780B Video Generator/Analyzer Software Release Notes
SW Version
16072545

FPGA Version
16011201

Change Log:

- Improves TMAU behavior
- Fixes issue with some 780D and 780E units' HDMI RX chips not powering up in proper state
- Added support for SDI RX in TMAX queries
- Fixes 780AH menu when Network Analyzer Suite option is not enabled
- Disables display of errant EDID data when HPD is low on 780D/780E/804B
- Fixes NBPC command on HDMI (broken with 16062141)
- Added TMAX:HRAT? and H5VA? (incoming +5V measurement) queries
- Adds TMAX:H? and TMAX:V? combined queries
- Changes to USB COM behavior (improves performance in Tera Term)
- Fixes issues with some patterns on 780 introduced in 16062141
- Added Report Saving Feature

Upgrade Procedure
SD Card Upgrade Procedure (Recommended)

1. Unzip download file and copy all 4 distribution files to the root of an SD or SDHC card.
2. Insert SD or SDHC card into front of 780B and turn on power.
3. On 780B, press Help on top right.
4. Update SW first by pressing Update next to Application Flash. Confirm button will show up.
5. Press Confirm to start updating SW. It takes about one minute to finish updating. When the update finishes, you will see "Application Updated" message as well as "Please reboot the unit now" message.
6. Power cycle the unit.
7. You should see that the SW Version number matches the one shown above.
8. Update FPGA by pressing Update next to FPGA Flash. Confirm button will show up.
9. Press Confirm to start updating FPGA. It takes about one minute to finish updating. When the update finishes, you will see "Xilinx Updated" message as well as "Please reboot the unit now" message.
10. Power down the unit, remove SD card, and power up.
11. Press Help on top right.

12. Verify that the SW Version number and FPGA Version number both match the version numbers shown above.

USB/Internal Flash Upgrade Procedure

1. Turn on 780B and press Help.
2. Check SW and FPGA Version numbers and see if they match the ones shown above. If so, you have the latest versions, so you don't have to continue with the procedure below. If not, continue with the upgrade procedure below.
3. Download the latest load from the downloads webpage.
4. Turn on 780B and press Preferences.
5. If COM is selected next to USB Mode, select Disk and power cycle 780B.
6. Connect 780B's USB port to your PC.
7. 780B should appear as a removable disk.
8. Copy downloaded VP500app.bin, fpga780B.bin, and bootstrp.bin files to 780B. If you only need to upgrade SW, just copy VP500app.bin and bootstrp.bin files.
9. After the files are copied over, use the "Safely Remove Hardware" function and then disconnect the USB cable.
10. On 780B, press Help on top right.
11. Update SW first by pressing Update next to Application Flash. Confirm button will show up.
12. Press Confirm to start updating SW. It takes about one minute to finish updating. When the update finishes, you will see "Application Updated" message as well as "Please reboot the unit now" message.
13. Power cycle the unit.
14. You should see that the SW Version number matches the one shown above.
15. If needed, update FPGA by pressing Update next to FPGA Flash. Confirm button will show up.
16. Press Confirm to start updating FPGA. It takes about one minute to finish updating. When the update finishes, you will see "Xilinx Updated" message as well as "Please reboot the unit now" message.
17. Power cycle the unit.
18. Press Help on top right.
19. You should see that the FPGA Version number matches the one shown above.

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 780B and press Preferences.
4. If COM is selected next to USB Mode, select Disk and power cycle 780B.

5. Connect 780B's USB port to your PC.
6. 780B should appear as a removable disk.
7. Copy unzipped supplemental files to 780B.

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 780B and press Preferences.
3. If COM is selected next to USB Mode, select Disk and power cycle 780B.
4. Connect 780B's USB port to your PC.
5. 780B should appear as a removable disk.
6. Copy downloaded compressed audio test sample files to 780B.

Sine Wave Audio Clips (760 kilobytes)

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

Sample BMP Files (324 kilobytes)

13. [Download sample BMP files from here](#) (updated on August 23, 2013).
14. Turn on 780B and press Preferences.
15. If COM is selected next to USB Mode, select Disk and power cycle 780B.
16. Connect 780B's USB port to your PC.
17. 780B should appear as a removable disk.
18. Copy downloaded sample files to 780B.
19. The UserPats.txt file is used to add the bitmaps to 780B Video Pattern menu. You can add your own bitmaps by copying them to 780B 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](#) (updated on June 30, 2009).
    b. For 64-bit Windows: [Download .inf file from here](#) (updated on Nov 5, 2012).
2. Turn on 780B and press Preferences.
3. If Disk is selected next to USB Mode, select COM and power cycle 780B.

4. Connect 780B'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 780B.
8. Go to the Preferences menu and make sure USB Mode is set to COM. If not, select COM and power cycle the 780B.
9. Connect 780B'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 780B 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 780B 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 780B 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 780B 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 780B 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.