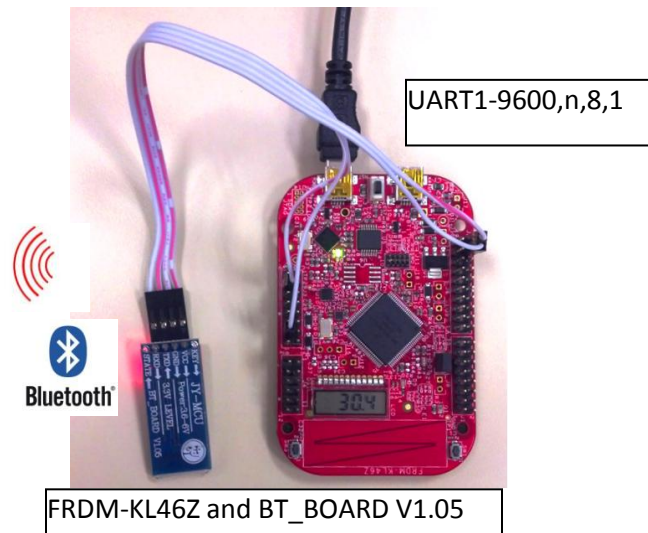
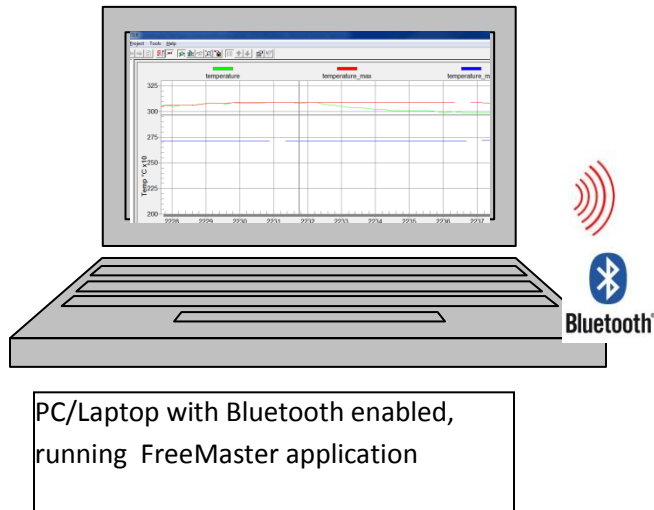


Interfacing wirelessly your Freedom FRDM-KL46Z over Bluetooth to Freemaster

This example shows a FRDM-KL46Z interfacing with a Bluetooth-serial board BT_BOARD V1.05, it uses FREEMASTER to graph temperature and light sensor variables.



Requirements

1 Freescale FRDM-KL46Z evaluation board

<http://www.freescale.com/frdm-kl46z>

1 Bluetooth to serial board BT_BOARD V1.05

1 PC MASTER Software (Freemaster installer)

<http://www.freescale.com/freemaster>

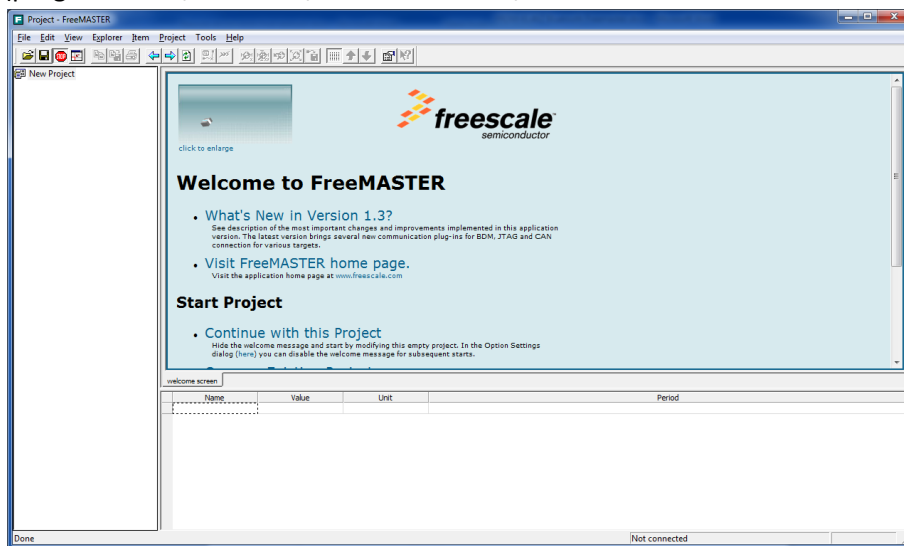
1 Freemaster project **freemasterDemo.pmp (included on project zip)**

1 firmware: **freemasterdemo.srec (included on project zip)**

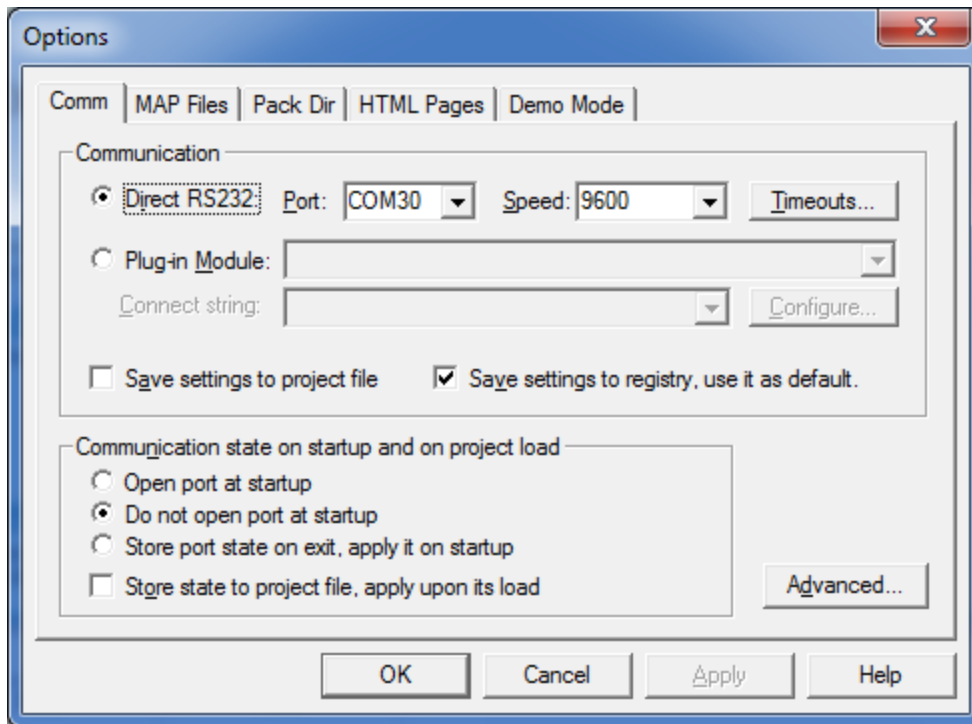
FreeMASTER

FreeMASTER is a user-friendly real-time debug monitor and data visualization tool that you can use for any application development and information management. FreeMASTER supports completely non-intrusive monitoring of variables on a running system. You can display multiple variables changing over time on an oscilloscope-like display, or view the data in text form. As well, FreeMASTER supports additional capabilities and targets with an on-target driver for transmitting data from the target to the host computer.

- 1) Download and Install Application Installation
- 2) Go to programs and execute Freemaster
(program Files\Freescale\FreeMASTER 1.3\PCMaster.exe"

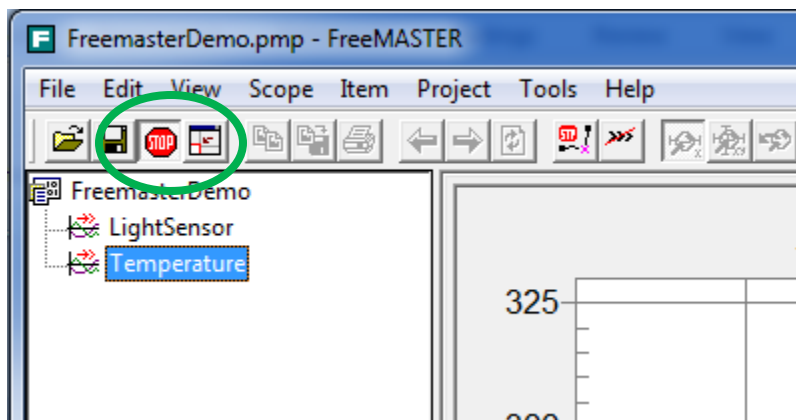


- 3) Go to Menu-File-Open and open freemasterDemo.pmp included in the zip file
- 4) Configure proper communication port. Project-Options Port

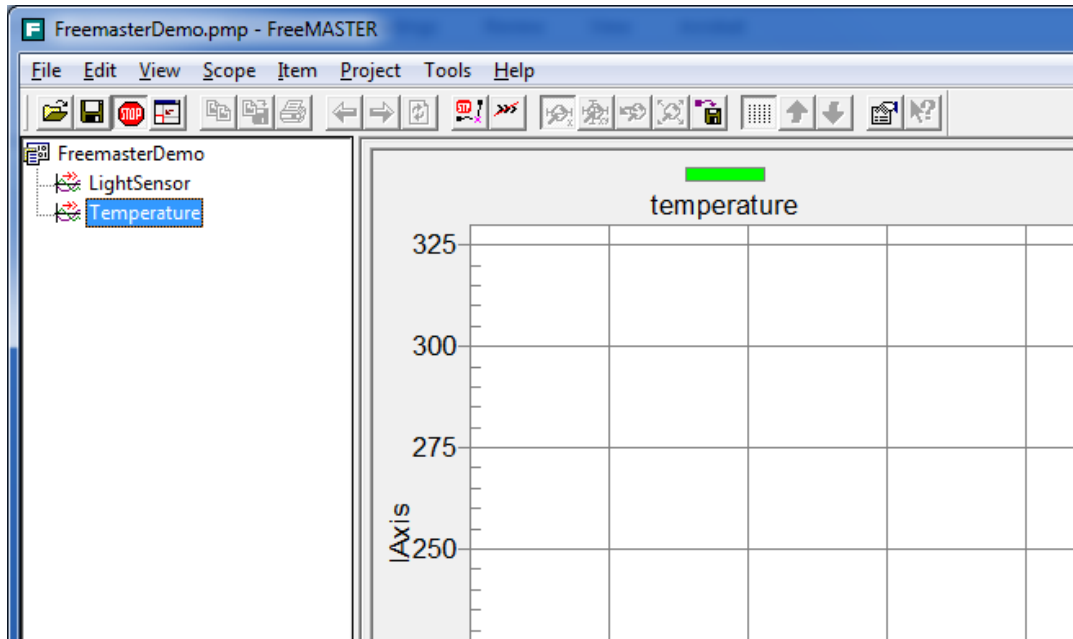


Port COM number depends on Bluetooth pairing process.

5) Start communication



6) Select Scope temperature



Put your finger close to MCU and temperature changes will be reflected on the graph.

Please note that this graph shows Temperature (green) Max temperature (Red) Min Temp (blue). Limits change periodically and get closer to temperature unless a change is detected.

Connections

Only 4 wires connections are required. See Table 1

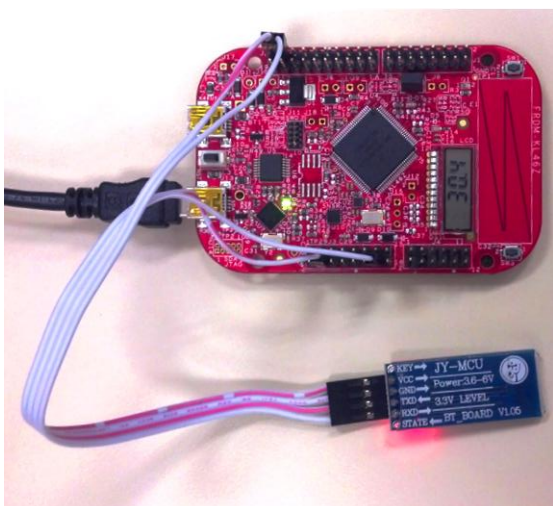
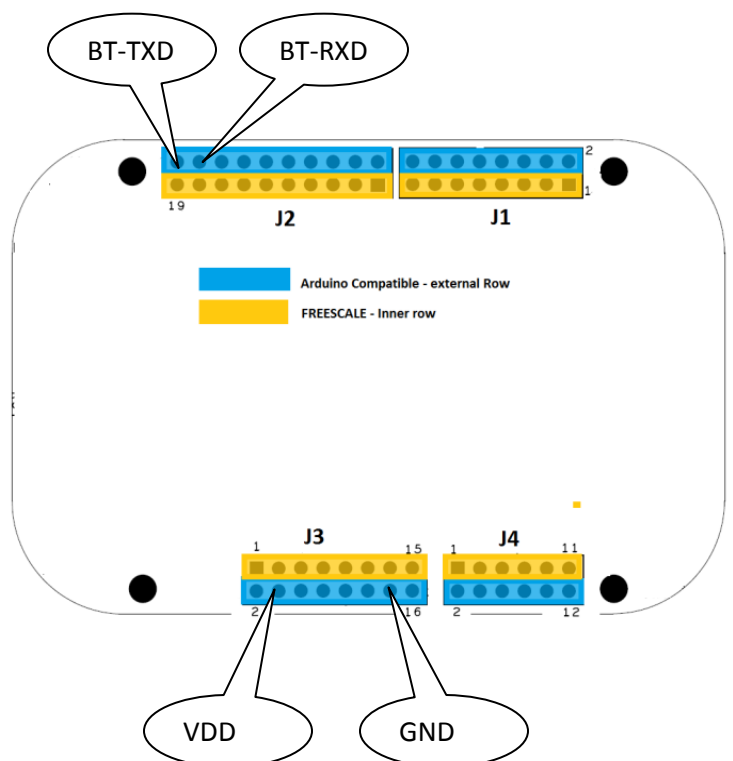


Table 1.
Connections
between
FRDM-
KL46Z
and



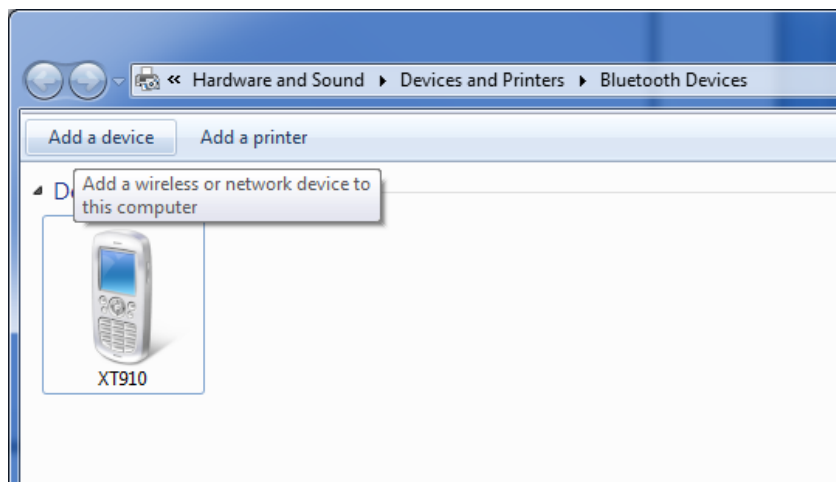
BT_BOARD V1.05	FRDM-KL46Z	KL46 signal name
VCC	J3-4	VDD (3.3V)
GND	J3-14	GND
TXD	J2-20	PTE1/UART1_RX
RXD	J2-18	PTE0 /UART1_TX

Bluetooth pairing

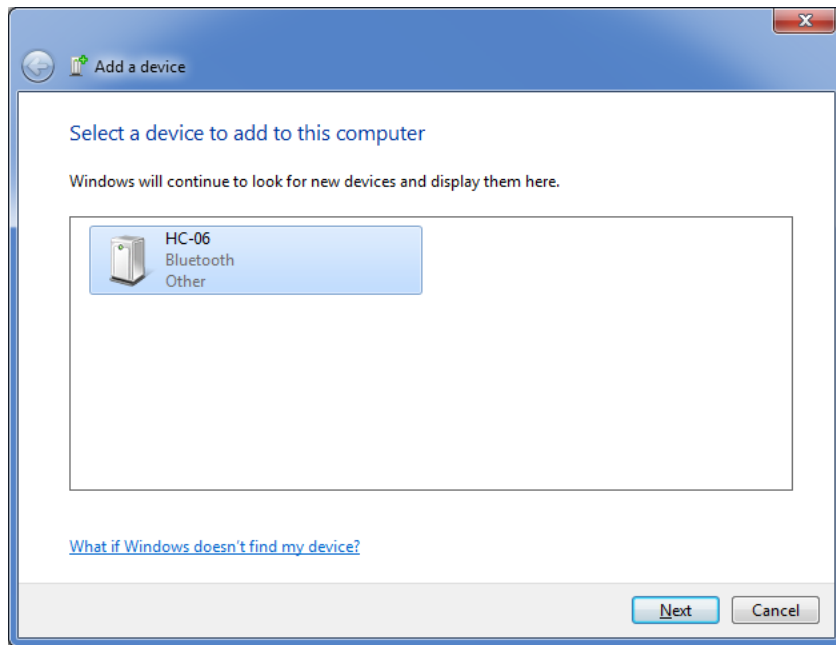
In this section shows how to pair your BT_BOARD V1.05 with your PC on windows 7.

1 power up FRDM-KL46Z with BT_BOARD V1.05 attached

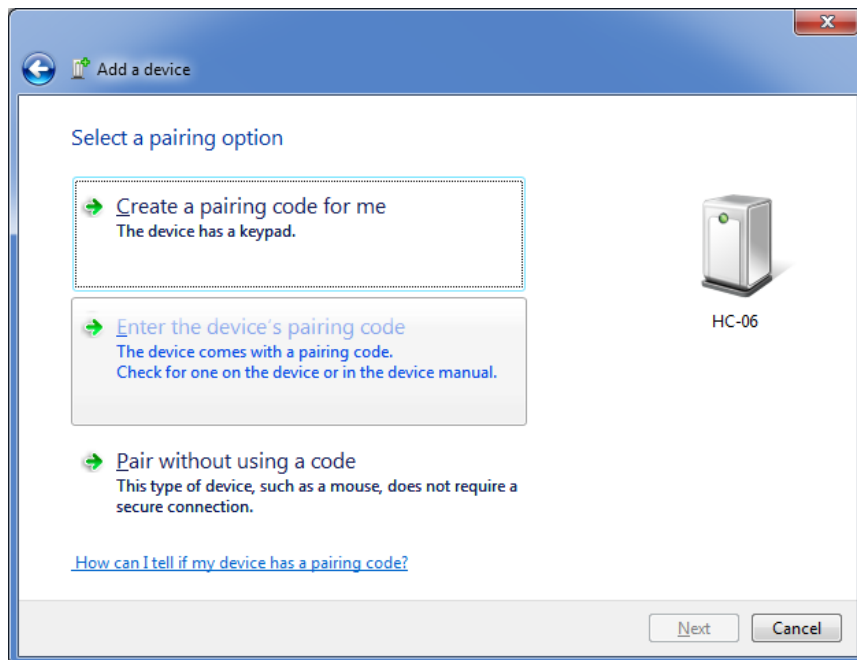
2 In your Bluetooth Devices manager select Add a device



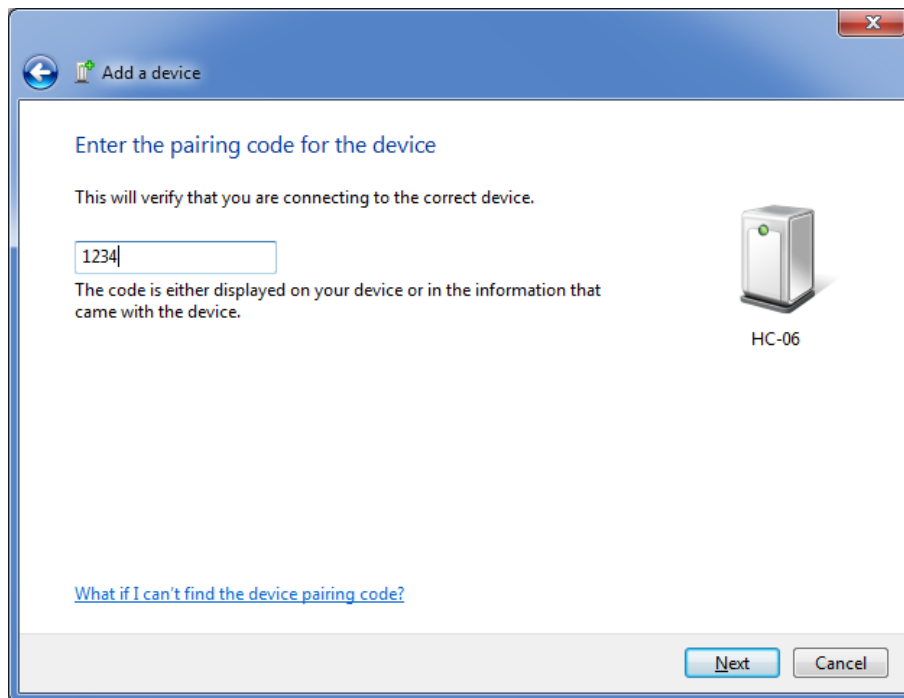
3 Search for HC-06, select it. and press Next



4. Select Enter the Device's pairing code



5.- Enter code 1234, and click Next



6 that is it, your device should be added successfully.



7.- Go to Device Manager and verify “Standard Serial over Bluetooth link” port is available, for instance in my case appears as COM31:

