

Gainspan WAB-GW-GS2011

Programing



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1. Introduction

This document outlines how to reprogram the Gainspan module WAB-GW-GS2011MIZ using a TTL serial interface.

2. Serial Programming

Required material

- Gainspan module WAB-GW-GS2011MIZ
- Female dual row 26-pin header MFG PN: [NPPN132AFCN-RC](#)
- 3.3V Virtual COM to TTL board, see below for recommendations
- [SparkFun FTDI Basic Breakout - 3.3V](#)
- 6 Position Single Row Male header MFG PN: [68001-106HLF](#)
- 6 pieces of 2" 22AWG wire
- Windows PC with at least one free USB Port
- The 2011 firmware files are included inside the .ZIP file at:
<http://teamfdi.com/products/WAB-GW/Gainspan%20Module%20Program%20Procedure%20V1.zip>

The PC GainSpan utility to program the module should work with any 3.3V TTL serial adapter, provided that all of the I/O signals are 3.3V and the boards VCC output is 3.3V. **Higher voltages than 3.3VDC can result in the board being damaged and not covered under the warranty.**

Building the Cable

These instructions are for building the cable with the SparkFun FTDI Basic Breakout - 3.3V board, if an alternate TTL serial board is used, use the table below as a reference.

Table 1 Pin Out

Signal	SparkFun FTDI Basic Pin	Application Header Pin
GND	1	2
3.3V	3	3
3.3V	3	26 (program mode)
TXD	4	21
RXD	5	24

Referenced As pin 1
in the above table

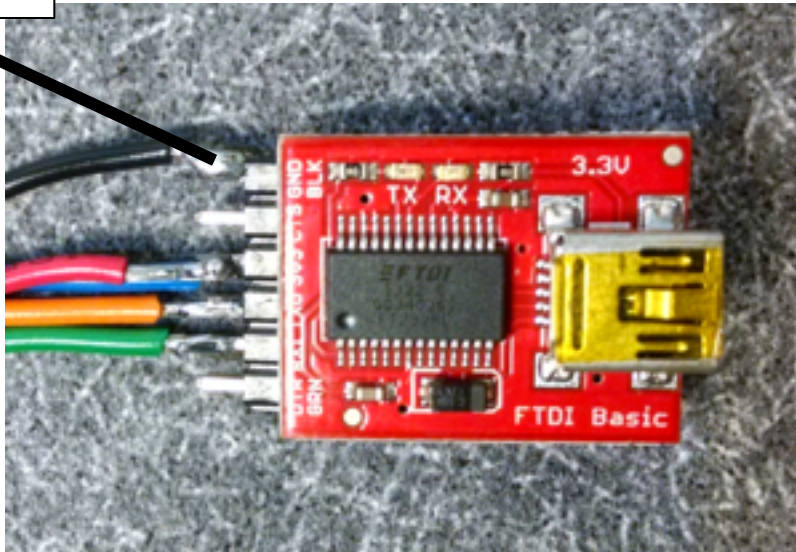
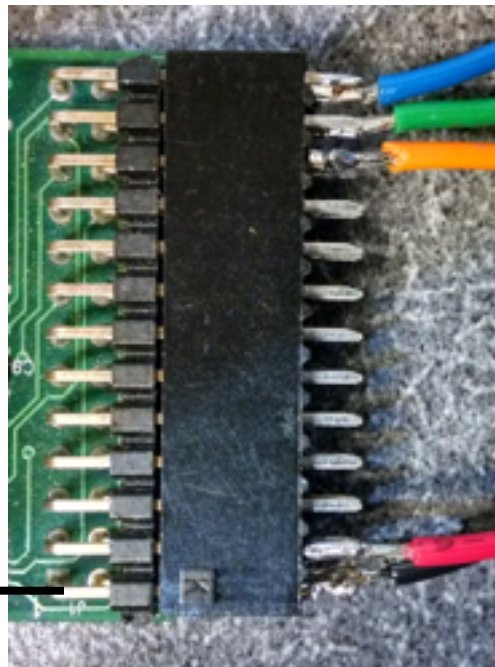


Figure 1 SparkFun FTDI Breakout Board

1. Solder the wires to the 6 Position Single Row Male header as defined in Table 1 (Figure 1). Note: there are two wires on the 3.3V signal, the first is to power the GainSpan module while the second is used to put the GainSpan module into the programming mode.
2. Solder the corresponding wire from the male header to the female dual row 26-pin header.



Application Header Pin 1

Figure 2 Application Header to WAB Board

Programming the Gainspan Module

1. Connect the cable to the FTDI and WAB boards as shown in Figures 1 and 2.
2. Extract the content of the zip file provided by FDI to the desktop.
3. Plug the FTDI adapter board into the PC using a USB cable. Drivers should install automatically on Window 7 and later.
 - a. Located the correct COM port by looking in the device manage under “Ports (COM &LPT)

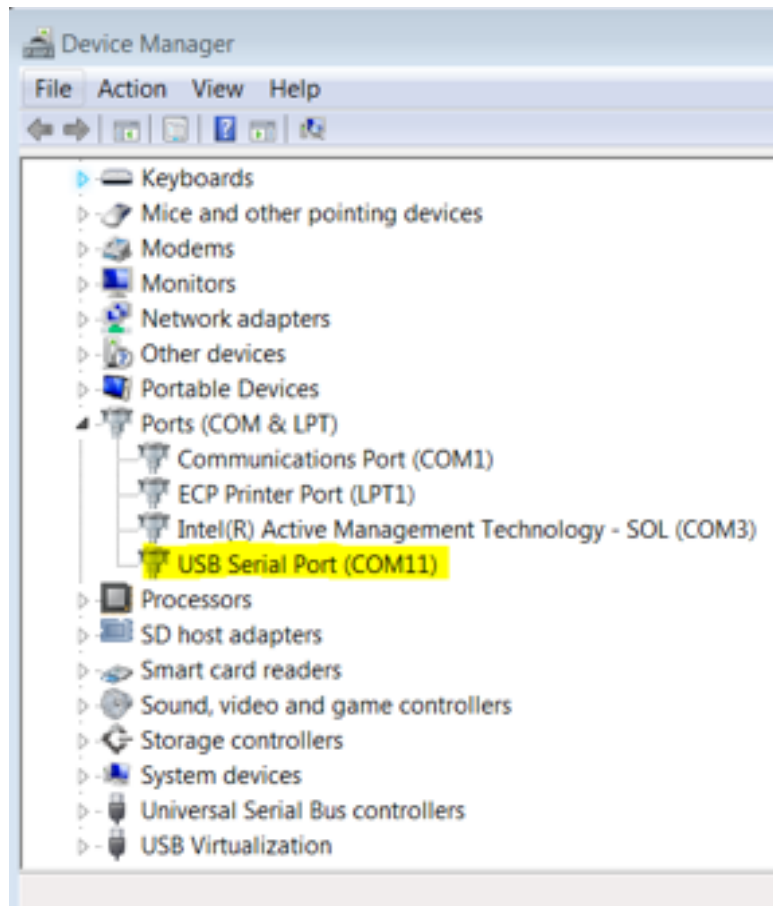


Figure 3 Windows Device Manager

4. Open the exe file located in the folder "GS_programming_tool"
5. Select the following options to test the connection
 - a. Select Interface: UART
 - b. Select UART Port: COMXX (where XX is the number of your COM port)
 - c. Select Baud Rate: 115200
6. Press the <Check> button to confirm connectivity, Figure 4 shows a proper connection to the module.

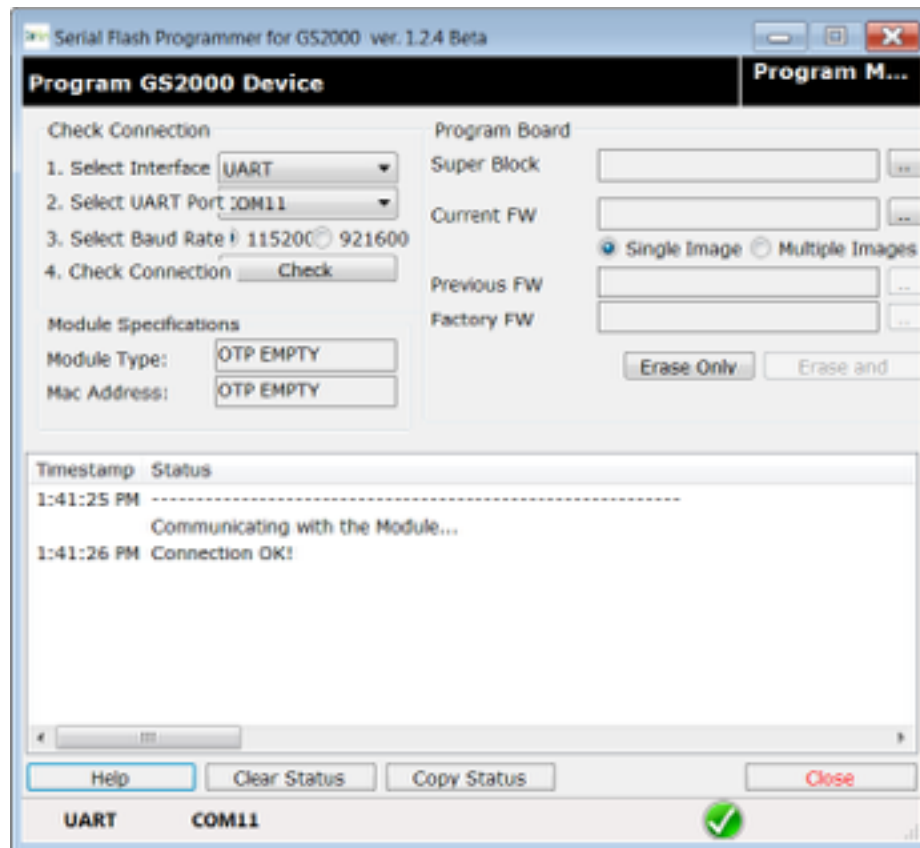


Figure 4 Programming Utility Successful COMs

7. Select the Super Block file by clicking the <..\> button next to it.
 - a. The file will be located in the extracted folder under “Firmware”.

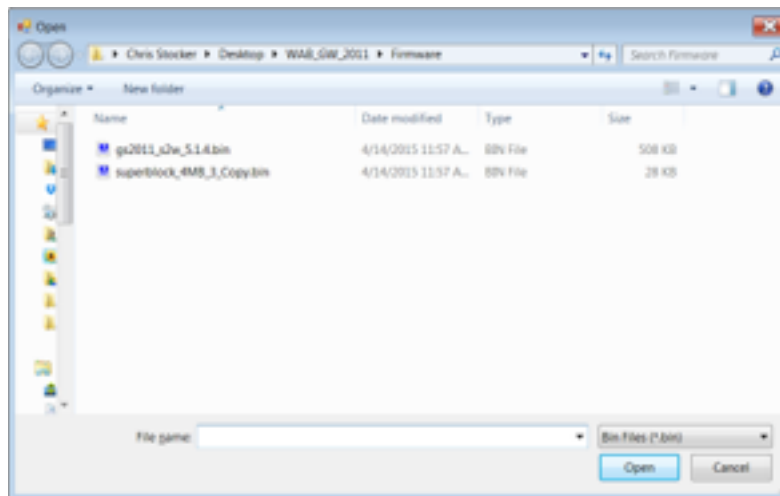


Figure 5 Open File Dialog for File Selection

8. Next select the current FW by pressing the <..\> button next to it.
 - a. The FW File will be located in the same directory as the Super block, **qw2011_s2w_5.1.4.bin**.
9. After valid files have been selected the <Erase and> button will be enabled, press this button to start programming the module.
10. After the module has been successfully programed the following screen will be shown.

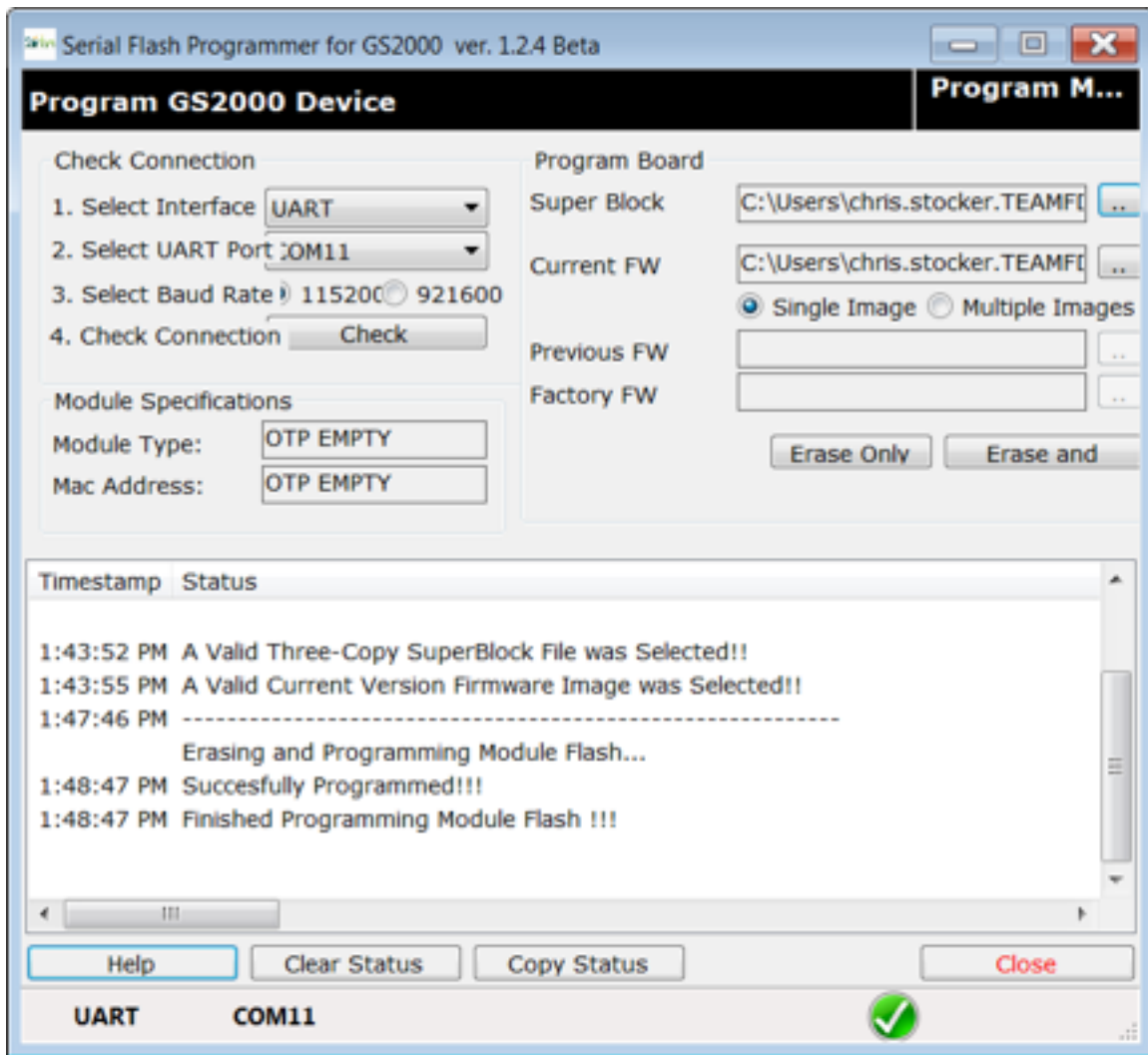


Figure 6 Successfully Programed Module Screen