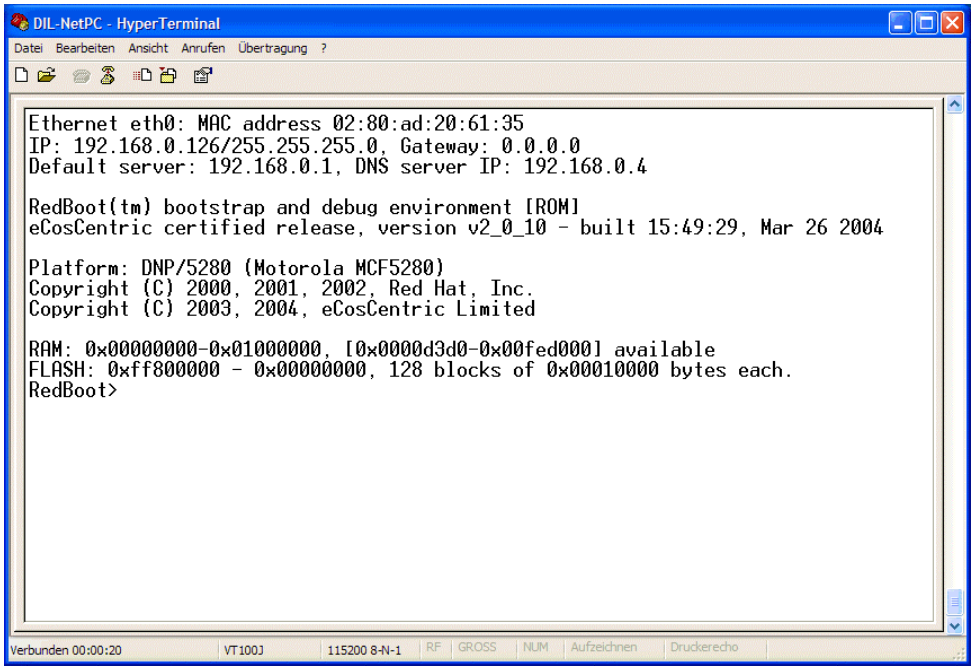
## First Steps with the RedBoot Boot Loader

Within the eCos Starter Kit, the DIL/NetPC DNP/5280 comes with a preinstalled RedBoot boot loader. RedBoot offers a user interface useable over a simple serial line. When connected with a terminal or terminal emulation program, you can interactively enter commands and see the results.

- **1. Step**: Setup a Ethernet connection with a 10/100 Mbps switch and Ethernet patch cables between the DIL/NetPC DNP/5280 and your PC.

- **2. Step**: Setup a serial link (**RS232 Serial Link**) between the DNP/5280 COM1 serial port and a serial port of your PC system. Use a null-modem cable for the physical connection between the COM1 port of the DNP/5280 and the PC COM port. Setup the line parameters to **115.200 bps**, **8 data bits**, **1 stop bit**, **no handshake**.

- **3. Step**: Run your terminal emulation program. Microsoft Windows-based PC systems offer *HyperTerminal* for this task. Linux-based systems comes with *Minicom*. Then provide the DNP/5280 with power. Wait for the RedBoot prompt "RedBoot>".

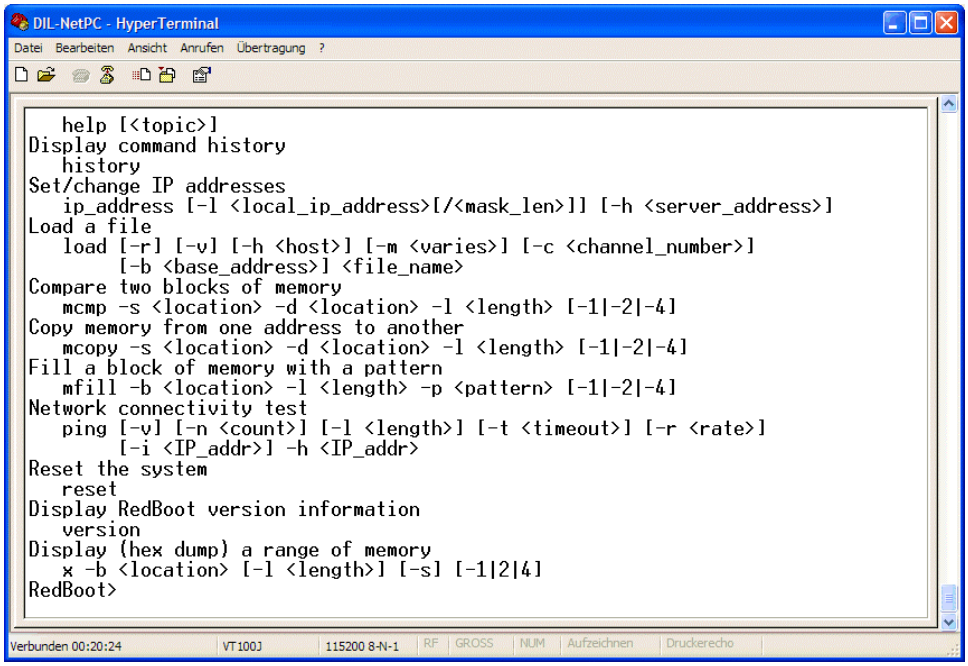



- **4. Step**: The user interface to RedBoot consists of a command line interpreter (CLI), much like a Linux shell prompt.

  When connected via a serial line you can interactively enter commands and see the results. Please type in the command

  ```
  help
  ```

  and hit Enter. RedBoot executes the `help` command and shows the results within your terminal window.

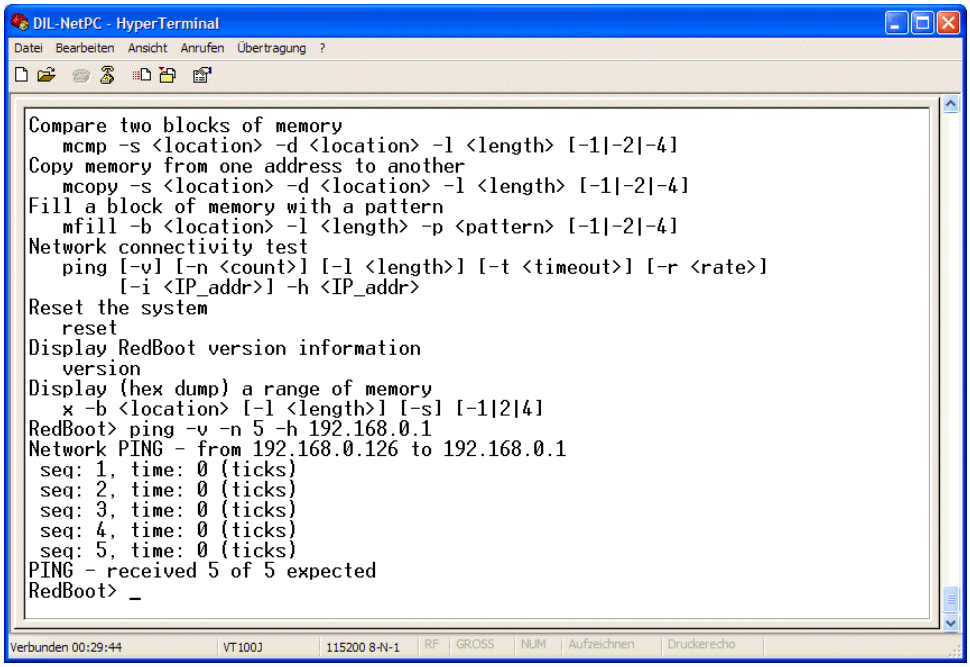



- **5. Step**: The RedBoot `help` command shows the available commands and the syntax of this commands.

| Command | Function |
|---|---|
| alias | Manage aliases kept in FLASH memory |
| baudrate | Set/Query the system console baud rate |
| cache | Manage machine caches |
| channel | Display/switch console channel |
| cksum | Compute a 32bit checksum [POSIX algorithm] for a range of memory |
| dump | Display (hex dump) a range of memory |
| fis | Manage FLASH images |
| fconfig | Manage configuration kept in FLASH memory |
| go | Execute code at a location |
| help | Help about help? |
| history | Display command history |
| ip_address | Set/change IP addresses |
| load | Load a file |
| mcmp | Compare two blocks of memory |
| mcopy | Copy memory from one address to another |
| mfill | Fill a block of memory with a pattern |
| ping | Network connectivity test |
| reset | Reset the system |
| version | Display RedBoot version information |
| x | Display (hex dump) a range of memory |

- **6. Step**: Check the Ethernet connection between the DIL/NetPC DNP/5280 and your PC. Use the RedBoot `ping` command for this task. Please enter the following command:

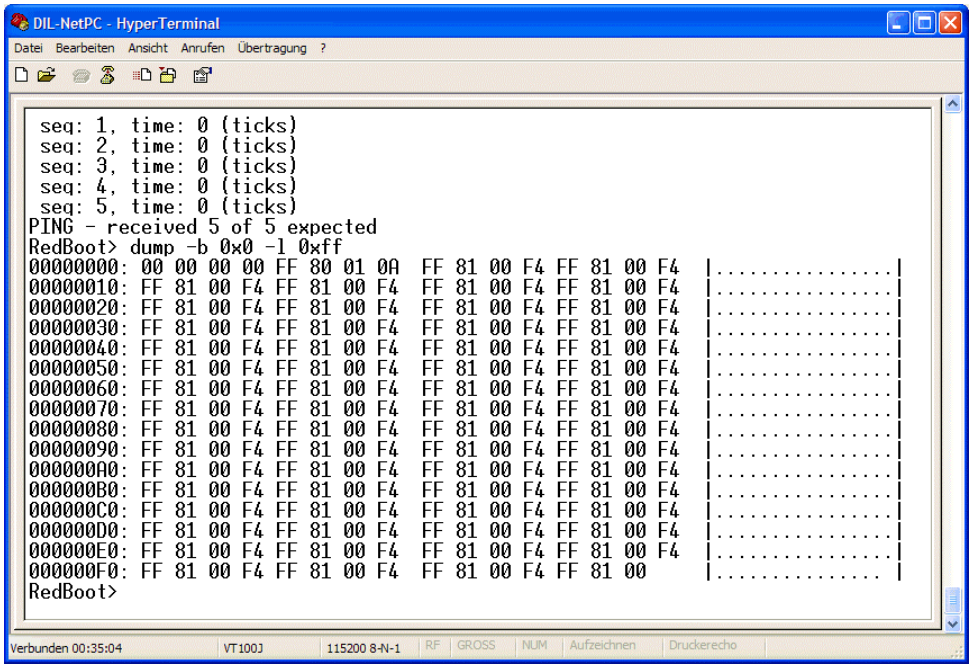
```
ping -v -n 5 -h 192.168.0.1
```




**Please note:** "192.168.0.1" is the IP address of your PC in this sample. Use another IP address if necessary. The default IP address of the DNP/5280 with RedBoot is **192.168.0.126**.

- **7. Step**: The RedBoot `dump` command allows you a direct view to the current memory content. Please enter the following command:

```
dump -b 0x0 -l 0xff
```




That is all.