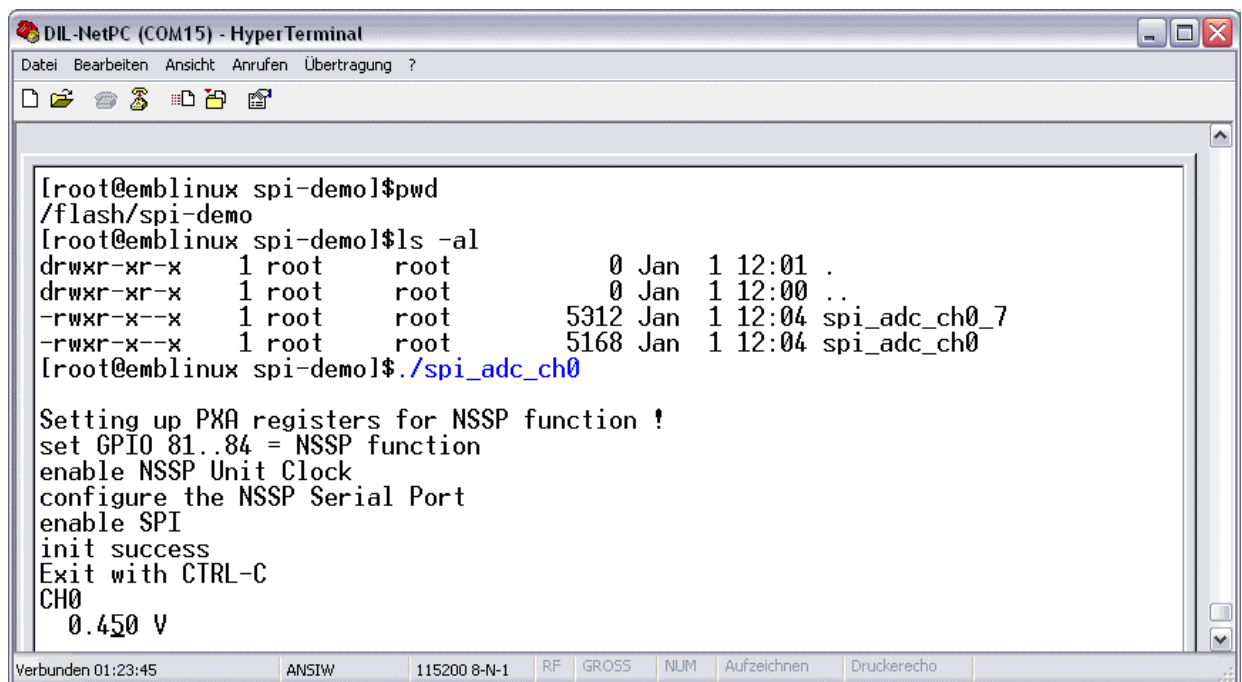


## How to use the SPI/ADC1 Analogue-to-Digital Converter Module

The DIL/NetPC DNP/2110 starter kit DNP/SK21 contains a small 10-bit SPI/ADC1 analogue-to-digital converter (ADC) module with 8-channel single-ended or 4-channel differential inputs. This module allows you to sample analog data sources with the DNP/2110.

- **1. Step:** Connect the SPI/ADC1 module to J8 (PIO Signals 2) of the evaluation board DNP/EVA6. This connector offers the SPI signals of your DNP/2110. The SPI/ADC1 hardware reference manual offers more details about this connection.
- **2. Step:** Please use a DNP/2110 starter kit CD-ROM (version 1.01 or newer). This CD-ROMs contains within the directory `/linux/demos/spi-adc1-dnp2110` some sample files (executables and C source codes).
- **3. Step:** Create a new subdirectory `/flash/spi-demo` on your DNP/2110 and transfer the two executables `spi_adc_ch0` and `spi_adc_ch0_7` with the help of a FTP session from the starter kit CD-ROM to this new DNP/2110 directory. Don't forget the `"chmod +x"` command for the files `spi_adc_ch0` and `spi_adc_ch0_7`.
- **4. Step:** Please run `./spi_adc_ch0` on your DNP/2110. This program runs within a endless loop and displays the current input of the SPI/ASC1 channel 0.



```

DIL-NetPC (COM15) - HyperTerminal
Datei Bearbeiten Ansicht Anrufen Übertragung ?
[root@emblinux spi-demo]$pwd
/flash/spi-demo
[root@emblinux spi-demo]$ls -al
drwxr-xr-x  1 root  root           0 Jan  1 12:01 .
drwxr-xr-x  1 root  root           0 Jan  1 12:00 ..
-rwxr-x--x  1 root  root    5312 Jan  1 12:04 spi_adc_ch0_7
-rwxr-x--x  1 root  root    5168 Jan  1 12:04 spi_adc_ch0
[root@emblinux spi-demo]$./spi_adc_ch0

Setting up PXA registers for NSSP function !
set GPIO 81..84 = NSSP function
enable NSSP Unit Clock
configure the NSSP Serial Port
enable SPI
init success
Exit with CTRL-C
CH0
0.450 V

```

**Please note:** For a successful test please supply a voltage between 0 and 3.3 VDC to channel 0 of the SPI/ADC1 module. The SPI/ADC1 hardware reference manual describes a simple test environment. Please see this document for more details.

That's all.