



# **QSB**

## **Quadrature to USB Adapter Firmware Update Instructions**

Revision: 1.0  
24 January 2012

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<b>Date</b>	<b>Comment(s)</b>
01/24/2012	Created version 1.0

# 1 Introduction

## 1.1 Purpose

Generally, the QSB Quadrature to USB Adapter device can be firmware upgraded by simply using QSBFirmwareUpdater.exe program. However, in some circumstances the firmware must be manually updated. The purpose of this manual is to describe how to manually update the firmware for QSB Quadrature to USB Adapter device.

## 2 QSB Firmware Installation Instructions

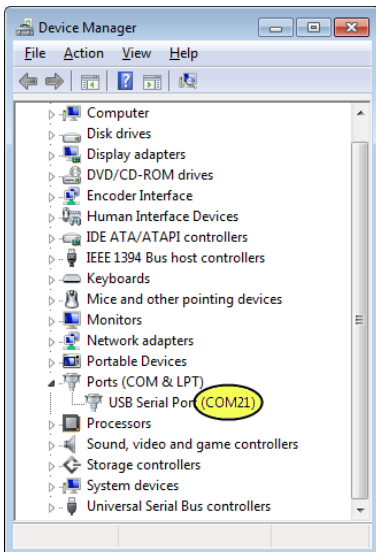
Please follow these steps to update the firmware for a QSB device only after all other attempts to update the firmware using the QSBFirmwareUpdater have been unsuccessful.

Note: This procedure utilizes the QSB Command Demo to initialize the device once the firmware has been downloaded to the device.

Step 1. Download the latest QSB firmware from the US Digital website to the C:\Program Files\US Digital\QSB directory or C:\Program Files (x86)\US Digital\QSB directory depending on whether the operating is 32 bit or 64 bit platform. Click on the following link and then locate the QSB Firmware section to download the latest firmware.  
<http://www.usdigital.com/support/software/qsb-quadrature-to-usb-adapter-software>

Step 2. Ensure the QSB device is plugged into a USB port.

Step 3. Determine the COM port assigned with the QSB device by opening the Device Manger. The Device Manager maybe found in the opening the Control Panel.

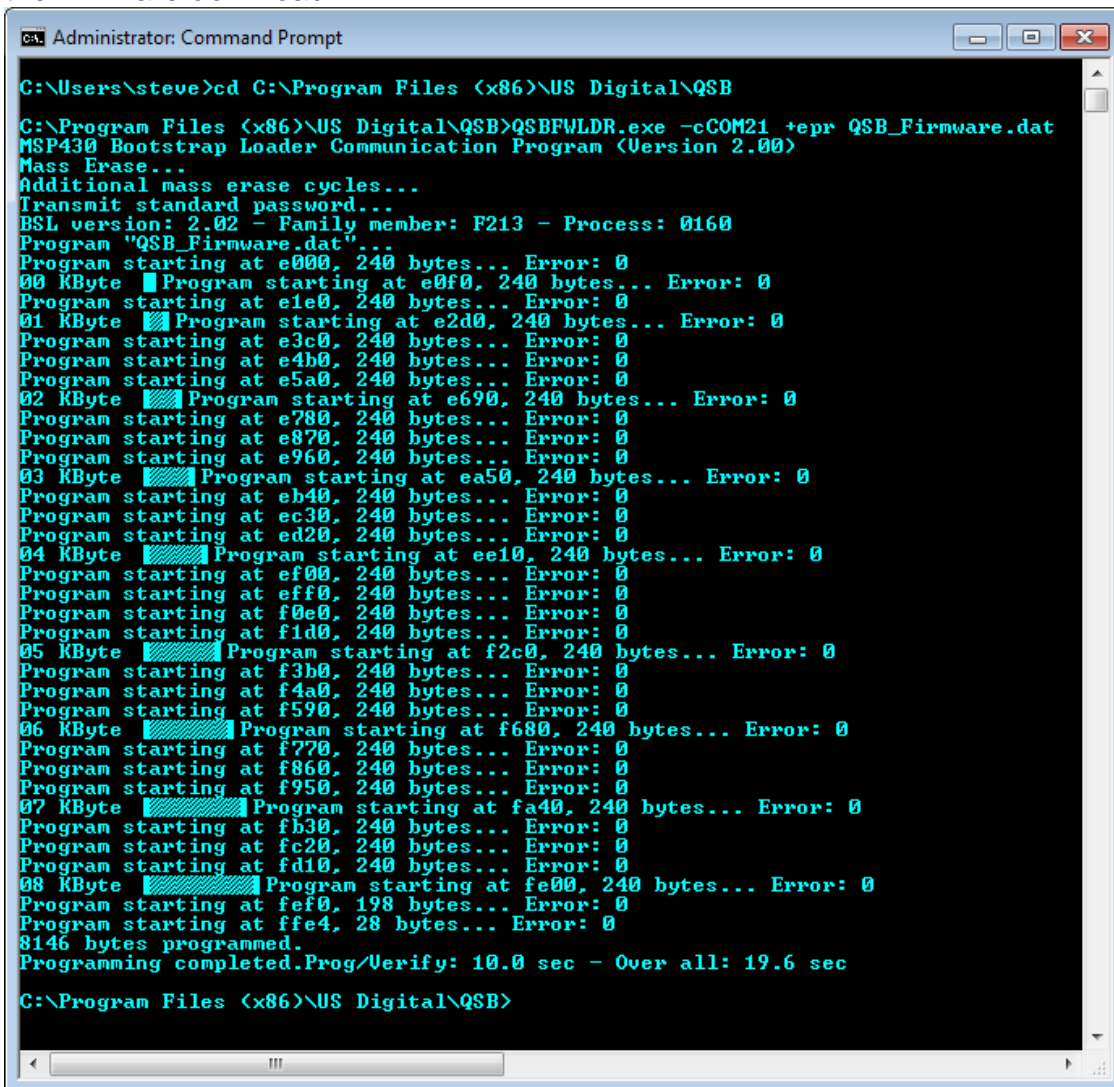


Step 4. Open a Command Prompt.

Step 5. Change directory to QSB program files directory that the QSB\_Firmware.dat was downloaded to.

Step 6. Enter the following command: QSBFWLDR.EXE -cCOM21 +epr QSB\_Firmware.dat

Substitute the correct COM port for the COM21. It will take approximately 20 seconds to the firmware download.



```
Administrator: Command Prompt

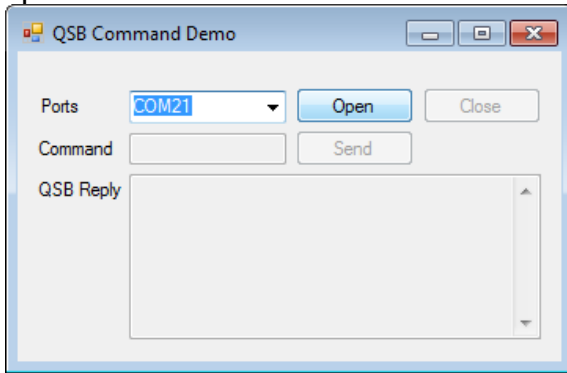
C:\Users\steve>cd C:\Program Files (x86)\US Digital\QSB

C:\Program Files (x86)\US Digital\QSB>QSBFWLDR.exe -cCOM21 +epr QSB_Firmware.dat
MSP430 Bootstrap Loader Communication Program (Version 2.00)
Mass Erase...
Additional mass erase cycles...
Transmit standard password...
BSL version: 2.02 - Family member: F213 - Process: 0160
Program "QSB_Firmware.dat"...
Program starting at e000, 240 bytes... Error: 0
00 KByte █ Program starting at e0f0, 240 bytes... Error: 0
Program starting at e1e0, 240 bytes... Error: 0
01 KByte ███ Program starting at e2d0, 240 bytes... Error: 0
Program starting at e3c0, 240 bytes... Error: 0
Program starting at e4b0, 240 bytes... Error: 0
Program starting at e5a0, 240 bytes... Error: 0
02 KByte ████ Program starting at e690, 240 bytes... Error: 0
Program starting at e780, 240 bytes... Error: 0
Program starting at e870, 240 bytes... Error: 0
Program starting at e960, 240 bytes... Error: 0
03 KByte ████ Program starting at ea50, 240 bytes... Error: 0
Program starting at eb40, 240 bytes... Error: 0
Program starting at ec30, 240 bytes... Error: 0
Program starting at ed20, 240 bytes... Error: 0
04 KByte ████ Program starting at ee10, 240 bytes... Error: 0
Program starting at ef00, 240 bytes... Error: 0
Program starting at eff0, 240 bytes... Error: 0
Program starting at f0e0, 240 bytes... Error: 0
Program starting at f1d0, 240 bytes... Error: 0
05 KByte ████ Program starting at f2c0, 240 bytes... Error: 0
Program starting at f3b0, 240 bytes... Error: 0
Program starting at f4a0, 240 bytes... Error: 0
Program starting at f590, 240 bytes... Error: 0
06 KByte ████ Program starting at f680, 240 bytes... Error: 0
Program starting at f770, 240 bytes... Error: 0
Program starting at f860, 240 bytes... Error: 0
Program starting at f950, 240 bytes... Error: 0
07 KByte ████ Program starting at fa40, 240 bytes... Error: 0
Program starting at fb30, 240 bytes... Error: 0
Program starting at fc20, 240 bytes... Error: 0
Program starting at fd10, 240 bytes... Error: 0
08 KByte ████ Program starting at fe00, 240 bytes... Error: 0
Program starting at fef0, 198 bytes... Error: 0
Program starting at ffe4, 28 bytes... Error: 0
8146 bytes programmed.
Programming completed.Prog/Verify: 10.0 sec - Over all: 19.6 sec

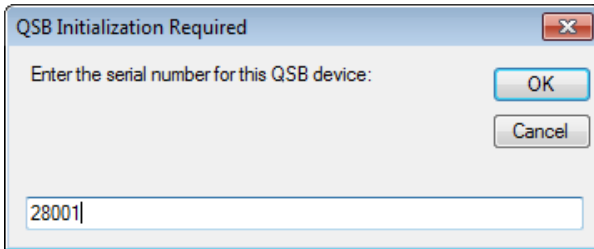
C:\Program Files (x86)\US Digital\QSB>
```

Step 7. Locate and execute the QSB Command Demo which can be found in the ..\US Digital\QSB\Demos\QSB Command Demo\bin\Debug\x86 directory.

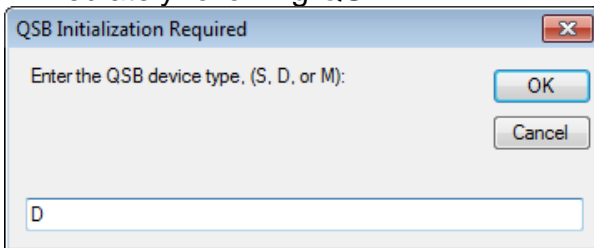
Step 8. The select appropriate COM port from the Ports drop-down list and then click the Open button.



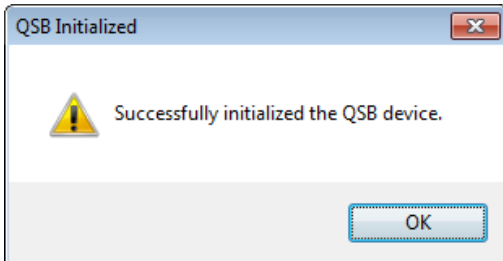
Step 9. If the device has not been initialized, then a dialog will prompt for the device serial number. Enter the serial number which can be found lasered on the top of the QSB device.



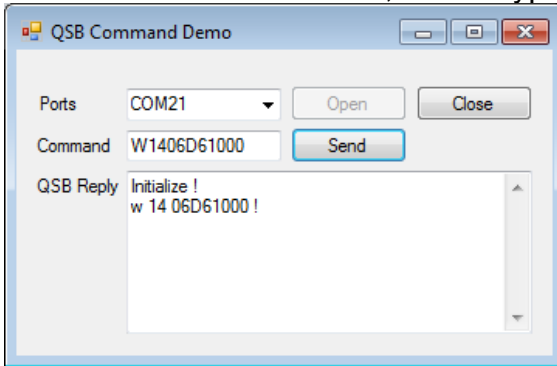
Step 10. Enter the device type in the following dialog. The device type can also be found lasered on the top of the QSB device. The device type is identified by the letter immediately following QSB-.



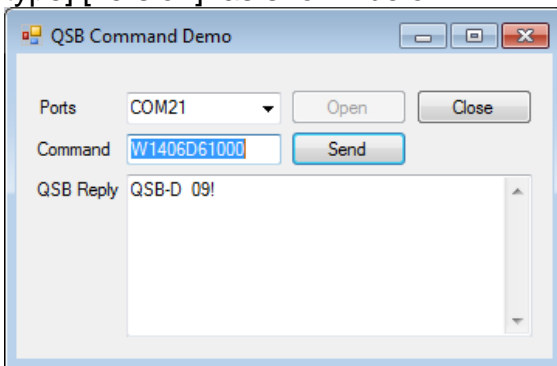
Step 11. Once the device has been initialized, a dialog will be displayed indicating that the QSB has been initialized successfully.



Step 12. The QSB Command Demo will display the response from the QSB device. A successful initialization complete response will contain a lower case “w 14” followed by the encoded serial number, device type as shown in the screen shot below.



Step 13. To verify the firmware version, click the Close button then click the Open button. When a new connection is opened with a QSB device, it responds with QSB-[device type] [version]! as shown below.



Please contact US Digital Customer Support if you have additional questions.