

## How to download a new Linux O/S Image to the DNP/5280 Flash

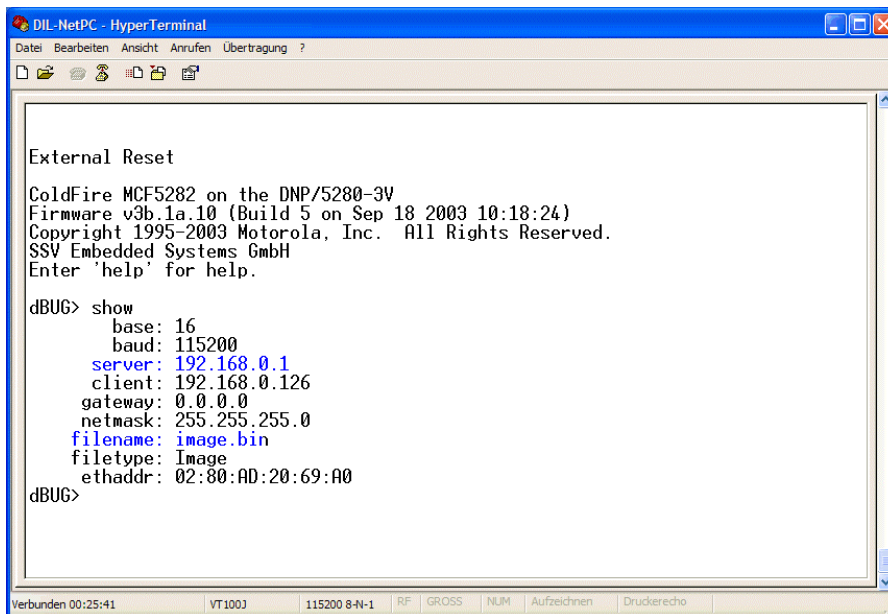
The DIL/NetPC DNP/5280 comes with a simple ROM monitor program called *dBUG*. This program allows you to download a new Linux O/S image file over a Ethernet-based TCP/IP connection from a Host to the DNP/5280 flash memory. The download needs a TFTP server program for the Host.

The ROM monitor *dBUG* provides a command line user interface (CLI). This interface is normally available on serial port COM1 when the RCM jumper is closed.

- **1. Step:** Power-up your DNP/5280 with the RCM jumper closed. The DNP/5280 runs *dBUG* directly after the reset. Enter the *dBUG* command

**show**

and check the setup for the TFTP server IP address (default: **192.168.0.1**) and the name of the Linux O/S image file (default: **image.bin**). Change these parameters if necessary.



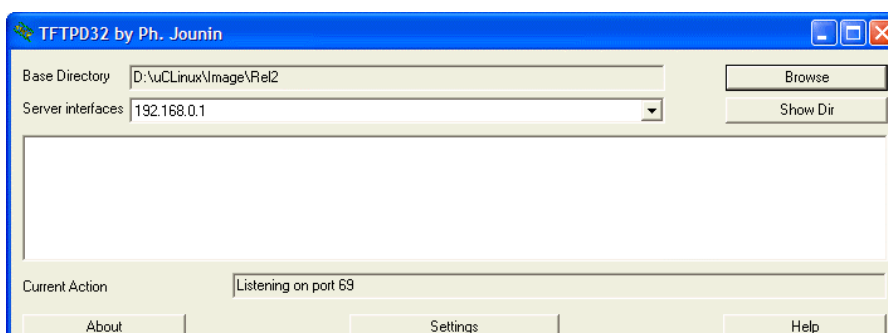
```

DIL-NetPC - HyperTerminal
Datei Bearbeiten Ansicht Anrufen Übertragung ?
External Reset
ColdFire MCF5282 on the DNP/5280-3V
Firmware v3b.1a.10 (Build 5 on Sep 18 2003 10:18:24)
Copyright 1995-2003 Motorola, Inc. All Rights Reserved.
SSV Embedded Systems GmbH
Enter 'help' for help.

dBUG> show
  base: 16
  baud: 115200
  server: 192.168.0.1
  client: 192.168.0.126
  gateway: 0.0.0.0
  netmask: 255.255.255.0
  filename: image.bin
  filetype: Image
  ethaddr: 02:80:AD:20:69:A0
dBUG>

```

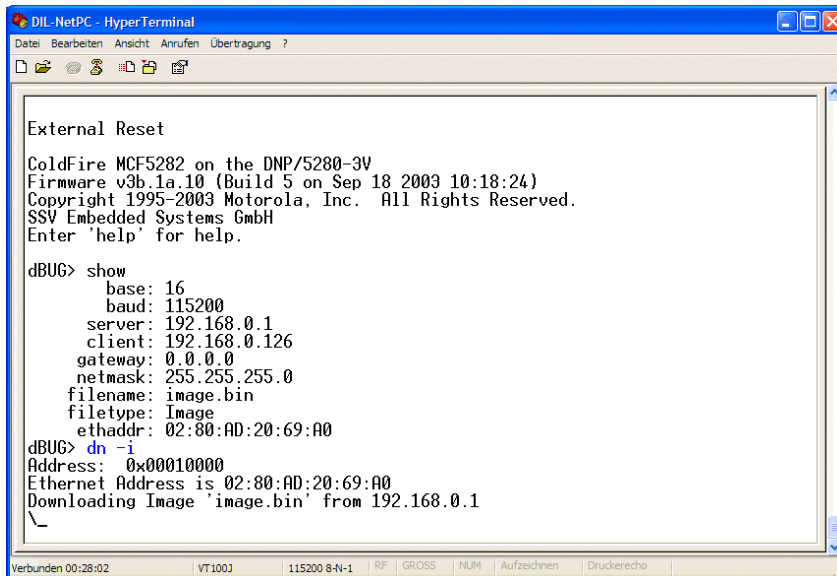
- **2. Step:** Run a TFTP server on your Host (e.g. your Windows-based PC). Make sure that the TFTP server has access to the Linux O/S image file.



- **3. Step:** Now we can start to download the Linux O/S image file. Enter the *dBUG* command

```
dn -i
```

to start the download. Wait until the download finish's. The download needs some time. Please wait.



```

DIL-NetPC - HyperTerminal
Datei Bearbeiten Ansicht Anrufen Übertragung ?
External Reset
ColdFire MCF5282 on the DNP/5280-3V
Firmware v3b.1a.10 (Build 5 on Sep 18 2003 10:18:24)
Copyright 1995-2003 Motorola, Inc. All Rights Reserved.
SSV Embedded Systems GmbH
Enter 'help' for help.

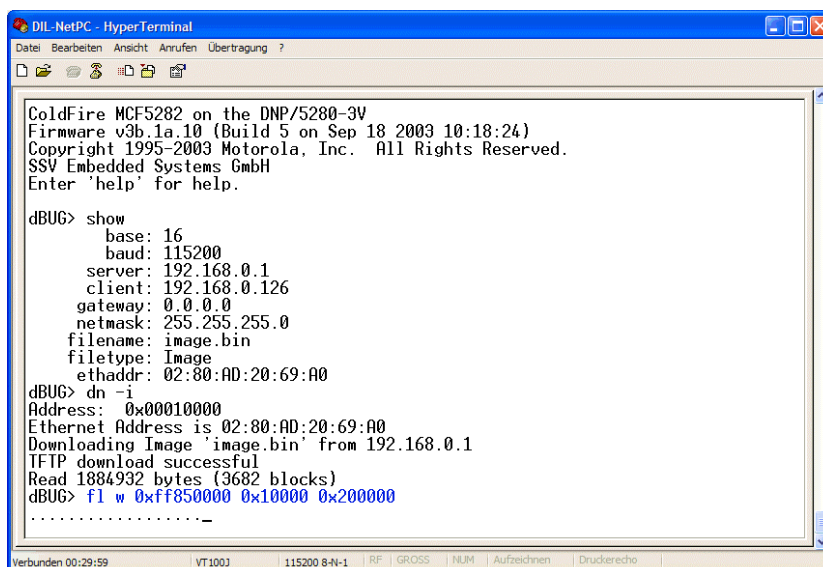
dBUG> show
    base: 16
    baud: 115200
    server: 192.168.0.1
    client: 192.168.0.126
    gateway: 0.0.0.0
    netmask: 255.255.255.0
    filename: image.bin
    filetype: Image
    ethaddr: 02:80:AD:20:69:A0
dBUG> dn -i
Address: 0x00010000
Ethernet Address is 02:80:AD:20:69:A0
Downloading Image 'image.bin' from 192.168.0.1

```

- **4. Step:** After the TFTP-based download the new Linux O/S image file is located within the DNP/5280 RAM. Enter the *dBUG* command

```
fl w 0xff850000 0x10000 0x200000
```

to move the Linux O/S image file from RAM to flash. This operation needs some time. Please wait.



```

DIL-NetPC - HyperTerminal
Datei Bearbeiten Ansicht Anrufen Übertragung ?
ColdFire MCF5282 on the DNP/5280-3V
Firmware v3b.1a.10 (Build 5 on Sep 18 2003 10:18:24)
Copyright 1995-2003 Motorola, Inc. All Rights Reserved.
SSV Embedded Systems GmbH
Enter 'help' for help.

dBUG> show
    base: 16
    baud: 115200
    server: 192.168.0.1
    client: 192.168.0.126
    gateway: 0.0.0.0
    netmask: 255.255.255.0
    filename: image.bin
    filetype: Image
    ethaddr: 02:80:AD:20:69:A0
dBUG> dn -i
Address: 0x00010000
Ethernet Address is 02:80:AD:20:69:A0
Downloading Image 'image.bin' from 192.168.0.1
TFTP download successful
Read 1884932 bytes (3682 blocks)
dBUG> fl w 0xff850000 0x10000 0x200000
.....

```

Remove the power supply from your DNP/5280 after the execution of the **fl** command. Then remove the RCM jumper and re-boot your DNP/5280 to run the new Linux O/S image.

**Please note:** *dBUG* cannot communicate with TFTP servers on different subnets because *dBUG* doesn't support routing. This means that the DNP/5280 and the TFTP server must be on the same subnet.