

780E Video Generator/Analyzer Software Release Notes

SW Version

17061534

FPGA Version

Rx – 16110103

Tx - 17011702

Change Log:

1. Enhancements Added

The following is a list of enhancements that have been added with this firmware release:

- Trac 773 - Added Audio Clock Regeneration N/CTS measurement to 780D/E RX.
- Trac 777 - Added command line support for invoking ColorBox pattern.
- Trac 782 - Added the XAVI:LEN command/query to support AVI InfoFrame version 4.
- Trac 788 - Added the XDRM commands send Dynamic Range & Mastering InfoFrame directly (without using XGIF).
- Trac 1880 – Added more details in the Frame Capture/Compare test to show +5V voltage levels, rather than simply indicating PASS/FAIL.
- Trac 780E DisplayPort analyzer now reports H/Vsync information from MSA, rather than internal circuitry.
- Trac 1990 - Added the Master pattern to the GUI list of basic patterns on all 780 units.

2. Anomalies Corrected

The following is a list of anomalies that have been corrected with this firmware release:

- Trac 1924 - Corrected improper response with TMAX command when querying results.
- Corrected issues related to reading the AVI InfoFrame from 780D/E RX which will enable an invalid AVI infoframe Version 4 to be analyzed.
- Corrected incoming color anomalies on 780D/E when video timing is changed in Real Time mode.
- Trac 796 - Corrected issue where 780E switched to 2ch audio when muting a channel of multichannel audio.
- Trac 902 - Corrected AVI InfoFrame information for HDMI VIC 4.
- Trac 935 - Corrected issue where DisplayPort asynchronous mode Nvid value was being set incorrectly.
- Trac 936 - Corrected NCPP query command response on 780E Tx.
- Removes error message which occasionally occurred when VIC is incorrect on incoming video.
- Trac 1065 - Corrects improper reporting of 14 bit/component in DP Format Analyzer for 16 bit/component video.
- Trac 2010 - Auto EDID test modified to properly report DisplayPort on incoming Rx port.
- Trac 2017 - Corrected issue where HDBaseT cable test would sometimes leave HPD pin low.

- Trac 1993 - Modified 780E TX HDCP 2.2 implementation to improve interoperability and conforms to HDCP 2.2 CTS.
- Trac 2034 – Corrects EMI H pattern in 4:2:0 subsampling mode. Removes extraneous lines on pattern.

Upgrade Procedure

SD Card Upgrade Procedure (Recommended)

1. Download the file from downloads page and unzip it.
2. Copy all files to a SD card's root directory and insert the card to device.
3. Power on the unit.
4. Go to the Help menu and perform Application Flash Update. When complete, reboot the device.
5. Go to the Help menu and perform FPGA Flash Update. When complete, reboot the device.
6. Power on the device and under preferences, select 'COM' as USB mode
7. Connect device to PC using USB connection
8. Using command terminal such as putty, connect to device using serial com communication.
9. Once it command terminal, press enter to bring up command prompt.
10. In commands, type '6gup r' and press enter. This may take few minutes so wait until command prompt shows again.
11. Reboot the device
12. Go to the Help menu and perform HDBaseT Tx Flash Update. When it tells you to reboot, go ahead and perform HDBaseT Rx Flash Update. When it tells you to reboot, power cycle.
13. Go to the Help menu and verify the version numbers match below.

SW 17061534, Tx FPGA 17011702, Rx FPGA 16110103, HDMI2Rx 1.99.17_D0, HDBT Tx 13131510, HDBT Rx 13131500

Supplemental Files (70 megabytes)

This archive contains all Compressed Audio Samples, Sine Wave Clips, and Sample BMP Files.

1. [Download Supplemental Files archive from here](#) (updated on August 23, 2013).
2. Unzip the files into a new folder in your PC.
3. Turn on 780E and press Preferences.

4. If COM is selected next to USB Mode, select Disk and power cycle 780E.
5. Connect 780E's USB port to your PC.
6. 780E should appear as a removable disk.
7. Copy unzipped supplemental files to 780E.

Alternatively, you can download the file sets separately: Compressed Audio Test Samples (57 megabytes)

1. [Download compressed audio test samples from here](#) (updated on August 23, 2013).
2. Turn on 780E and press Preferences.
3. If COM is selected next to USB Mode, select Disk and power cycle 780E.
4. Connect 780E's USB port to your PC.
5. 780E should appear as a removable disk.
6. Copy downloaded compressed audio test sample files to 780E.

Sine Wave Audio Clips (760 kilobytes)

7. [Download audio clips from here](#) (updated on August 23, 2013).
8. Turn on 780E and press Preferences.
9. If COM is selected next to USB Mode, select Disk and power cycle 780E.
10. Connect 780E's USB port to your PC.
11. 780E should appear as a removable disk.
12. Copy downloaded audio files to 780E.

Sample BMP Files (324 kilobytes)

13. [Download sample BMP files from here](#) (updated on August 23, 2013).
14. Turn on 780E and press Preferences.
15. If COM is selected next to USB Mode, select Disk and power cycle 780E.
16. Connect 780E's USB port to your PC.
17. 780E should appear as a removable disk.
18. Copy downloaded sample files to 780E.
19. The UserPats.txt file is used to add the bitmaps to 780E Video Pattern menu. You can add your own bitmaps by copying them to 780E and updating this text file.

USB COM Port .inf File

1. Determine whether your Windows is 32-bit or 64-bit.
 - a. For 32-bit Windows: [Download .inf file from here.](#)
 - b. For 64-bit Windows: [Download .inf file from here.](#)

2. Turn on 780E and press Preferences.
3. If Disk is selected next to USB Mode, select COM and power cycle 780E.
4. Connect 780E's USB port to your PC.
5. Follow the procedure below to install the USB COM Port driver.

Windows 8

1. Go to the Advanced Startup options. You can easily do this by holding down the Shift key and clicking on Restart.
2. Select Troubleshoot.
3. Select Advanced options.
4. Select Startup Settings.
5. Click on Restart.
6. Press F7 for "Disable driver signature enforcement." 7. Turn on the 780E.
8. Go to the Preferences menu and make sure USB Mode is set to COM. If not, select COM and power cycle the 780E.
9. Connect 780E's USB port to your PC.
10. Go to the Device Manager.
11. Under Other devices, right-click on USB COM and select Update Driver Software.
12. Select Browse my computer for driver software.
13. Click on Browse button and browse to the location of the downloaded 780E USB COM driver file and click on OK.
14. Click on Next.
15. When you see the Windows Security dialog box show up, click on "Install this driver software anyway."

Windows 7

16. The first time you connect 780E to your PC in COM mode, the Installing device driver software message will show up. Click on this message to see the status.
17. You will see a message that says "Searching Windows Update" for the USB COM port driver. After a while, you will see "No driver found" message.
18. Click on Close.
19. Open Device Manager by launching Control Panel and selecting System and Security -> System -> Device Manager.
20. Under Other devices, you might see USB COM.
21. Right-click on USB COM and select Update Driver Software.
22. Click on Browse my computer for driver software.
23. Click on Browse, select the folder that contains QD780.inf file, and click on OK.
24. Click on Next.

25. If a dialog box shows up asking whether or not to continue installing the driver, click on "Install this driver software anyway."

Windows Vista

26. The first time you connect 780E to your PC in COM mode, the Found New Hardware Wizard will show up. Select "Locate and install driver software (recommended)."
27. When asked if you want to allow Windows to search online for driver software for your USBCOM Device, click on "Don't search online."
28. When asked to insert the disc that came with your USBCOM Device, click on "I don't have the disc. Show me other options."
29. Click on "Browse my computer for driver software (advanced)."
30. Browse and select the directory where QD780.inf is located.
31. Click on Next.
32. If a dialog box shows up asking whether or not to continue installing the driver, click on "Install this driver software anyway."
33. If you get a dialog box that says the file 'usbser.sys' is needed, then you will need to either insert the Windows Vista installation disc or search your PC for usbser.sys file.

Windows XP

34. The first time you connect 780E to your PC in COM mode, the Found New Hardware Wizard will show up. Select "Install from a list of specific location (Advanced)."
35. Click on Next.
36. Click on Browse and select the directory where QD780.inf is located.
37. Click on Next.
38. If a dialog box shows up asking whether or not to continue installing the driver, click on Continue Anyway.
39. If you get a dialog box that says the file 'usbser.sys' is needed, then you will need to either insert the Windows XP installation disc or search your PC for usbser.sys file.

Windows 2000

40. The first time you connect 780E to your PC in COM mode, the Found New Hardware Wizard will show up. Click on Next.
41. Select "Display a list of known drivers for this device so that I can choose a specific driver."
42. Click on Next.
43. Select Ports (COM & LPT) and click on Next.
44. Click on Have Disk.

45. Browse to the location of QD780.inf file and select it.
46. Click on OK.
47. Click on Next.
48. Click on Next.
49. If a dialog box shows up asking whether or not to continue the installation, click on Yes.