Teledyne LeCroy quantumdata 980 Firmware Release 5.01
Aug 15, 2018
Release Notes

Overview

This document provides information on Release 5.01 of the firmware and External Manager software release for the quantumdata 980B and 980R Advanced Test Platforms. For further information, please refer to the Quick Start Guide for the Advanced Test Platforms, and the User Guides for the individual modules, all available on our website at www.quantumdata.com

Installation Instructions

Important Note: When upgrading the 980 GUI Manager and the system firmware, please be sure to disconnect any HDMI cables that are connected to the 980 48G Protocol Analyzer / Video Generator module for HDMI. Failure to do so may cause issues while upgrading the gate ware.

Begin by installing the Windows **External Manager** software:

1. Download the External Manager, file type .msi
2. Download the release "atp" .deb file.
3. Run the .msi file to install it.

Then install the Instrument firmware **Release**.

4. Launch the newly installed External Manager (980 Manager) and connect to the 980 via Ethernet TCP/IP. (For information on the 980 network connections, please refer to the Advanced Test Platform Quick Start Guide and related erratum below.)
    a. Note: you may see a warning about version mismatch. This is normal, and indicates that you should continue with the version upgrade before using the instrument with the new version of the External Manager.
5. From the External 980 Manager program, pull down the **Instrument** menu and select **Upgrade UI/Firmware/Gateware**. Browse to and select the .deb release file, select **Open**, and continue with the process. The 980 will power down at the end.
    a. Note there are 2 .deb files one is for the standard 32Bit 980, the other is for the new 64 Bit version. Check the status bar on your 980 to insure you select the proper one to download.

If the 980 is licensed for **HDR Lab Images** (License 45):

6. Download the HDR Lab Images .deb file.
7. From the External 980 Manager program, pull down the **Instrument** menu and select **Upgrade System Components**. Browse to and select the hdr-lab-images.deb file, select Open and continue with the process.

If the 980 is licensed for **HDMI HDCP CTS 2.2 Compliance Test for Sinks** (License 29):

8. Download the 980-hdcp2-sink-ct.deb file.

9. From the External 980 Manager program, pull down the **Instrument** menu and select **Upgrade CT Scripts**. Browse to and select the 980-hdcp2-sink-ct.deb file, select Open and continue with the process.

If the 980 is licensed for **HDMI CTS 1.4b Compliance Test for Sinks** (License 6):

10. Download the 980-hdmi-sink-ct.deb file.
11. From the External 980 Manager program, pull down the **Instrument** menu and select **Upgrade CT Scripts**. Browse to and select the 980-hdmi-sink-ct.deb file, select Open and continue with the process.

To verify the installation:

1. After installing any necessary packages from above, press the front button and Reboot the 980.
2. View the Instrument Information report in one of the following ways:
    a. From the External 980 Manager, when connected to the 980, pull down the **Instrument** menu and select **Information**.
    b. From the External 980 Manager, when connected to the 980, locate the **Instruments** section in **Navigator**, right-click on the instrument, and select **Information**.
    c. From the 980 front panel touch screen, select the **Other** page and then select **About the 980 Manager**.
3. Verify the following version information from the Instrument Information report, for the specific versions of modules installed:

Table 1: Module revisions and FPGA Build Versions

Module	SW Build 5.00	SW Build 5.01
DP 1.2 980 Protocol Analyzer Rev E	4.17.85 Build Number: 1	4.17.85 Build Number: 1
DP 1.2 980 Protocol Analyzer Rev E (410)	4.18.42 Build Number: 1	4.18.42 Build Number: 1
DP 1.2 980 Protocol Analyzer Rev D	4.17.85 Build Number: 1	4.17.85 Build Number: 1
DP 1.2 980 Protocol Analyzer Rev F	4.18.62 Build Number: 1	4.18.62 Build Number: 1
DP 1.4 980 Protocol Analyzer	4.25.152 Build Number: 1	4.25.175 Build Number: 1
SDI Scope	4.33.7 Build Number: 32	4.33.7 Build Number: 32
HDMI 2.0 980 Video Generator Rev B	4.34.1 Build Number: 32	4.34.1 Build Number: 32
HDMI 2.0 980 Video Generator Rev C	4.34.1 Build Number: 32	4.34.1 Build Number: 32
HDMI 1.4 980 Protocol Analyzer	4.22.1 Build Number: 57	4.22.1 Build Number: 57
HDMI 2.0 980 Protocol Analyzer	4.22.7 Build Number: 43	4.22.7 Build Number: 43
HDMI 2.0 RX/TX	4.27.1 Build Number: 38	4.27.1 Build Number: 55

HDMI 2.1 RX/TX	4.28.2 Build Number: 93	4.28.1 Build Number: 102
Phy and Protocol Aux Channel Analyzer	5.16.24 Build Number: 12	5.16.24 Build Number: 12

New and Improved Features and Functions:

New HDMI 2.0 Foundation Package

- 980 HDMI 2.0 Foundation Base Package license: 00-00249
- 980 HDMI 2.0 Foundation Package Compliance Option license: 95-00173

The HDMI foundation package allows customers to purchase a 980 Analyzer with limited functionality at a reduced price.

The Foundation Package Hardware consists of:

- 980B Chassis
- HDMI 18G RX/TX Analyzer
- HDMI 18G Generator

The Foundation Pack Software capabilities are as follows:

- Generate HDMI Video
- Real Time Video Analysis
  - No Capture Support Available
- Run limited HDMI Compliance Test Functionality
  - Cannot be run via external GUI
  - Results cannot be saved.

Foundation package units can be easily upgraded to full functionality in the future if the customer so desires.

HDMI Related

- 980 48G Protocol Analyzer / Video Generator module for HDMI – The module now supports five (5) additional eARC Rx Compliance tests: HFR5-2-52, HFR5-2-40, HFR5-2-41, HFR5-2-32 and HFR5-2-39.
- 980 48G/18G Protocol Analyzer / Video Generator modules for HDMI – The HDMI SCDC Editor on these modules now supports the editing of all SCDC fields. These edited SCDC registers can be used to emulate a variety of condition in the sink function of the module.

DisplayPort Related

- 980 DisplayPort 1.4 Video Generator / Protocol Analyzer module – The module supports both DP 1.4 Link Layer compliance tests for both testing sources and sinks. Many of these tests have been modified as a result of a recent Test Event.

The Following Software Issues were Resolved:

- 980 9G HDMI Protocol Analyzer / Video Generator module – The module supports HDMI HDCP 2.2 compliance testing. There was an issue on the 1B-01 test that has been resolved. The issue involved the limited number of frames that could be processed. Now this module can process up to 2200 frames for this test.
- 980 18G Protocol Analyzer / Video Generator modules for HDMI – The module now properly runs the Pixel Error test either through the GUI Manager or the command line using the PDAX command.
- 980 DisplayPort 1.4 and 1.2 Video Generator / Protocol Analyzer modules – The module supports the ability to transmit MST to a DP sink. The module now is able to properly transmit video resolutions whose Horizontal Active resolution is divisible by four (4).
- Java exception error appearing after loading 5.00 on a unit that did not have an active ACA license.

Errata

1. CEC Functionality on HDMI 18 Gbps RX/TX Analyzer receive port.

Regarding the HDMI 2.0 RX/TX analyzer (this is the HDMI 2.0 18 Gbps analyzer module that has 2 HDMI ports: Transmit and Receive): On this module, CEC is disabled by default on the HDMI Receive port. We expect this to be corrected in the next release. CEC functionality can be enabled temporarily (until the instrument is rebooted.) The following procedure will allow you to enable RX CEC functionality:

1. Launch the Windows External Manager (980 Manager) and connect to the 980.
2. From the Windows 980 Manager, select the **Other** GUI page.
3. Select the **Command Console**.
4. Select the **Connect** button.
5. Touch in the **Command** field to activate the touch screen keyboard.
6. Type the command **`discover`** and press **Enter**.
7. In the resulting list, locate the section that includes class: **Quantum Data, Inc. HDMI 2.0 RX/TX**.
8. Make note of the **slot** number indicated for this section. (For example, **3**)
9. Again, touch in the Command field to activate the touch screen keyboard.
10. Type the **slot** number from step 7 above and press **Enter**. (For example, **3** then press **Enter**.)
11. You should see a command prompt of **#p2c-scope>**
12. Touch in the **Command** field to activate the touch screen keyboard.
13. Type the command **`wb1 350 18 0`** and then press **Enter**. (After the letters wb, the other visible characters are digits. Be sure to type the 3 spaces where shown.)
14. Verify that **`wb1 350 18 0`** is echoed in the console window.

15. You may **Disconnect** and close the **Command Console**.

2. Difficulty connecting via Ethernet.

Under some conditions, the 980B and 980R Advanced Test Platforms may exhibit difficulty in establishing an Ethernet connection. In this case, if a connection cannot be established after following the Quick Start Guide and common procedures for establishing a network connection, please follow this procedure:

1. Press the front button of the 980 ATP and select Shutdown.
2. After shutdown is complete, turn off the physical power switch beside the mains power cord inlet.
3. While the power switch is OFF, press the front button and hold for a few seconds. Repeat this a few times to assure that all motherboard and power supply capacitors are drained.
4. Make sure the Ethernet connector is connected to your network or PC before powering on the 980 ATP. On Gigabyte motherboards with 2 Ethernet connectors, use the bottom Ethernet connector on 980B, or on the 980R, the Ethernet connecter nearest the mains power inlet.
5. Power on the 980 ATP and allow it to fully boot.
6. Use the normal procedure to establish Ethernet TCP/IP connection with the External 980 Manager software.

3. Special Notes

There is currently no real-time display on the HDMI 2.1 Analyzer

Support

For support on the Quantum Data 980 or other Teledyne LeCroy PSG products, please send an email to psgsupport@teledynelecroy.com

Please include your full contact information and a detailed description of the problem, including product model number, serial number, firmware version, software version, etc.