

### XE8000EV121 Firmware Programming

### Evaluation board for SX8723/24/25

#### Introduction

The onboard microcontroller is a gateway providing translation between UART (computer side) and I2C (SX87xx side). Some communication problems may occur due to wrong manipulation on the board, this document describes how to re-program the firmware.

The XE8000EV121 gateway firmware is available on Semtech web site, or by request at this e-mail address: [support\\_sensing@semtech.com](mailto:support_sensing@semtech.com)

Recommended reading: XE8000EV121 User Guide

#### Programming procedure

##### 1. Connect the board

Connect the board to your USB port, and then switch on the XE8000EV121 using the *Power* switch (top left side of the board).

*Note:* Ensure that the jumper at the right of the power switch is either connected on 3.3V or 5V\_USB. For more information on how to determine which Serial COM port has been assigned please refer to the XE8000EV121 User Guide.

##### 2. Set the PIC Gateway in programming mode

The gateway program (br10) jumper allows the user to programme the onboard PIC16F877A. By default, the jumper is not connected.

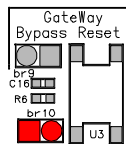


Figure 1. Gateway program jumper

On the board, shortcut the *br10* jumper and press the Reset button. Now the chip is set in programming mode. After the reset, the shortcut of *br10* jumper is not necessary.

##### 3. Start the Graphical User Interface

Once the board is connected launch the GUI from Windows *Start Menu->Programs->SX87xx->SX87xx* and the GUI main window will open.

##### 4. Open the programming window

Select the Serial COM port corresponding to your XE8000EV121 board on the GUI toolbar. Don't click on the Open button. Only select the correct port.

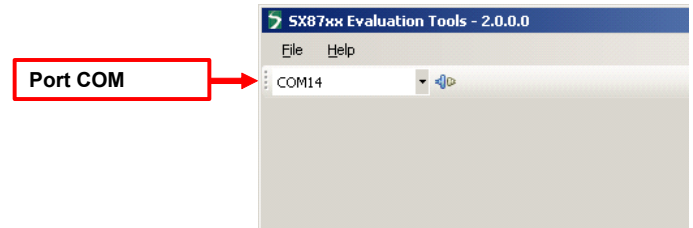


Figure 2. COM port selection

Press the **Ctrl+Alt+P** on the keyboard to open a programming window.

##### 5. Program the firmware

Click on the *Browse* button and select the firmware to upload in the microcontroller. The default file name is *gateway.hex*.

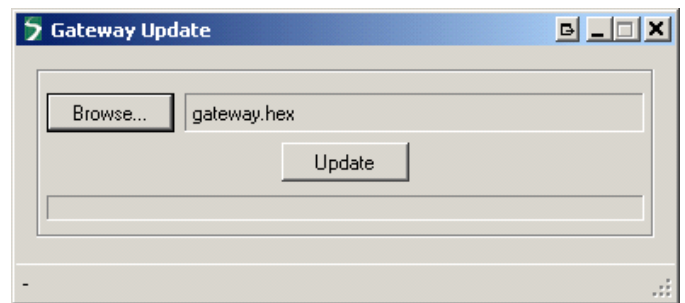


Figure 3. Programming window

Click the *Update* button to program the microcontroller. After a few seconds, if the programming has been done correctly a message appears: *The gateway has been updated successfully.*

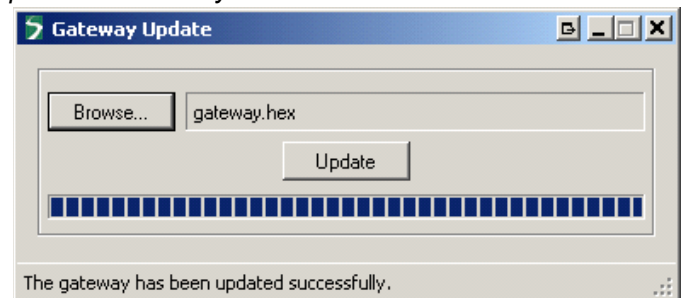


Figure 4. Successful programming

1. Annex: XE8000EV121 board layout

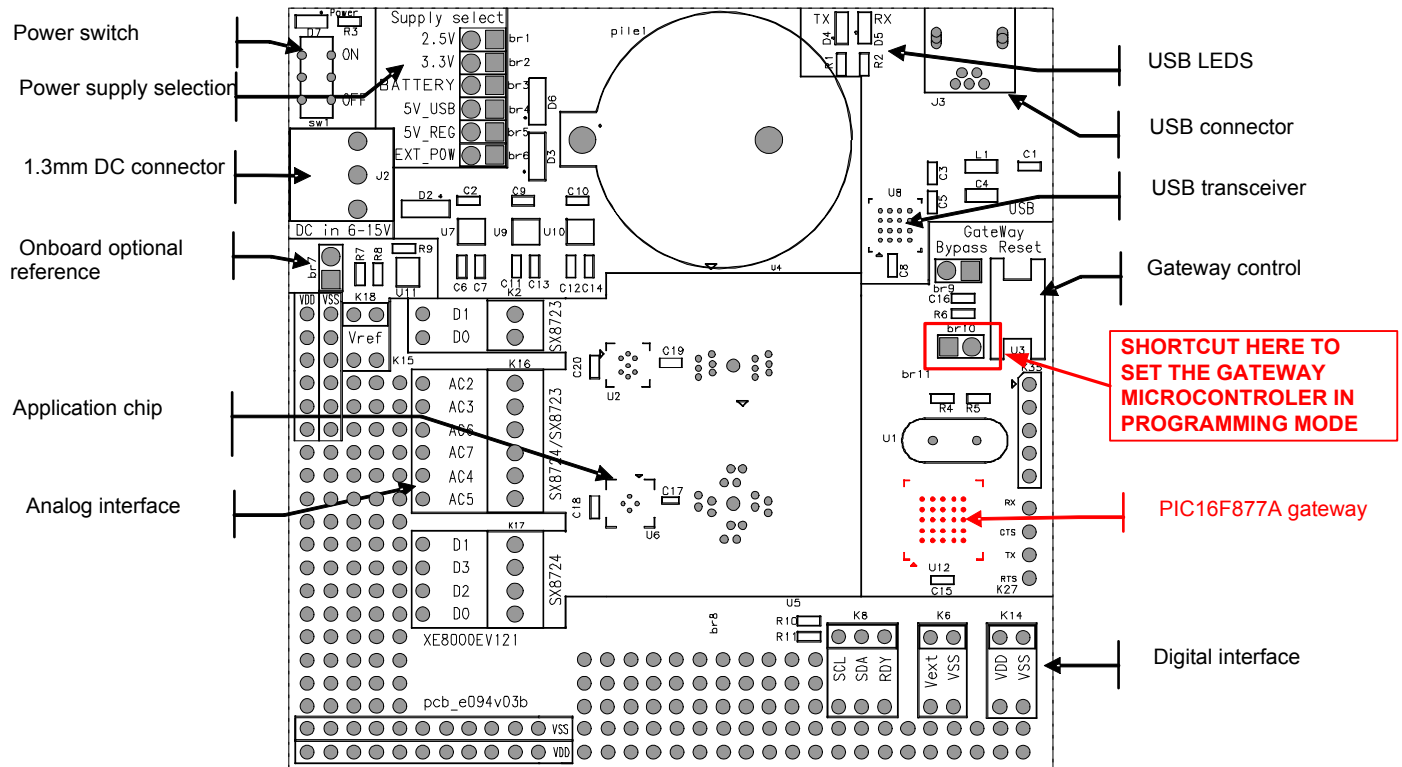


Figure 5. XE8000EV121 board layout

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