

Uploading Firmware to the PCAN-MicroMod

For a firmware upload you need:

- the PCAN-MicroMod Evaluation Board (is used in this procedure)

- or -

a motherboard for the MicroMod with the following features:

- an RS-232 connector (with a driver connected ahead)

MicroMod pin	Name	Function
J1:17	TxD	Serial transmit (TTL levels)
J1:18	RxD	Serial receive (TTL levels)

- a switch or jumper to set the MicroMod to programming mode

MicroMod pin	Name	Programming mode	Normal operation mode
J1:23	M0	0 V	5 V (internal pull-up)
J1:24	M2	5 V (internal pull-up)	0 V

- a pushbutton to reset the MicroMod

MicroMod pin	Name	Status for reset
J1:21	Reset_In	0 V

- the possibility to set the digital inputs 0 and 1 to Low state

MicroMod pin	Name	Status for firmware upload
J2:25	DI 1	0 V
J2:26	DI 0	0 V

- └ a serial RS-232 port on a computer running Windows
 - └ a serial 1:1 cable with male D-Sub connectors
 - └ the Windows software FLASH MCU Programmer for the F²MC-16LX microcontroller family.
You can download a setup program of the current version from the Spansion website (www.spansion.com). Search for "mcu programmer download" there.
 - └ the firmware file (*.mhx)
- Do the following to upload a new firmware:
1. Make sure that the Evaluation Board with the MicroMod is switched off.
 2. Connect the Evaluation Board and the serial port of you computer with the serial cable.

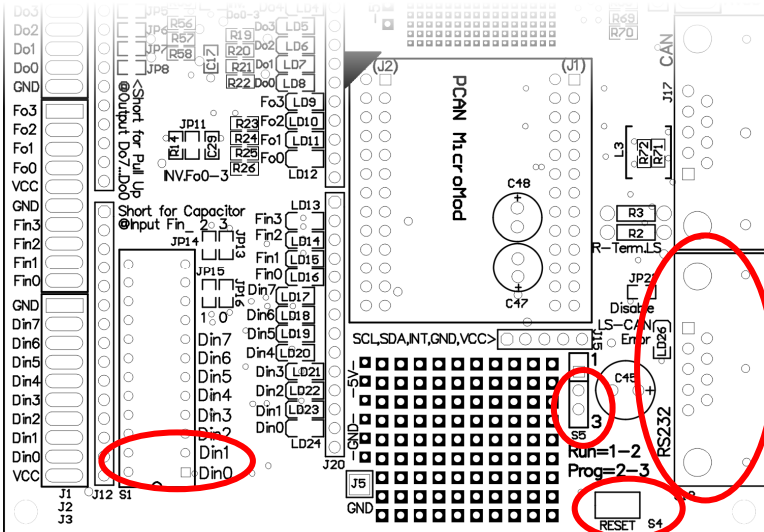
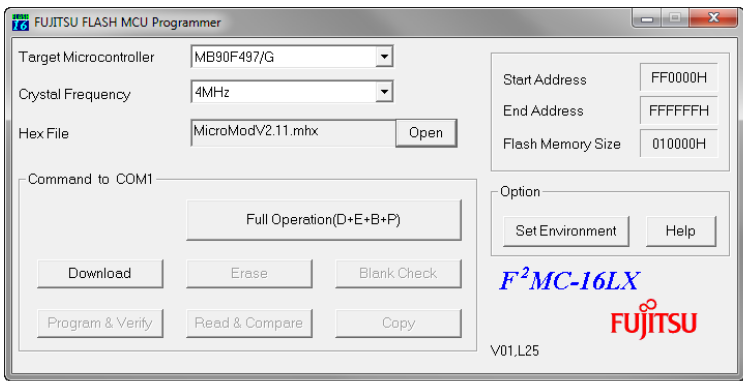


Figure 1: The marked elements on the Evaluation Board are used in this and in the following steps.

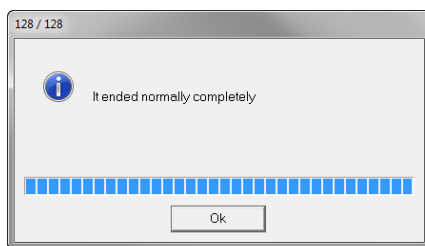
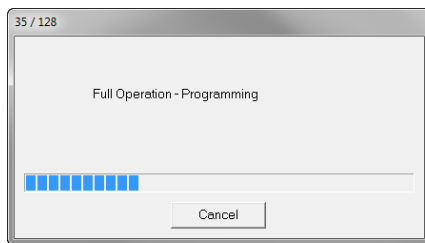
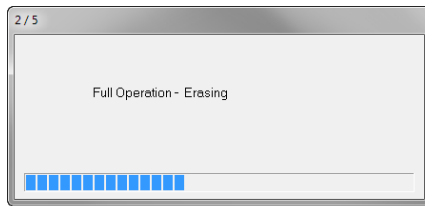
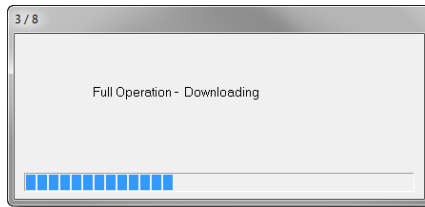
3. Set the jumper S5 to position 2-3 so that the MicroMod will start in programming mode.
4. Apply power.
The LED on the MicroMod stays off.
5. Ensure that the switches for the digital inputs Din0 and Din1 are set to Off (right switch position).
6. Reset the MicroMod with the push button S4.
7. Under Windows, start the FUJITSU FLASH MCU Programmer (FMC16LX).



8. Select **Set Environment** in order to check that the indicated serial port is corresponding to the actually used one. Confirm with **OK**.
9. Do the following settings:
Target Microcontroller: MB90F497/G
Crystal Frequency: 4 MHz
10. Use the **Open** button behind the **Hex File** field to select the firmware file that shall be used for upload.

11. Start the transfer sequence by clicking on **Full Operation (D+E+B+P+R)**.

The process takes approximately one minute. At its end a message is shown that confirms the proper sequence.



12. Disconnect the power from the Evaluation Board.
13. Setup the normal operation mode (Run mode) for the MicroMod (jumper S5 to 1-2), before applying power again.

The upload procedure is finished and you can use the MicroMod normally now.

Product names mentioned in this document may be the trademarks or registered trademarks of their respective companies. They are not explicitly marked by "™" and "®".

© 2014 PEAK-System Technik GmbH

PEAK-System Technik GmbH
Otto-Roehm-Strasse 69
64293 Darmstadt
Germany

Phone: +49 (0)6151 8173-20
Fax: +49 (0)6151 8173-29

www.peak-system.com
info@peak-system.com

Document version 1.1.0 (2014-01-16)