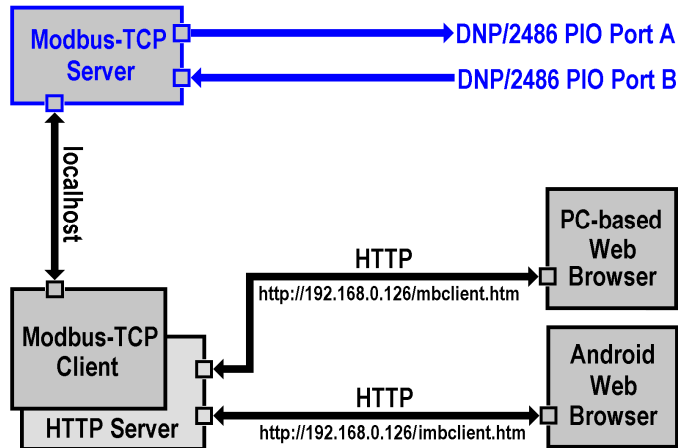


How to use the DNP/2486 Modbus-TCP demo with Android-based Smartphones

The DIL/NetPC DNP/2486 starter kit DNP/SK29 is also with a pre-installed comprehensive Modbus-TCP demo available (order code DNP/SK29-MB). The software includes a Modbus-TCP server (*mbserver*), a Modbus-TCP command line client (*mbclient*) and a Modbus-TCP CGI client (*mbclient.cgi*, *imbclient.htm* and *mbclient.htm*) for the DNP/2486 embedded HTTP server.



The DNP/2486 Modbus server allows Modbus-TCP-based access to the PIO Port A and Port B bits. Port A (PA0 – PA7) is used as an 8-bit output. Port B (PB0 – PB7) is used as an 8-bit input.

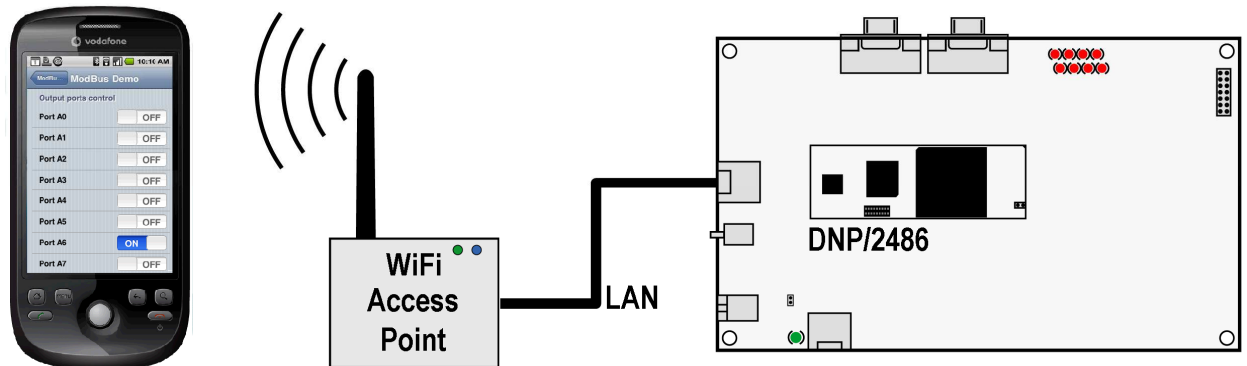
- **1. Step:** Use a Telnet session as root user and execute the following command line to run the pre-installed Modbus TCP server:

```
mbserver
```

```

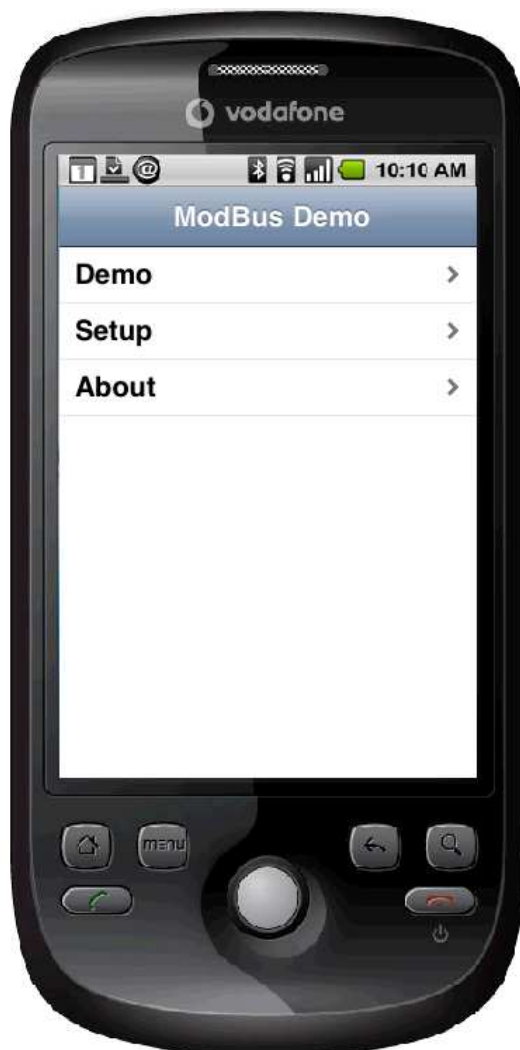
Telnet 192.168.0.126
Debian GNU/Linux 4.0
emblinux login: root
Password:
Last login: Mon Jun 16 02:00:59 2008 from 192.168.0.240 on pts/0
emblinux:~# mbserver
emblinux:~# ps -A
  PID TTY          TIME CMD
    1 ?            00:00:01 init-inittal
    2 ?            00:00:00 ksoftirqd/0
    3 ?            00:00:00 events/0
    4 ?            00:00:00 khelper
    5 ?            00:00:00 kthread
    8 ?            00:00:00 kblockd/0
   11 ?            00:00:00 khubd
   13 ?            00:00:00 kseriod
   63 ?            00:00:00 pdf_lush
   64 ?            00:00:00 pdf_lush
   65 ?            00:00:00 kswapd0
   66 ?            00:00:00 aio/0
  237 ?            00:00:00 scsi_eh_0
  238 ?            00:00:00 usb-storage
  261 ?            00:00:00 kjournald
  406 ?            00:00:00 metalog
  407 ?            00:00:00 metalog
  447 ?            00:00:00 lan2pio
  451 ?            00:00:00 avahi-autoipd
  454 ?            00:00:00 avahi-autoipd
  462 ?            00:00:10 lighttpd
  472 ?            00:00:00 inetd
  482 ?            00:00:00 sshd
  488 ?            00:00:00 cron
  496 tty1        00:00:00 getty
  497 ttyS0       00:00:00 getty
  510 ?            00:00:00 mgmt
 1781 ?            00:00:00 in.telnetd
 1782 pts/0        00:00:00 login
 1783 pts/0        00:00:00 bash
 1788 ?            00:00:00 mbserver
 1789 pts/0        00:00:00 ps
emblinux:~# _
  
```

- **2. Step:** Make sure that the WiFi interface of your Android-based SmartPhone and the DNP/2486 Ethernet LAN interface are connected within the same TCP/IP network (e.g. within the IP address range 192.168.0.x). The following picture shows a typical network configuration.



- **3. Step:** Please run the web browser on your Android-based SmartPhone and access the DNP/2486 Modbus-TCP CGI client with the following URI:

<http://192.168.0.126/imbclient.htm>



- **4. Step:** Select the *Demo* button within the Android-based SmartPhone web browser window. This brings you to a web page with some controls for each PIO Port A LED PA0 to PA7 on the DNP/EVA11-SV1 evaluation board. Please use these controls to turn the LEDs on and off.



Please note: The Modbus server and client code for the DNP/2486 MAX-Linux is based on the original pre-tested Modbus TCP Toolkit code of the Modbus organization. This means the DNP/2486 implementation is 100%-compatible to the Modbus TCP protocol specification.

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That's all.