

Proxmark flashing with JTAG connector

Roel Verdult

September 20, 2008 - v0.2

1 Environment

All the required applications, tools and binaries are available in the file-section of proxmark.org

<http://www.proxmark.org/files/index.php?dir=Flash>

The easiest way to flash the Proxmark is with an application called *armpgm*¹. This tool will flash a .S19(Motorola) file to the arm processor. You can create a .S19 file with a conversion tool like *bin2s19.exe*². It will convert a compiled gnuarm .BIN file to the .S19 format. When using windows, a GUI version of armpgm is available. In Windows, make sure you first install the parallel port driver³ to avoid connection problems.

The proxmark needs power during the flashing. The USB is not initialized but can be used as power source for the Proxmark.

¹<http://kjell.e.andersen.googlepages.com/>

²Copyright P&E Microcomputer Systems

³Win32-parallel-port-driver-95nt.exe

2 Flashing



Figure 1: armpgm flasher screen

Just open the application, browse for the initial ebuller image⁴, plug the JTAG connector in the proxmark, select the correct target, press **Check**, then **Erase** and finally hit the **Program** button. Programming the proxmark will take about 20 seconds. After this procedure you are done with the JTAG connector and the bootloader is ready. From now on, you can use the USB flashing method.

After building the source-code you can use the *flashos.bat* batch file from the cockpit directory to USB-flash the proxmark with a new software version.

3 Special thanks

- Jonathan Westhues - Inventing the proxmark
- Gerhard de Koning Gans - ISO14443A (MIFARE) compatibility
- ebuller - Preparing the first bootloader image

⁴2008.09.17-armpgm-ebullen-proxmark3-image.S19