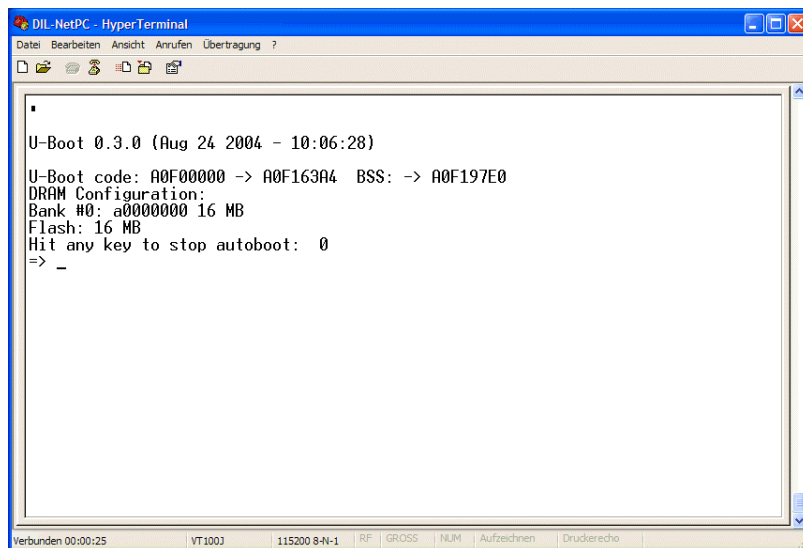


## How to use the U-Boot Autoboot Feature

Direct after power-up the DIL/NetPC DNP/2110 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/2110 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/2110 and the PC COM port. For more details about this connection please use the DIL/NetPC DNP/2110 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/2110 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 0.3.0 (Aug 24 2004 - 10:06:28)
U-Boot code: A0F00000 -> A0F163A4 BSS: -> A0F197E0
DRAM Configuration:
Bank #0: a0000000 16 MB
Flash: 16 MB
Hit any key to stop autoboot: 0
=> _
Verbinden 00:00:25 VT100J 115200 8-N-1 RF GROSS NUM Aufzeichnen Druckerzueho

```

- **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.

```
=>printenv
```

```

bootargs=console=ttyS0,115200 root=/dev/ram
baudrate=115200
bootfile="img-dnp2110"
ethaddr=02:80:ad:20:63:cc

```

```
netmask=255.255.255.0
ipaddr=192.168.0.126
serverip=192.168.0.1
bootcmd=bootm 0x40000
bootdelay=5
Environment size: 207/4092 bytes
=>
```

The environment variable **bootdelay** defines the wait time for the U-Boot autoboot feature. The default value for the DNP/2110 is 5 (5 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.

```
=> setenv bootdelay 2
=> saveenv
Saving Environment to Flash...
Un-Protected 1 sectors
Erasing Flash...
. done
Erased 1 sectors
Writing to Flash...
\done
Protected 1 sectors
=> printenv

bootargs=console=ttyS0,115200 root=/dev/ram
baudrate=115200
bootfile="img-dnp2110"
ethaddr=02:80:ad:20:63:cc
netmask=255.255.255.0
ipaddr=192.168.0.126
serverip=192.168.0.1
bootcmd=bootm 0x40000
bootdelay=2
```

```
Environment size: 207/4092 bytes

=>
```

After the next reset the DNP/2110 U-Boot boot loader works with the new value for the autoboot feature boot delay.

That is all.