

How to Reinstall or Upgrade RMS100 SpeedLoader



Introduction

RMS100 ships with a factory programmed bootloader program called SpeedLoader. SpeedLoader occupies Flash memory from 0x40000000 to 0x40003FFF and allows high-speed transfer of application programs into Flash or SRAM.

This application note describes how to reprogram or replace SpeedLoader. The process involves running a Kick-Start program from RAM, which in-turn loads the new SpeedLoader into Flash memory.

If you have a license for Rowley CrossWorks, there is no need to follow this application note. Simply connect to the RMS100 using JTAG and program the SpeedLoader executable directly into Flash. CrossWorks has an integrated Flash loader for this purpose.

Equipment

1. RMS100 board
2. USB cable (for power and communications)
3. PC with OCD Commander and Terminal Emulator
4. Revely DBG-3FT debug cable or other Wiggler compatible debug cable

Files (download from www.revely.com)

1. RMS100_Init.mac
2. Kickloader.elf (exe)
3. Speedloader.elf (exe)

Setup

1. Move RMS100 on-board "FLASH" jumper to WE (write-enable) position
2. Connect debug cable from RMS100 to PC parallel port
3. Connect USB/Power cable
4. Start Hyperterminal and set to standard RMS100 configuration (refer Quick-start Guide)

Procedure

1. Run OCD Commander and connect to RMS100

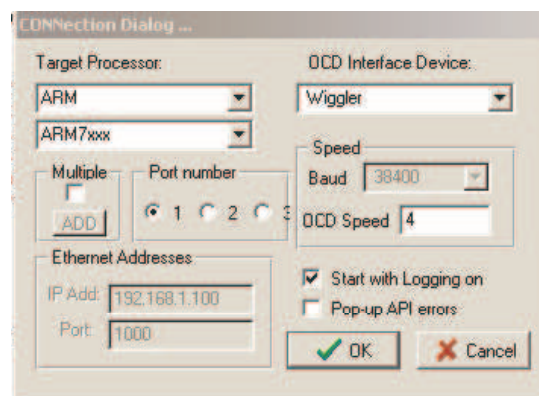


Figure 1 - Connect OCD Commander to RMS100

2. Click HALT and then click MACRO. Load and run the macro "RMS100_Init.mac".
 - This configures external SRAM.
3. From the menu select Commands -> Download. Load the file Kickloader.elf

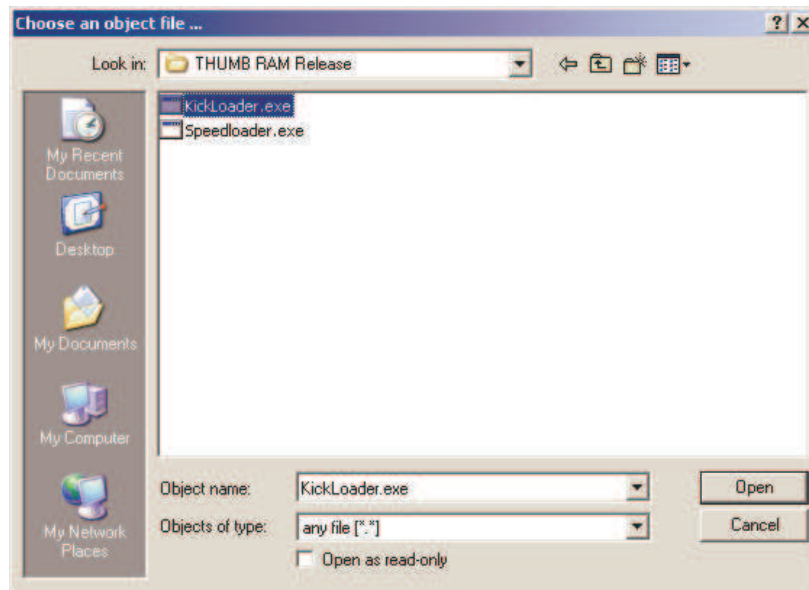


Figure 2 - Download Kickloader.exe

4. Type "GO" and hit Enter
5. Hyperterminal will display KickLoader menu text
 - KickLoader is almost identical to SpeedLoader.
6. Using Hyperterminal, Hit 'D' key to start download
 - RMS100 will proceed to clear temporary space for file transfer.
7. In HyperTerminal Select **Transfer**→**Send File...**
 - Browse to select ELF file SpeedLoader.elf
 - Select Xmodem1K protocol and click **Send**
 - HyperTerminal will show download progress
8. KickLoader will display section information before programming Flash
9. When download is complete, Hit 'R' to run.
10. The new SpeedLoader will now run
 - Remove power and change FLASH jumper to WP (write-protect)

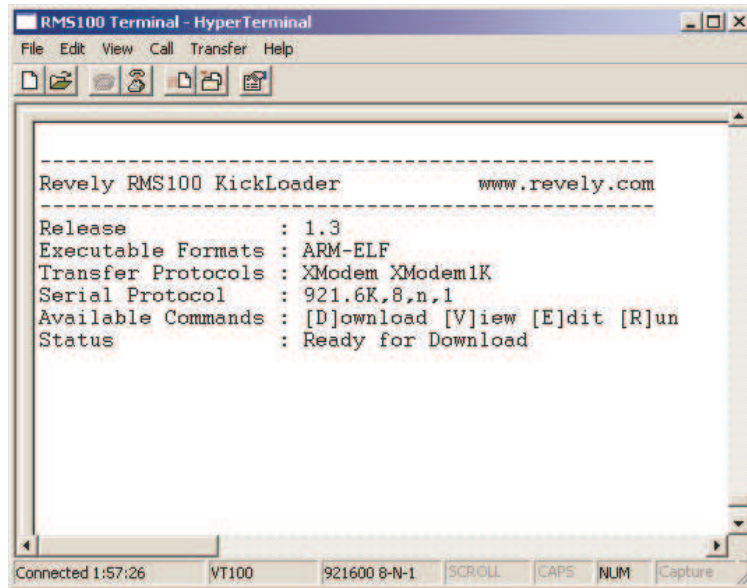


Figure 3 - KickLoader Ready for SpeedLoader.exe Download

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