quantumdata 780E Firmware v19.04 Release Notes

May 16, 2019

1 Overview

This document provides information on Release 19.04 of firmware for the quantumdata 780E Handheld Video Generator/Analyzer.

For further information, please refer to the Quick Start Guide and User Guide for the 780E, available on our website at https://www.quantumdata.com/780e.html

2 Installation Instructions

1. Go to the downloads page http://www.quantumdata.com/downloads.html
2. Select the 780 Series Tab.
3. Select and download the official release for the 780E Multi-Protocol Analyzer/Generator.
4. Extract the files from the download zip.
5. Format an SD card (4 GB maximum) using the SD Card format tool such available at https://www.sdcard.org/downloads.
6. Copy all files to the rood directory of the SD card and insert the card into the 780E.
7. Power on the 780E.
8. Go to the 780E Help menu and perform Application Flash Update.
9. When complete, reboot the device.
10. Go to the 780E Help menu and perform FPGA Flash Update.
11. When complete, power down the 780E.
    a. Remove the SD Card.
    b. Power up the 780E to reboot the device.
12. View the help Menu on the 780E and validate the firmware versions per the 19.04 column of Table 1. The version numbers for Release, TX FPGA, and RX FPGA should all be correct.
13. Next, continue with Table 1 and compare the versions of HDMI 2.0 RX, HDBaseT TX, HDBaseT RX under the 19.04 column.
14. If the firmware versions from step 13 match, the upgrade is complete. Power down the 780E and remove the SD card.
15. If the firmware versions from step 13 DO NOT match, continue with the following procedure:
    a. Power down the 780E, insert the SD card again, and power up.
    b. Go to Help Menu and perform Program Other Chips (Press View)
    c. Update HDMI 2.0 RX Flash and wait for completion.
    d. Update HDBaseT Tx Flash and wait for completion.
    e. Update HDBaseT Rx Flash and wait for completion.
    f. Reboot the 780E and verify the software versions again per the instructions above.
    g. Power down the 780E and remove the SD card.

2.1 Table 1: Firmware Versions

Item	Version / Revision (Changes compared to previous release are in GREEN)	
	780E	
	18.08	**19.04**
Release	18.08.3163	19.04.3048
TX FPGA	18010202	19050101
RX FPGA	18042401	18042401
HDMI 2.0 RX	1.99.17_D0	1.99.17_D0
HDBT TX	13140210	13140210
HDBT RX	13140200	13140200
DP RX	7.14	7.14
Bootstrap	3.36	3.36
Boot	3.28	3.28

3 Enhancements and Corrections

3.1 Updates and fixes

	Bug Id	Description
1		Improved deep color detection for 780E HDMI Analyzer
2		Ability to load compressed audio samples from SD card
3		Added menu item to set system time
4		Added "-DP" to list of options returned for "*OPT?" query
5	2641	Fixed occasional issue with bottom of Dolby Vision test image
6	2651	Fixed color issues with bitmaps loaded from SD card
7	2675	Added support for parsing EDID version 1.4
8	2733	Fixed occasional CEC/DDC issue with "CBL2?" query (command-line cable test)

9	2752	"TCAL" command (touch panel calibrate) now returns to Help menu when completed
10	2898	Improvement to TMDS/SCDC setup sequence upon hotplug to HDMI Tx
11	2740	Fixed access issue with certain SDHC cards greater than 4GB capacity
14	2929	Added DPCD SSC status to DP Rx info screen
15	2868	Applied errata for HDMI CTS 1.4b EDID tests 8-1 and 8-2
16	2943	Improved HDBaseT transmit performance at greater than 200 MHz pixel clock

4   Errata

4.1   Known Issues

4.1.1   Odd number of active pixels per line
The 780E video generators are limited to formats with an even number of active pixels per line. If a format is loaded with an odd number of active pixels per line, the output video will contain either one more or one less active pixel per line.

4.1.2   Extremely large ACA captures can sometimes corrupt the flash filesystem
ACA captures with a very large amount of data, usually over many hours, can cause file system corruption. We suggest limiting ACA captures to shorter durations. We expect to fix this issue in a future release.

4.1.3   Some pattern packs and other bitmaps may show incorrect colors in YCbCr
In some situations, the video generator may apply limited quantization range when not intended, so component values may be incorrect. We expect to fix this issue in a future release.

4.1.4   SD Cards greater than 4GB capacity
This release fixes bug 2740 which can result in file corruption when using an SD card of greater than 4GB capacity. However, when updating to this release per the installation instructions above, the previous firmware will be running on the 780E during the upgrade process, so we recommend using a card no greater than 4GB. This limitation will be removed after successfully updating to this release.

5   Support
For support on the quantumdata 780E 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.