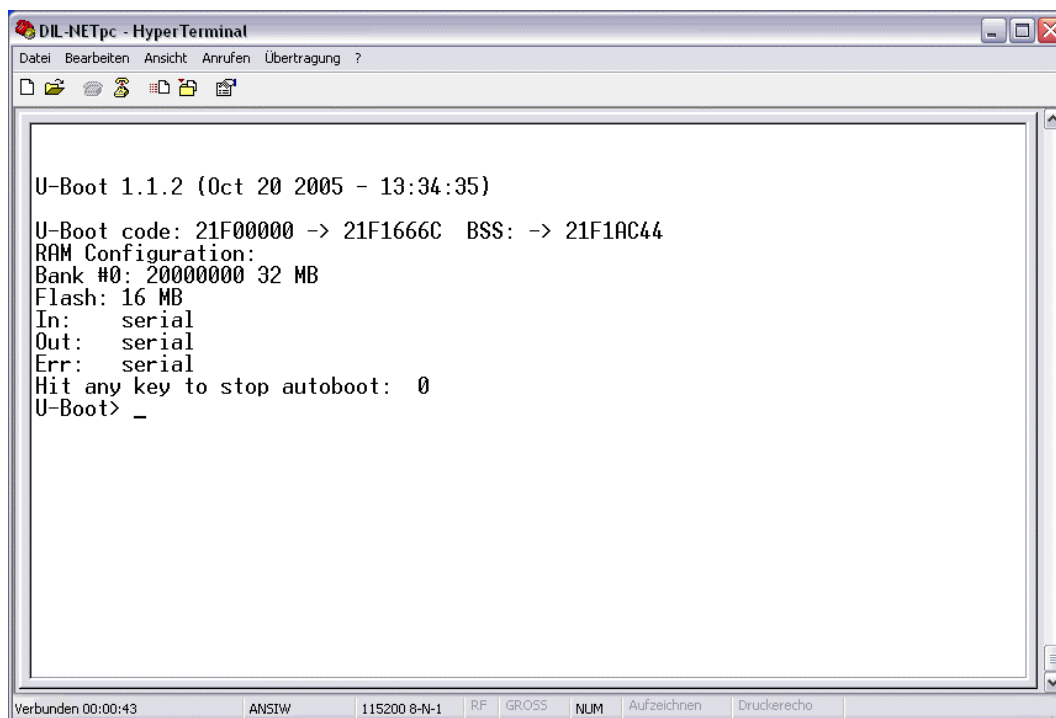


How to use the U-Boot Autoboot Feature

Direct after power-up the DIL/NetPC DNP/9200 starts the U-Boot boot loader program. This boot loader wait some time for a key over a serial connection if RCM is enabled. If there is no key input detected, the U-Boot boot loader starts a Linux O/S image from flash memory. The wait time is given by the U-Boot environment variable **bootdelay**.

- **1. Step:** Setup a serial link (**RS232 Serial Link**) between the DIL/NetPC DNP/9200 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 DIL/NetPC DNP/9200 and the PC COM port. For more details about this connection please use the DIL/NetPC DNP/9200 Starter Kit documentation.
- **2. Step:** Run your terminal emulation program. Microsoft Windows-based PC systems offer *HyperTerminal* for this task. Linux-based systems come with *Minicom*. Set the RCM jumper for RCM enable. Then provide the DIL/NetPC DNP/9200 with power.
- **3. Step:** Wait for the first message of U-Boot within your terminal emulation program window. Please hit any key for interrupt the U-Boot autoboot process.



```
DIL-NETpc - HyperTerminal
Datei Bearbeiten Ansicht Anrufen Übertragung ?
U-Boot 1.1.2 (Oct 20 2005 - 13:34:35)
U-Boot code: 21F00000 -> 21F1666C BSS: -> 21F1AC44
RAM Configuration:
Bank #0: 20000000 32 MB
Flash: 16 MB
In: serial
Out: serial
Err: serial
Hit any key to stop autoboot: 0
U-Boot> _
```

- **4. Step:** The U-Boot user interface consists of a command line interpreter (CLI), much like a Linux shell prompt. When connected via a terminal emulation program you can interactively enter commands and see the results. Please enter the **printenv** command. U-Boots shows a list of environment variables together with the current setup values.

```
U-Boot> printenv
```

```
bootargs=console=ttyS0,115200 root=/dev/ram
bootdelay=3
baudrate=115200
ethaddr=02:80:ad:20:57:23
bootfile="img-dnp9200"
netmask=255.255.255.0
ipaddr=192.168.0.126
bootcmd=bootm 0x10040000
serverip=192.168.0.1
stdin=serial
stdout=serial
stderr=serial
```

```
Environment size: 251/4092 bytes
U-Boot>
```

The environment variable **bootdelay** defines the wait time for the U-Boot autoboot feature. The default value for the DNP/9200 is 3 (3 seconds).

- **5. Step:** Please change the value for **bootvalue** carefully. This step needs two U-Boot commands: 1. the **setenv bootdelay x** change the value, 2. **saveenv** update the flash with the new value.

```
U-Boot> setenv bootdelay 2
U-Boot> saveenv
```

```
Saving Environment to Flash...
Un-Protected 1 sectors
Erasing Flash...
. done
Erased 1 sectors
Writing to Flash...
\done
Protected 1 sectors
U-Boot> printenv
```

```
bootargs=console=ttyS0,115200 root=/dev/ram
baudrate=115200
ethaddr=02:80:ad:20:57:23
bootfile="img-dnp9200"
netmask=255.255.255.0
ipaddr=192.168.0.126
bootcmd=bootm 0x10040000
serverip=192.168.0.1
stdin=serial
```

```
stdout=serial  
stderr=serial  
bootdelay=2
```

```
Environment size: 251/4092 bytes  
U-Boot>
```

After the next reset the DNP/9200 U-Boot boot loader works with the new value for the autoboot feature boot delay.

That is all.