

Programmer OSBDM-S12 Read/Write S12 Chip Secret Tutorial

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(using the MC9S12XS128 as an example; you probably won't succeed easily)

Preparation: (the programmer package .rar must be extracted to the current folder of D/E disk beforehand)

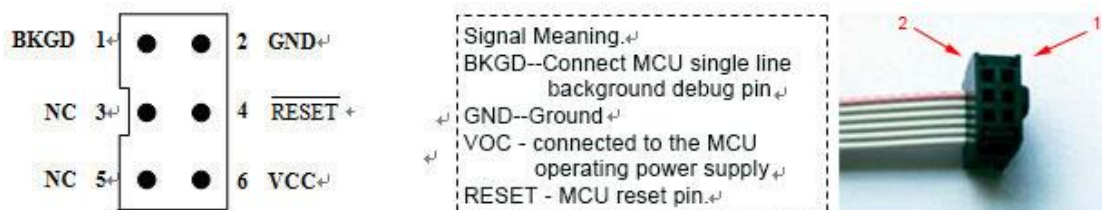
A. Run PEDrivers_install.exe to complete the programmer driver installation; read/write software does not need to be installed.

B. Plug the OSBDM programmer into the USB port and follow the prompts to automatically complete the device identification and driver installation. You can see the LibUSB-Win32 Devices - OSBDM/OSJTAG devices in the Device Manager after correctly installing the driver, where the CDC Serial Port drivers for the ports (COM and LPT) are irrelevant and there is no harm in having errors.



C. Insert the 6p plug of the programmer into the BDM connector of the target board correctly (row of pins, flying wires, clips, probes are all acceptable). The pin definitions of each chip model can be found on the Internet, or you can ask the store to help find out.

The standard definition of the BDM interface is as follows: (the left picture is the on-board socket; the right picture is the cable plug, the red side of the side of the small triangle marked as 1 pin). The interface signal wires need to be connected to 4 pins: 1, 2,4,6.



VCC: Default output 5V power supply, optional 3.3V or no output power supply.

This is set by the JP2 jumper of the programmer board, if the target board has self-power supply, then JP2 should be disconnected.

Start:

1. Run the software: enter the \PROG12Z_C\ folder, find and run prog12z.exe read and write software (can be sent to the desktop by right-clicking, convenient for next time), during the period of time, if the pop-up shown in the figure below the red circle of the device recognition error prompts, it is necessary to check whether to insert the programmer device, if the confirmation of insertion and connection of the correct need to reinstall the driver for further attempts until the error prompts become The device is recognized normally:



2. Connect to the target: After the hardware and software are ready, click Connect (Reset) in the lower-left corner of the figure below to connect to the target, and then select a partition algorithm of the chip model in the interface that pops up: (there may be more than one partition, for example, Pflash, Dflash or EEPROM, and if there are more than one partition, then exit and enter the software to re-select the partition or CM command to change the partition)



You have selected to display this dialog on startup. Specify communications parameters and click OK.

Connection port and Interface Type

Interface: Add LPT Port
Refresh List

Port:

* Contains Embedded Debug Hardware [Click for info.](#)

Target CPU Information

CPU: **HC12/HCS12 - Autodetect Device Type**

BDM Communications Speed

Autodetect communications speed

Use IO_DELAY_CNT = (Decimal)

MCU Internal Bus Frequency (For programming)

Auto-Detect

MCU Internal Bus frequency (FREQ) in Hz = (Decimal)

Reset Options

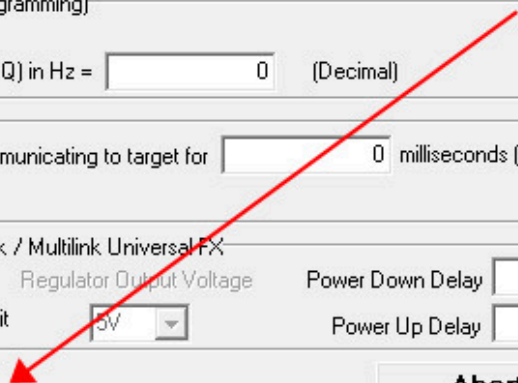
Delay after Reset and before communicating to target for milliseconds (decimal).

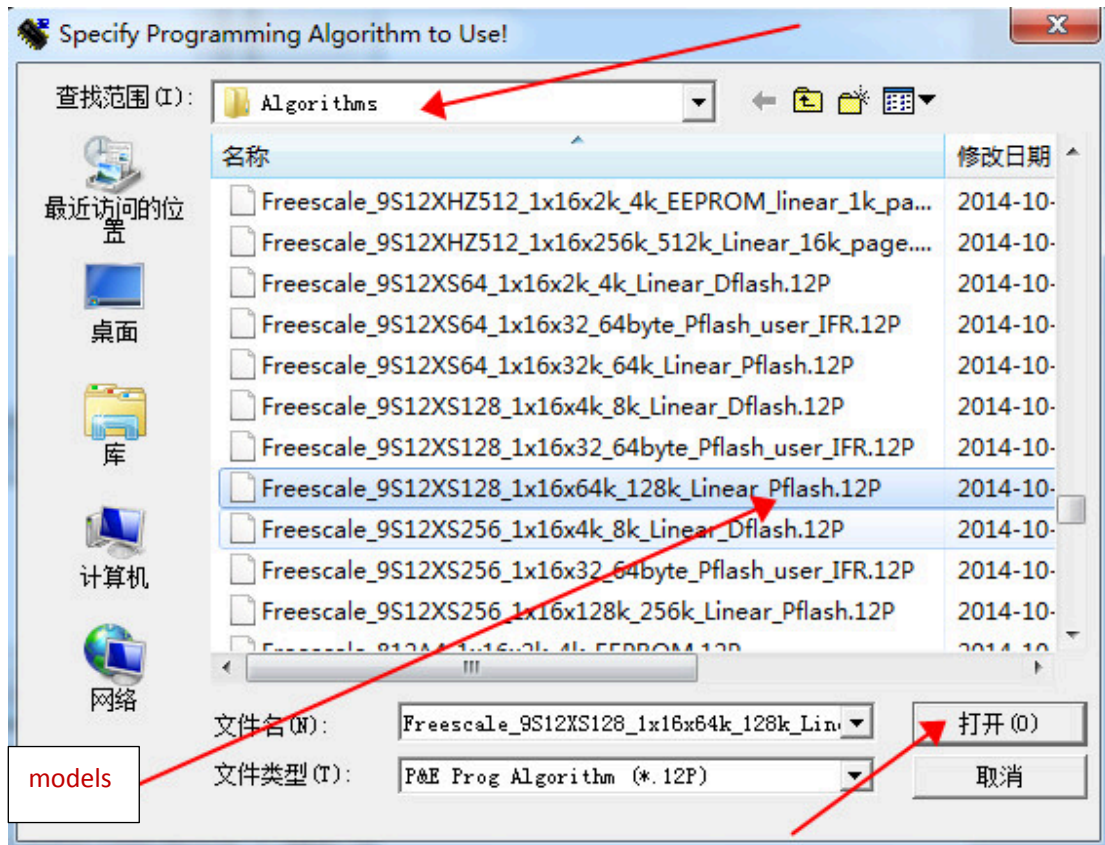
Power Control for Cyclone / TraceLink / Multilink Universal FX

Provide power to target Regulator Output Voltage Power Down Delay mS

Power off target upon software exit Power Up Delay mS

Show this dialog before attempting to contact target (Otherwise only display on Error)



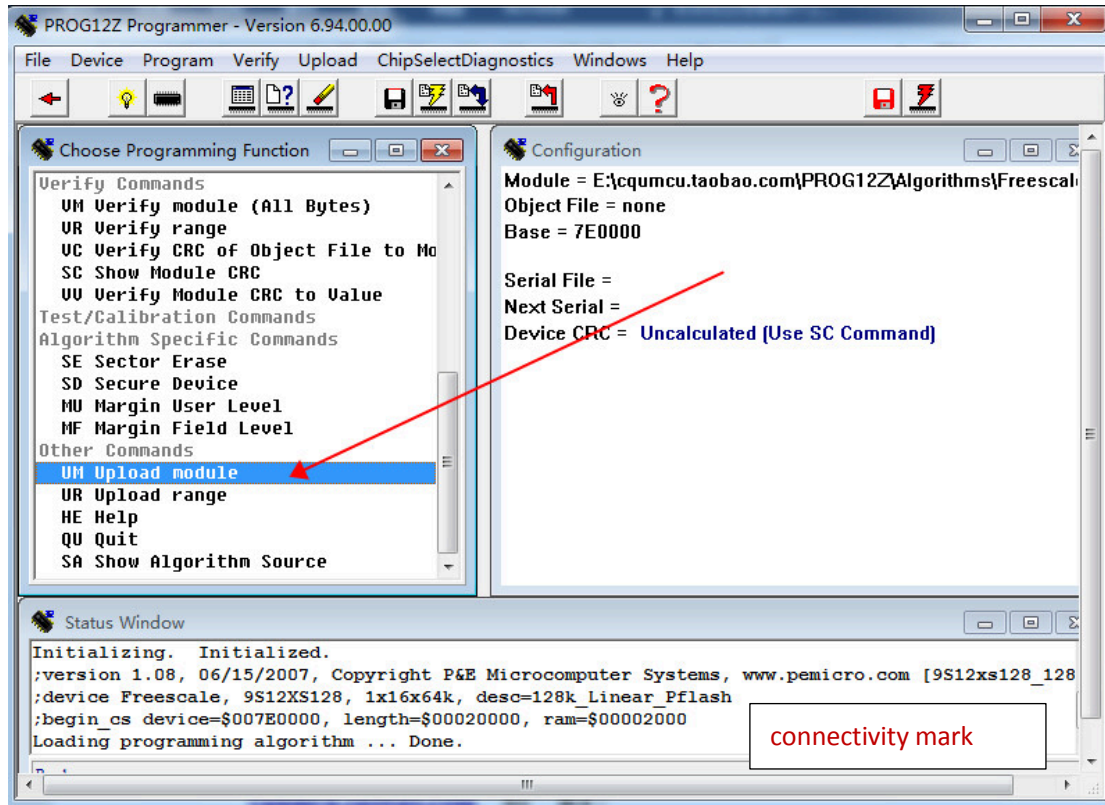


If the following message pops up during the period, it indicates that you cannot communicate with the chip: there may be problems with the board power supply, interface wiring, or the chip may be encrypted. If the chip is encrypted, you can use **unsecure_12.exe** software to clear and unlock the chip before writing.

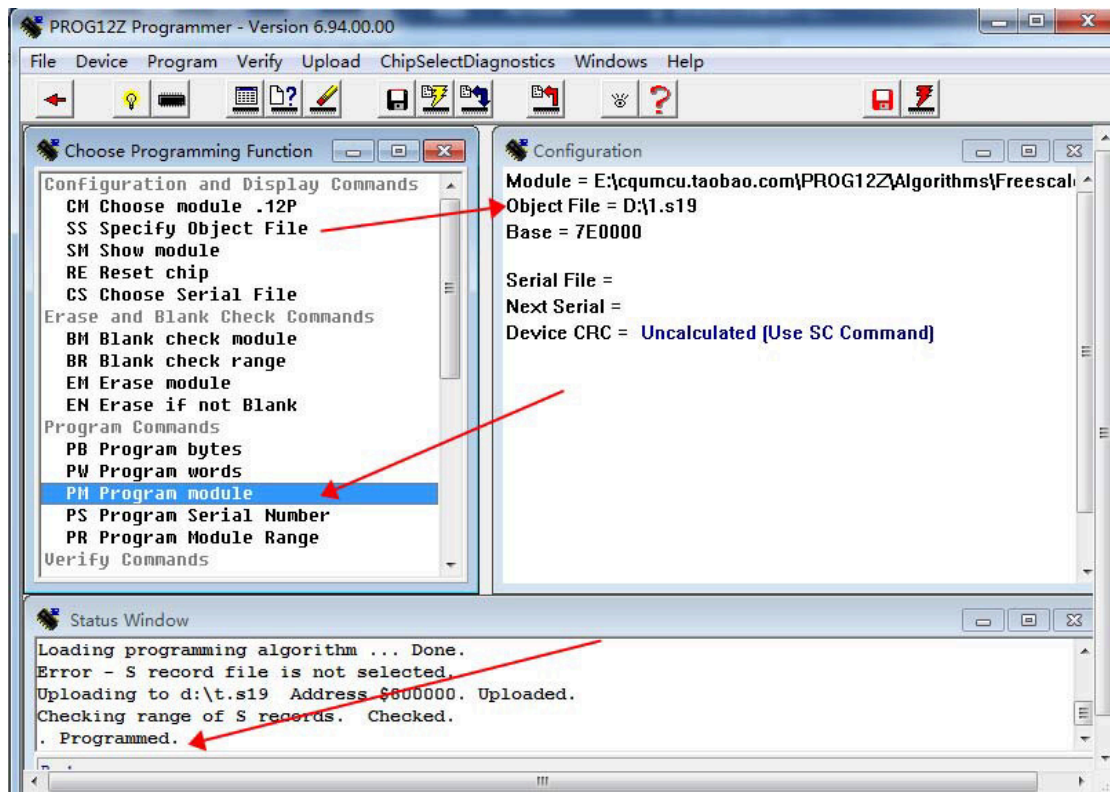


The software will then connect to the target chip and a model number is indicated in the lower left corner to indicate that the target is connected. **The connection must be successful first!**

3. Read data: Find and double-click the **UM Upload Moudle command**, which will read out the code from all memory areas of the chip. In the S19 File? box that pops up in the middle, enter a file name similar to **D:\r** (the read r.s19 data file can be found in D disk and can be opened with Notepad to view it!) The address progresses while reading until the Uploaded prompt appears, indicating that the reading is complete.



4. Select File: Double click to execute SS Specify Object File command, then you can select the existing .s19/elf data file to be written in the pop-up file option box.
5. Erase Chip: Double click to execute EM Erase Module command to erase the chip.
6. Flush Data: Locate and double-click the PM Programm Module command to flush the pre-specified data file to the chip. After that, there will be a programmed writing prompt and address progress change, until Programmed appears, indicating the end of writing.



OK, power off and restart the target board, the program can run normally.