

PT8643 Test procedure. (BS20101217)

1. Install boot loader.

If no GPS board is installed, J5 on the PT8643 board must be connected to XK1 on the main board. Otherwise J5 must be connected to XX on the GPS board (Rev. 4).

Connect the Silabs debug adapter to J4 on PT8643 board.

Apply power to PT5300.

Run the file "FLASH_BL.BAT" to install the boot loader in the PT8643 board. ("FLASH_BL.BAT" is located on "L:\Produk\PT8643\Bootloader")

When the update is complete the D1 will blink slowly to indicate that the boot loader is running. After approx. 15 seconds D1 and D2 will blink in a alternating pattern indicating that the RUN code could not be executed.

Disconnect power from the PT5300 mainframe and attach the changeover cable between J4 on the PT8643 board and XQ1 on the main board. J2 on the PT8643 board **MUST** be connected to XR1 on the main board.

2. Install RUN-Code.

Connect the RS232 port on the PT5300 to a PC and run the program "PT8613-FW-Loader.EXE" (Located on "L:\Produk\PT8643\RUN")

Apply Power the PT5300 mainframe and press connect in the Windows program. This must be done within 15 seconds after the power was applied to the PT5300.

Select the latest HEX file for the PT8643 and press "Start".

D1 will blink fast during the update process.

When the update is complete two CRC values is shown in a message box. They must be equal.

3. Testing the Ethernet interface.

Connect the Ethernet cable and Re-power the PT5300 mainframe and wait for the initialisation to complete.

When the green led in the Ethernet connector turns on and the yellow led lights intermittently select the menu "Network" → "Ethernet" → "DHCP" on the PT5300 and verify that DHCP is on.

The Telnet protocol must also be enabled. Go to "Network" → "Config" → "Telnet" and select ON. (This will be enabled as default in a later software release.)

The DHCP assigned IP address can be verified in the menu "Network" → "Ethernet" → "IP ADDR". If the IP address is 0.0.0.1 the Ethernet interface has not received it's DHCP configuration. This can take a minute or two.

4. Telnet test.

Run the program "DK-5300.EXE" located on "L:\Produk\PT8643\Utilities".

In DK-5300 select "File" → "Netfinder". In the Netfinder window select "Refresh Instrument List". After a few seconds your PT5300 should appear.

Select your PT5300 from the list and select "Connect".

A user name and a password must be entered. The default user name is "**Administrator**" and the default password is "**2730**". User names and passwords are case sensitive.

When connected, the main window will allow you to change some basic settings on the PT5300. (Try it...)

5. SNTP test.

If a GPS board is installed the SNTP protocol must be tested.

On your windows computer double click the clock on the task bar.

Select internet time in the window that appears and enter the IP address for the PT5300. When the IP address is entered click "Update Now".

If Windows adjusts it's clock to the correct time without any errors the SNTP protocol working.

6. LED Patterns.

RS232 Status.

D5 and D6 describes the status of the RS232 port on the rear of the PT5300.

D5	D6	Description.
OFF	OFF	RS232 disabled. (This should be considered as a fault.)
OFF	ON	Normal RS232 communication can be established with PT5300 main board.
ON	OFF	Telnet communication is established with PT5300 main board.
ON	ON	Firmware update of the PT8643 board is possible.

Normal Operation.

D1	OFF.
D2	Changing state when Telnet data is received.
D3	OFF when SNTP time is synchronized. ON is considered an error.
D4	If a GPS board is installed D4 will blink every second. Otherwise D4 will be ON.

Bootloader Operation.

D1	Blinking slow: Bootloader is active. Blinking fast: The RUN-code is being installed.
D1 and D2	If D1 and D2 is alternating an error occurred.
D3	OFF.
D4	OFF.
D1,D2,D3,D4	If D1, D2, D3, and D4 is ON at the same time the MCU has illegally tried to write the internal FLASH memory. The integrity of the boot loader MUST be verified. This can be done by checking the boot loader CRC values using the PT8643-FW-Loader software. Otherwise just reprogram the boot loader using the Silabs adapter.