

CrossFire™ MX1B

Using bootload and how to upgrade
built-in firmware



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Using bootload and how to upgrade the CrossFire™ MX1B

The CrossFire™ MX1B contains built in firmware, this document contains instruction about how to download firmware to the unit.

Bootloader

A bootloader is a program whose purpose is to load and run programs in microcontroller platforms. In this case the intention with the bootloader is to load and store a new hex-file that contains the firmware for a specific unit.

The process of loading new firmware requires communication between the processor and the computer on which the code is stored. Bootload accomplishes this via a serial port.

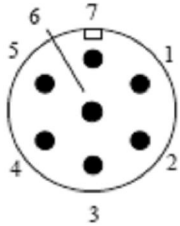
In order to connect and get the CrossFire™ MX1B to accept new firmware the bootstrap load pin must be activated, when this pin is made active the unit places itself in a mode where it accepts communication with a bootloader.

Connection

When loading firmware to the CrossFire™ MX1B the following pins are involved

Connector Power Supply

Conn.Pin	Signal Type	Connector type
PS.1	+ 24 V	DIN M23
PS.2	+ 24 V	
PS.3	GND	
PS.4	GND	
PS.5	TxD	
PS.6	RxD	
PS.7	Debug	



Connection wiring

Connection wiring	
PS.1	Power 24V
PS.3	Ground
Debug	Ground
PS.3	Computer RS232 Ground
TxD	Computer RS232 Rx
RxD	Computer RS232 Tx

Hitex Bootload

Hitex Bootload is a program for loading firmware to the CrossFire™ MX1B. When the program is started the following interface appears.



Figure 1, Hitex Bootload interface.

PC Port

Press the PC Port button and the following dialog appears.

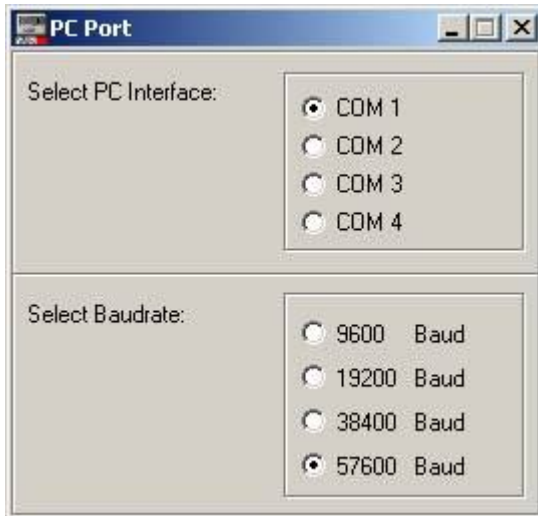


Figure 2, PC Port dialog.

Set the Baudrate to 57600 Baud and select COM port according to your computers port number.

Busconfigurations

Press the Busconfigurations button and the following dialog appers.

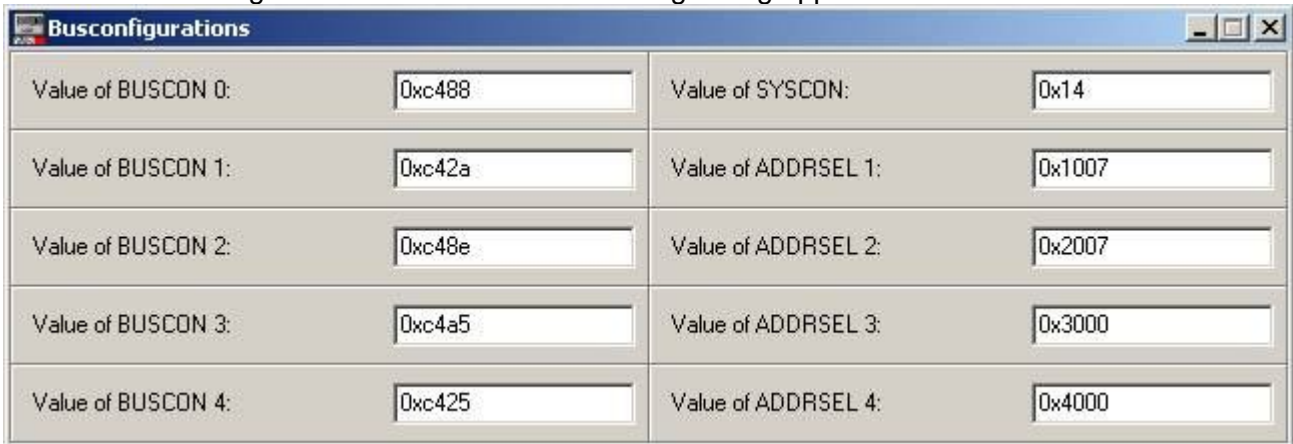


Figure 3, Busconfigurations dialog.

Set the values according to Figure 3.

Target Memory

Press the Target Memory button and the following dialog appers.

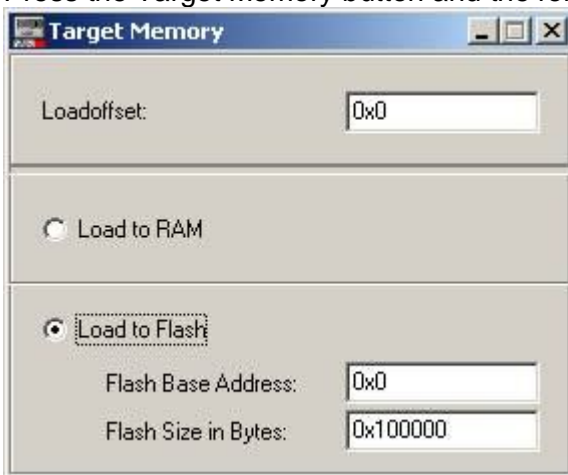


Figure 4, Target Memory dialog.

Set the values according to Figure 4.

Controller

Press the Controller button and the following dialog appers.

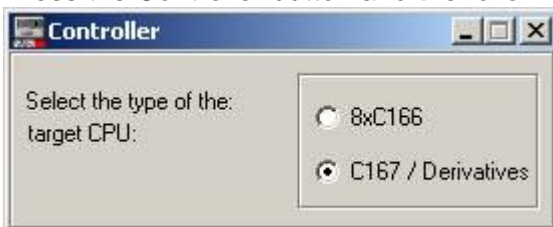


Figure 5, Controller dialog.

Set the controller to C167/Derivatives

Before Loading...

Press the Before Loading... button and the following dialog appers.

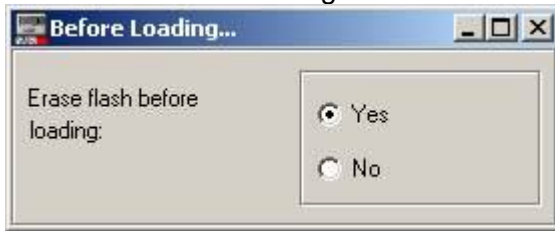
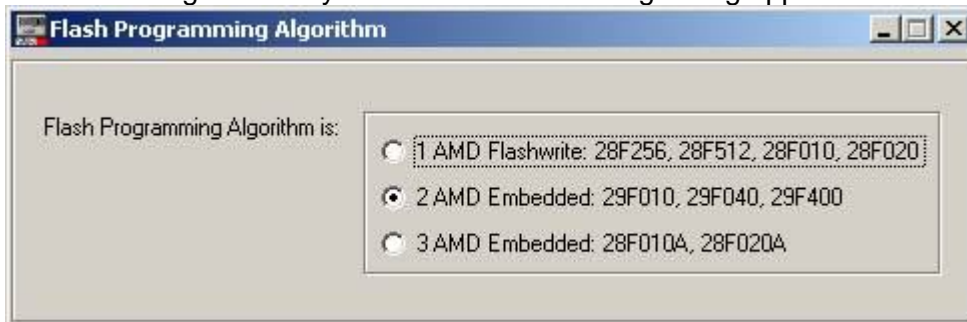


Figure 6, Before Loading... dialog.

Set Erase flash before loading to Yes.

Flash Programming Algorithm

Press the Target Memory button and the following dialog appers.

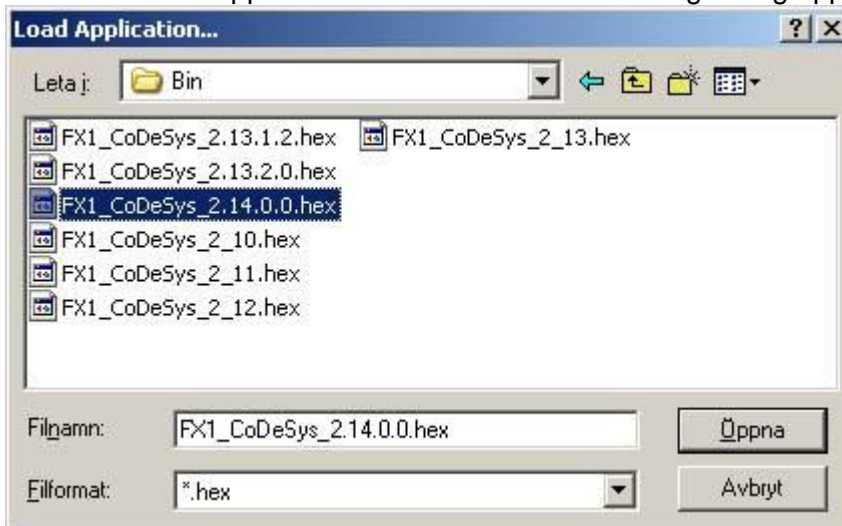


Figur 7, Flash Programming Algorithm dialog.

Set the values according to Figur 7.

Load Application...

Press the Load Application... button and the following dialog appers.



Figur 8, Load Application... dialog.

Choose the hex-file to be loaded.

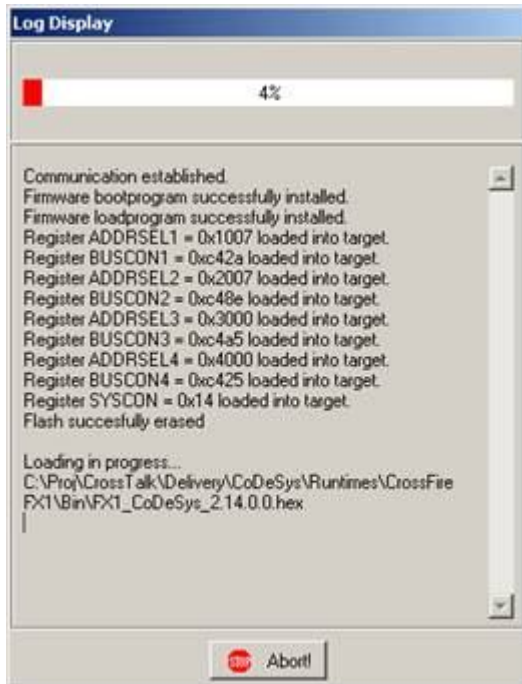
Download the Hex-file

To install and download a firmware, please follow this procedure:

1. Cut the power to the MX1B unit
2. Connect the MX1B unit to you computer via RS232
3. Power up the unit



4. Press on the button that looks like a checker flag and the following will appear



The loader takes a while to complete the firmware loading, so be patient and wait until the progress bar reaches 100%

When the loading is complete

5. Cut the power to the MX1B unit
6. Remove PS.7 "Debug" from ground.
7. Power up the unit and start use it.

8. If the following appears, cut the power to the unit and go back to step 3 and try again

