Update Instruction - PGR-8800

Precautions

The firmware update process is sensitive to power interruptions while it is running. Connect the unit properly to a power supply, and fasten the screws in the terminal block before starting the upgrade. If power is interrupted while the firmware update is running, the emergency procedure outlined below can be used to put new software in the unit.

Normal procedure

1. Connect power
2. Connect the unit to a computer via USB
3. Open My Computer and check that the Log and configuration drives appear
4. Drag and drop the two firmware files (PGR-8800.bin and PGR-8800.md5) to the root of the Log drive
5. Wait for the Test diode to stop blinking, signifying that the firmware has been stored
6. Remove the USB cable to start the upgrade procedure
7. The upgrade takes about a minute. The vulnerable time is about 10 seconds in the middle of the period, just before the unit reboots. Progress is indicated on the sensor LEDs, which light up as the stages are completed.
8. When all sensor LEDs have turned on, and the unit has returned to normal operation, cycle the power to the unit.
9. Connect USB and check that the Log tells the correct version of the firmware and that any configuration changes you may have made are still correct.
10. Delete the firmware files from the Log drive. You can also delete the backup directory from the drive. The files in this directory contain the old firmware, should you wish to downgrade.

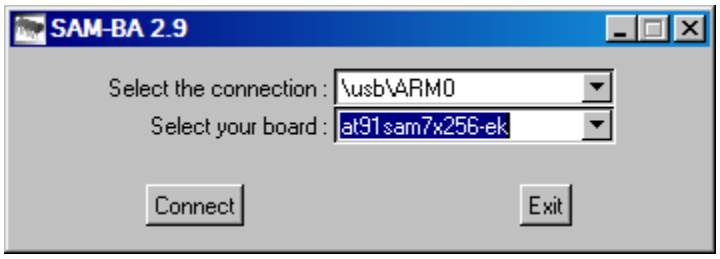
The upgrade will keep all settings and the log intact. New functions in the new firmware will be set to default values.

To revert the upgrade and continue with the old software, use the same procedure, but use the files from the backup directory on the Log drive when moving the firmware files to the root of the drive in point 4.

Emergency procedure for reviving dead units

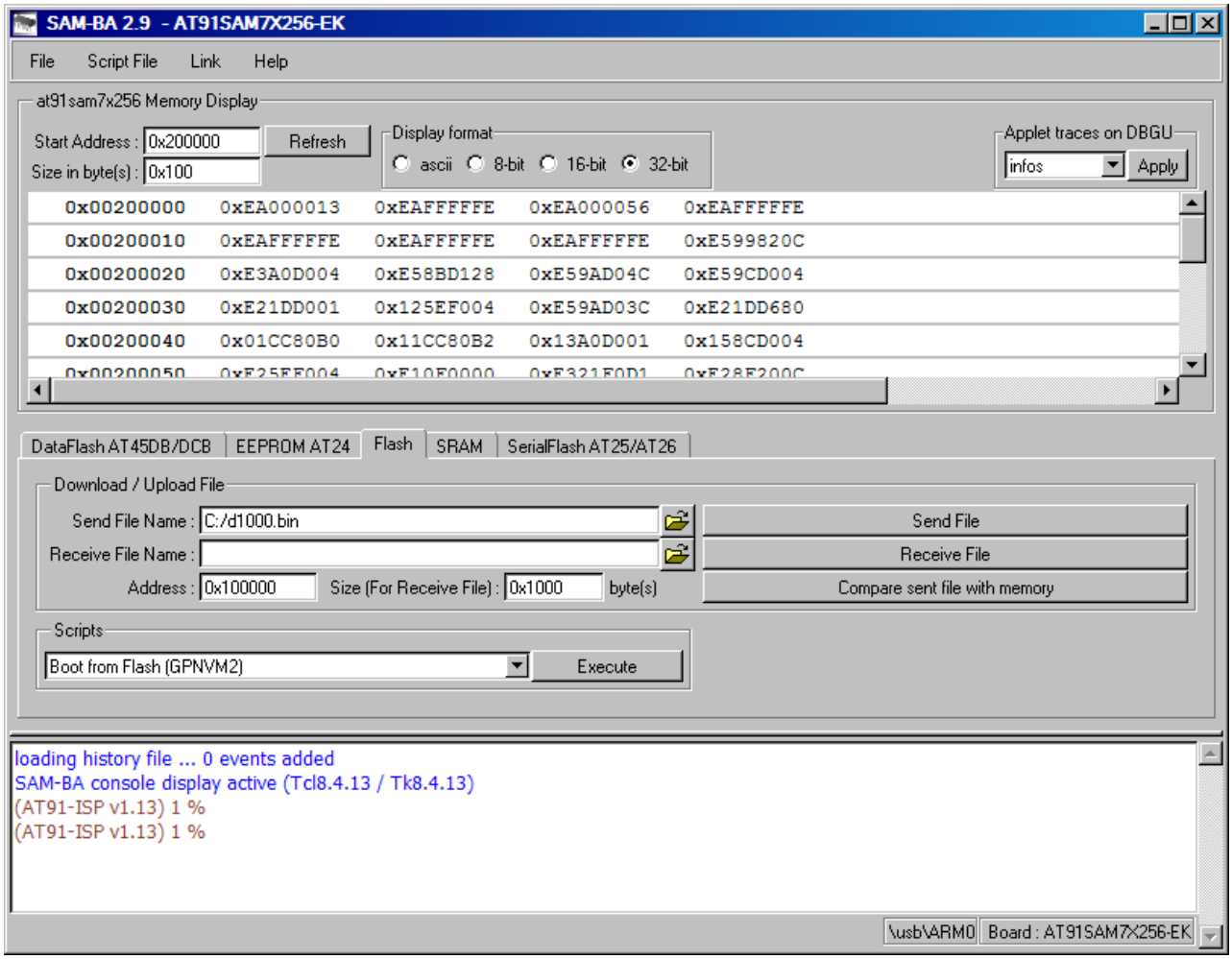
This procedure is a last resort for units where the normal update procedure has failed for some reason, e.g. due to power interruptions. It is quite a bit trickier than the standard procedure. If in doubt, send the unit to Selco for revival. This procedure erases the configuration, but the log is not affected.

1. Fetch and install Atmel AT91-ISP from http://www.atmel.com. Selco has a local copy available at ftp://ftp.selco.com/public/Atmel%20SAM-BA%20SW/. At the time of writing, this software (version 1.12) will only work on 32 bit Windows installations (Windows XP, Windows Vista 32 bit, Windows 7 32 bit).
2. Connect power to the unit. For safety reasons, use a low-voltage supply on the DC input.
3. Use a plastic pin to depress the Erase-button on the PCB. It is situated on the PCB directly below the Sensor 2 LED. It is just possible to reach it from the outside with a thin or bent insulating pin, but may be easier to do by removing the cover carefully – take care in the right hand side, where the ribbon cable is connected, and avoid touching the PCB. Pressing this button while the unit is powered irreversibly erases the software in the unit.
4. Remove and reattach power. The unit will appear completely dead – no LEDs will turn on.
5. Attach the USB cable. The computer will ask for permission to install software for the atm6124.sys Atmel AT91xxxxx Test board. Accept this.
6. Start Atmel AT91-ISP SAM-BA and select the at91sam7x256-ek board:



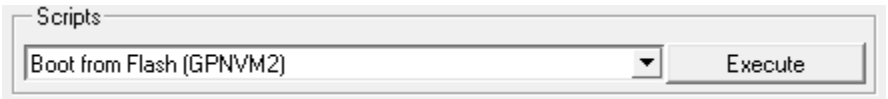
Or

7. In the Flash section, select the bin file in ‘Send File Name’ and click Send File.



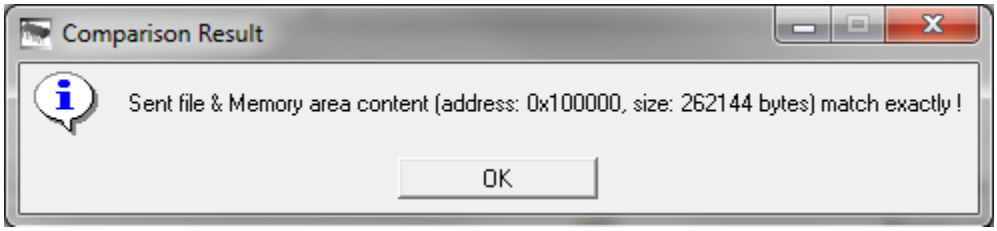
8. Answer No to lock the flash when the download finishes.

9. Select the script Boot from Flash in the bottom of the screen, and press Execute.



10. Click Compare sent file with memory

Please check that you get this message:



11. Remove the USB cable
12. Remove and reattach power
13. The unit will now boot, turn on the test diode for some time, and be functional again.