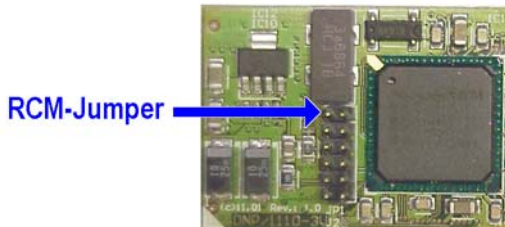


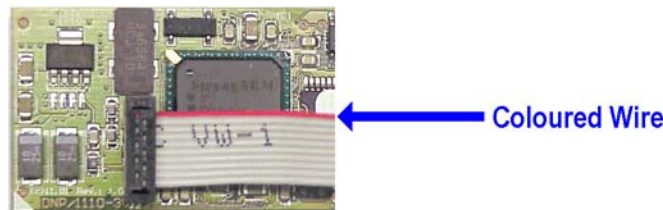
How to use the JTAG Flash Programmer

With the DNP/1110 JTAG Flash Programmer you can program a new boot loader to the DNP/1110 over the Intel StrongARM SA-1110 JTAG interface. You don't need any additional special hardware parts or JTAG interface boards for your PC. The DNP/1110 JTAG Flash Programmer is driven by a standard PC printer port (LPT port). It is necessary to run a Linux operating system on this PC. The JTAG Flash Programmer firmware is pre-build for Linux.

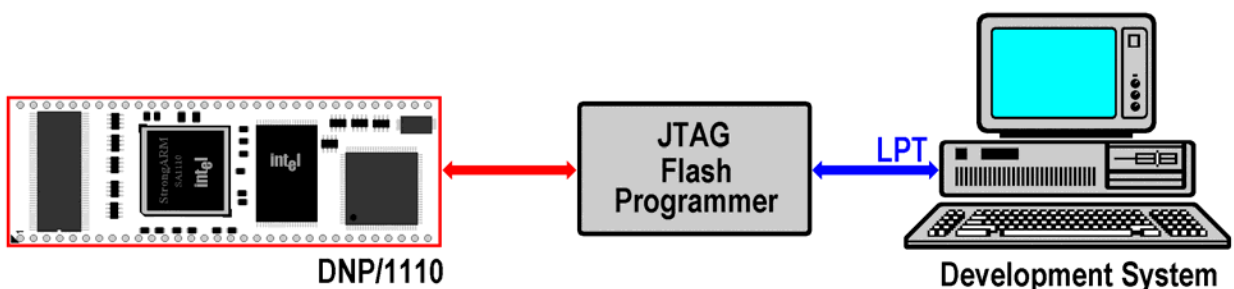
- **1. Step:** Download a copy of the JTAG Flash Programmer firmware archive file `jflash-dnp1110.tgz` from www.dilnetpc.com (i.e. enter the URL www.dilnetpc.com/jflash-dnp1110.tgz to your browser).
- **2. Step:** Make sure that the power for the DNP/1110 is off. Then remove the RCM (Remote Console Mode) jumper from your DNP/1110. The following picture shows a DNP/1110 without this jumper.



- **3. Step:** Connect the JTAG Programmer Ribbon Cable to the DNP/1110. The following picture shows the direction of the coloured wire (pin 1).

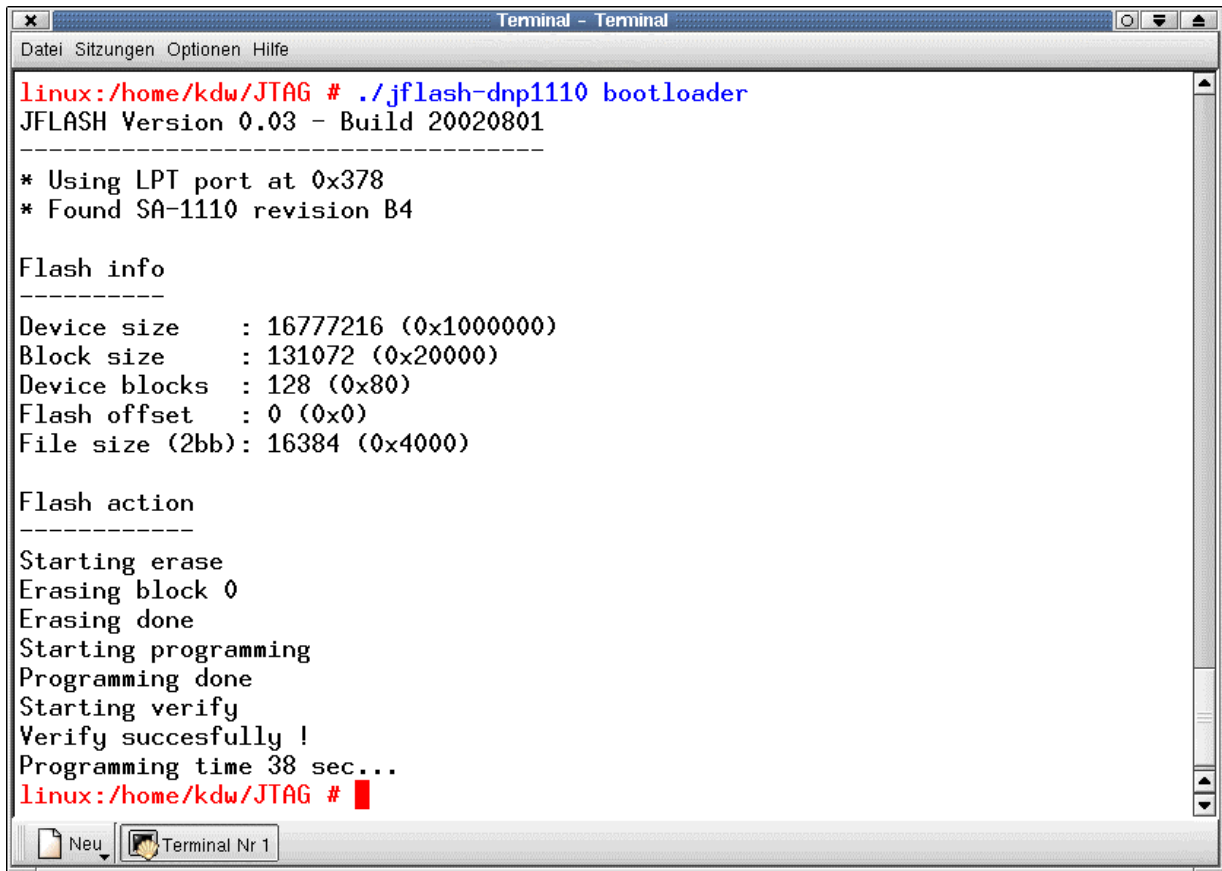


- **4. Step:** Connect the other side of the DNP/1110 JTAG Flash Programmer with your first PC printer port. Power up the DNP/1110. This port use the I/O base address 0x378. Check your PC BIOS for details. This I/O base address is a fix part of the JTAG Flash Programmer firmware.



- **5. Step:** Extract the executable firmware file `jflash-dnp1110` from the JTAG Flash Programmer firmware archive to a directory of your Linux-based development system. Put your new boot loader image file (i.e. the file `bootloader` from the JTAG Flash Programmer firmware archive) also to the same directory.
- **6. Step:** Power up the DIL/NetPC DNP/1110. Then run the executable firmware file on your development system. The command line parameter for this program is the name of the boot loader image file.

```
./jflash-dnp1110 bootloader
```



```
Terminal - Terminal
Datei Sitzungen Optionen Hilfe
linux:/home/kdw/JTAG # ./jflash-dnp1110 bootloader
JFLASH Version 0.03 - Build 20020801
-----
* Using LPT port at 0x378
* Found SA-1110 revision B4

Flash info
-----
Device size      : 16777216 (0x1000000)
Block size      : 131072 (0x20000)
Device blocks   : 128 (0x80)
Flash offset    : 0 (0x0)
File size (2bb): 16384 (0x4000)

Flash action
-----
Starting erase
Erasing block 0
Erasing done
Starting programming
Programming done
Starting verify
Verify succesfully !
Programming time 38 sec...
linux:/home/kdw/JTAG # █
```

- **7. Step:** Remove the power from the DNP/1110. Remove the JTAG Programmer Ribbon Cable from the DNP/1110. Put the RCM jumper to the right position. Power up the DNP/1110 again and check the function of the new boot loader.