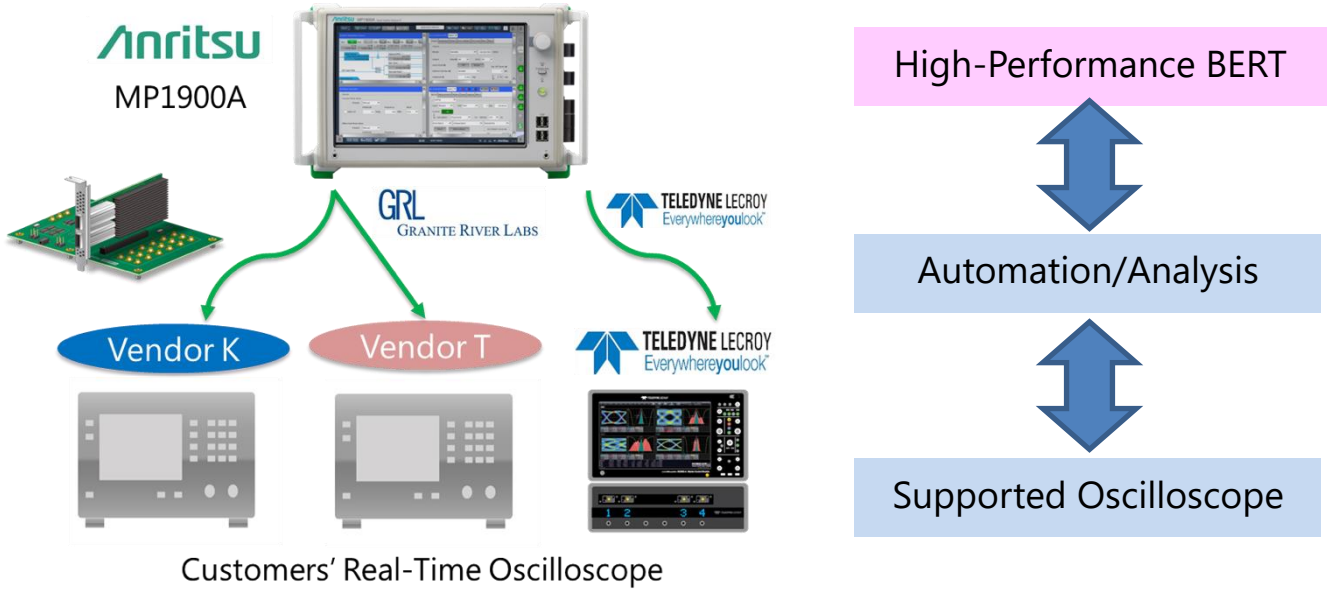
Signal Quality Analyzer-R MP1900A

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1. Outline

PCIe, USB, and Thunderbolt receiver tests require calibration of the BERT Tx signal using a wideband real-time oscilloscope. The Signal Quality Analyzer-R MP1900A includes compliance software for automated calibration when used in combination with an oscilloscope from three key makers. This compliance software automates calibration, testing and reporting to simplify measurement and increase reproducibility, helping lighten test engineers' workloads. These materials explain how to obtain and use the compliance software.



2. Supported Keysight/Tektronix Oscilloscopes

2.1 Automation Software

The Granite River Lab (GRL) automation software is used when using either a Keysight or Tektronix oscilloscope. This software is sold and supported by Anritsu.

There is software for each of the following applications. The latest version of each software can be download from the GRL download site listed below.

Model	Application	Download Site
GRL-PCIE3-BASE-RXA	PCIe 3.0 Base Spec	https://graniteriverlabs.com/download-center/#GRL-PCIE4-BASE-RXA
GRL-PCIE3-CEM-RXA	PCIe 3.0 CEM Spec	https://graniteriverlabs.com/download-center/#GRL-PCIE4-CEM-RXA
GRL-PCIE4-BASE-RXA	PCIe 4.0 Base Spec	https://graniteriverlabs.com/download-center/#GRL-PCIE4-BASE-RXA
GRL-PCIE4-CEM-RXA	PCIe 4.0 CEM Spec	https://graniteriverlabs.com/download-center/#GRL-PCIE4-CEM-RXA
GRL-PCIE5-BASE-RXA	PCIe 5.0 Base Spec	https://graniteriverlabs.com/download-center/#GRL-PCIE5-RXA
GRL-PCIE5-CEM-RXA	PCIe 5.0 CEM Spec	https://graniteriverlabs.com/download-center/#GRL-PCIE5-CEM-RXA
GRL-USB32-RXA	USB3.2 Gen1/Gen3	https://graniteriverlabs.com/download-center/#GRL-USB32-RXA
GRL-TBT3-RXA	Thunderbolt 2/3	https://graniteriverlabs.com/download-center/#GRL-TBT3-RXA

There are two types of GRL software licenses. License installation and configuration depends on the type of license that you purchased:

- Node-Locked license : Runs on one specified Host PC.
- Floating license : USB license dongle with a built-in software license enables up to 3 HOST PC.

2.2 Software Activation Information

Anritsu manages the software versions for the MP1900A and oscilloscopes. The following table lists the tested latest software versions.

Model	Automation Software	MX190000A	MX183000A	Oscilloscope
GRL-PCIE3-BASE-RXA	V1.0.63	V4.03.12	-	DSAZ634A V06.40.00714 DPO73304DX 10.8.3 Build 3 DPO75902SX V10.0.8.138
GRL-PCIE3-CEM-RXA	V1.0.49	V4.03.12	V4.03.15	DSAZ634A V06.40.00714 DPO73304DX 10.8.3 Build 3 DPO75902SX V10.0.8.138
GRL-PCIE4-BASE-RXA	V1.5.114	V4.03.12	-	DSAZ634A V06.40.00714 DPO73304DX 10.8.3 Build 3 DPO75902SX V10.0.8.138
GRL-PCIE4-CEM-RXA	V1.0.86	V4.03.12	V4.03.15	DSAZ634A V06.40.00714 DPO73304DX 10.8.3 Build 3 DPO75902SX V10.0.8.138
GRL-PCIE5-BASE-RXA	V1.00.06	V4.03.12	-	DSAZ634A V06.40.00714 DPO75904SX V10.0.8.138
GRL-PCIE5-CEM-RXA	V1.00.00	V4.03.12	V4.03.15	DSAZ634A V06.40.00714 DPO75904SX V10.0.8.138
GRL-USB32-RXA	V1.00.138	V4.03.12	V4.03.15	DSAZ634A V06.40.00714
GRL-TBT3-RXA	V1.5.48	V4.03.12	-	DSAZ634A V06.40.00714

Please enquire if your oscilloscope is not one of the supported oscilloscope listed above.

The MX190000A and MX183000A installers can be downloaded from the following site.

For more details about each software, refer to the release notes at

<https://www.anritsu.com/test-measurement/support/downloads?model=MP1900A>

2.3 Download Method

Access the GRL download site and click the  button after entering the required information.



2.4 Installation Method

The downloaded file is a zip file including the following three installers. Use the respective installer to install the software in the appropriate location.

(XXXXXX indicates the application name and xxxxxx indicates the version.)

Installer Name	Usage	Install Destination
XXXXXX PtternFileInstallation xxxxxxxsetup.exe	Pattern settings file for calibration	MP1900A
XXXXXX TestApplication xxxxxxxsetup.exe	Main Compliance Test software	Oscilloscope or PC controller ^{*1}
XXXXXX TestScopeSetupFileInstallation xxxxxxxsetup.exe	Oscilloscope settings file for calibration	Oscilloscope

*1: The compliance software will run on the supported oscilloscopes or on the appropriate provided PC controller.

The VISA (Virtual Instrument Software Architecture) software must be installed in the equipment where the compliance software is installed. If this is an external PC, the VISA version is different from when installing in an oscilloscope. Usually, VISA is already preinstalled in an oscilloscope but if it has not been installed, download the required version from the following download sites and install it.

Install Destination	VISA	Download Site
External PC	NI-VISA	http://www.ni.com/download/ni-visa-17.0/6646/en/
Keysight Scope	Keysight IO Libraries	http://www.keysight.com/ Search from IO Libraries
Tektronix Scope	Tektronix TekVISA	http://www.tek.com/ Search from TekVISA

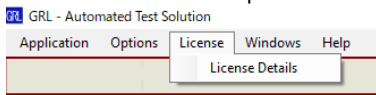
2.5 License Activation

The GRL automation software has a trial license valid for 12 days after first installation in the equipment. To activate the full license after purchasing the software, send an email listing the following information to support@graniteriverlabs.com. The full software license key will be sent to the provided email address within 48 hours.

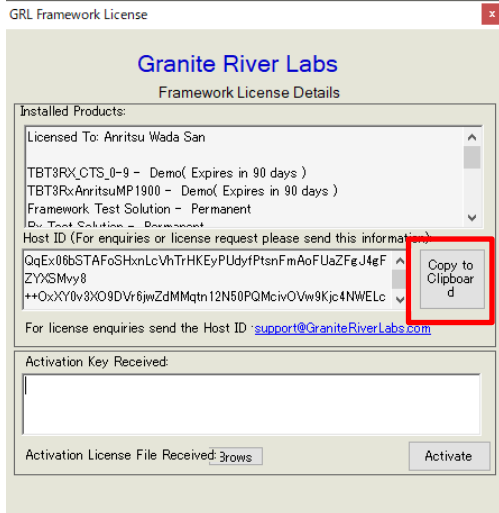
- Host ID^{*1}
- CD/DVD/USB Serial Number^{*2}
- Name and telephone number
- email address
- Company name

*1: The Host ID is obtained using the following procedure after installing the trial software.

Start the software and pull down the License – License Details menus as shown below.



Click the [Copy to Clipboard] button at the displayed screen.

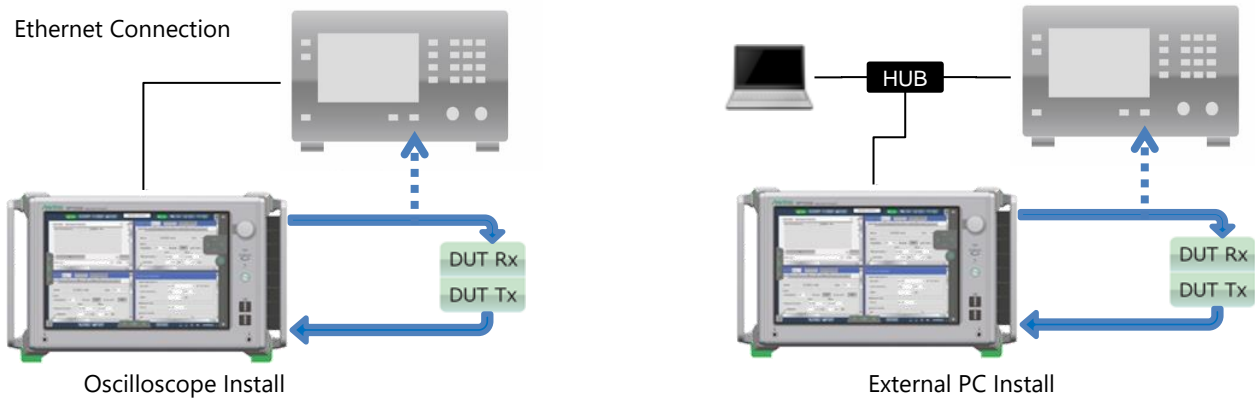


In case of floating license, please send 3 HOST IDs to use

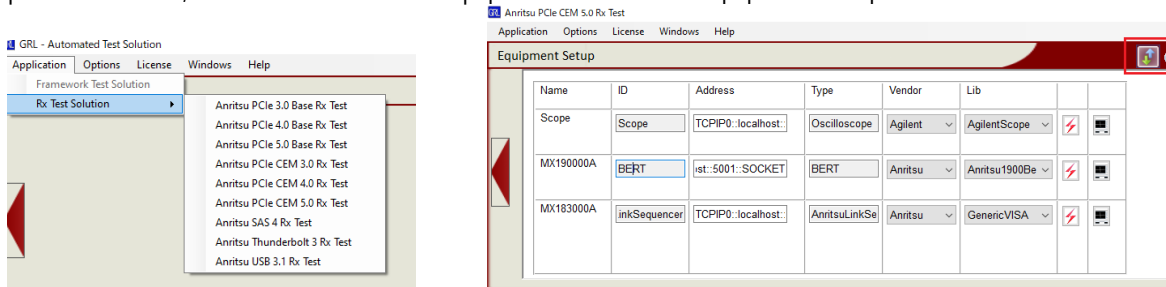
*2: The CD/DVD Serial Number is provided with the CD, DVD, or USB memory sent after purchasing the software. It is the number on the package label.

2.6 Control Connections and Settings

The automation software controls either the oscilloscope where it is installed or the separate PC controller.



It controls the measuring instrument over Ethernet. After selecting the application from the Application – Rx Test Solution pulldown menus, set the Address for the equipment Name at the Equipment Setup screen.



When installing automation software in oscilloscope

Name	Address	
	Keysight Oscilloscope	Tektronix Oscilloscope
Oscilloscope	TCPIP0::localhost::inst0::INSTR or TCPIP0::127.0.0.1::inst0::INSTR	GPIB8::1::INSTR ^{*1}
BERT	Connected Ethernet port address (xxx.xxx.xxx.xxx) TCPIP0::xxx.xxx.xxx.xxx::5001::SOCKET ^{*2}	
AnritsuLinkSequencer	Same address as BERT TCPIP0::xxx.xxx.xxx.xxx::5000::SOCKET ^{*3}	

*1: A Tektronix oscilloscope requires specification of the GPIB interface at Ethernet control. The default address is 8 but use an address matching the oscilloscope setting.

*2: The BERT (MP1900A) requires a port setting. The default is 5001.

*3: The Anritsu Link Sequencer (MX183000A) requires a port setting. The default is 5000.

When installing automation software in external PC

Name	Address	
	Keysight Oscilloscope	Tektronix Oscilloscope
Oscilloscope	Connected Ethernet port address (xxx.xxx.xxx.xxx) TCPIP0::xxx.xxx.xxx.xxx::inst0::INSTR	
BERT	Connected Ethernet port address (xxx.xxx.xxx.xxx) TCPIP0::xxx.xxx.xxx.xxx::5001::SOCKET ^{*1}	
AnritsuLinkSequencer	Same address as BERT TCPIP0::xxx.xxx.xxx.xxx::5000::SOCKET ^{*2}	

*1: The BERT (MP1900A) requires a port setting. The default is 5001.

*2: The Anritsu Link Sequencer (MX183000A) requires a port setting. The default is 5000.

3. Supported TeledyneLeCroy Oscilloscopes

3.1 Automation Software

Enquiries about all solutions are handled by Teledyne LeCroy at the following website:

<https://teledynelecroy.com/support/contact/>

Teledyne LeCroy has a great deal of knowledge and experience in the PCIe business world to support these solutions.

Contact the Anritsu Business Section directly for BERT-related enquiries.

Anritsu and LeCroy have a strong support system for troubleshooting customers' measurement issues.

• **United States**

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