

Compile Pi4J with a specific baud rate

The BrickPi board uses the UART to communicate with the Raspberry Pi. The baud rate used, which is 50000 Bd, is not standard, therefore it is not supported by default by the WiringPi library enclosed in Pi4J. In order to use it, a slight modification on the code need to be done and Pi4J needs to be compiled manually. Since the steps are not trivial, the method to perform the modification and compilation is explained in the following. We assume that you are running the image provided with Raspoid.

```

1 # Maven is needed to compile Pi4J
2 sudo apt-get install maven
3 # Clone the Pi4J repo
4 cd ~
5 git clone https://github.com/Pi4J/pi4j.git
6 cd ~/pi4j
7
8 # We need to correct the Makefile to use the right folder to include the
9 # jni header files otherwise we will get a compilation error
10 cd ~/pi4j/pi4j-native/src/main/native/
11 nano Makefile
12 # Change this text at line 11
13 -I/usr/lib/jvm/jdk-7-oracle-armhf/include -I/usr/lib/jvm/jdk-7-oracle-armhf/include/
   linux
14 # With this one
15 -I/usr/lib/jvm/jdk-7-oracle-arm-vfp-hflt/include -I/usr/lib/jvm/jdk-7-oracle-arm-vfp
   -hflt/include/linux
16
17 # Compile a first time to fetch all the dependencies and clone
18 # the wiringPi repo
19 cd ~/pi4j
20 mvn install -P native -Dpi.host=127.0.0.1
21
22 # Comment the line to clone the wiringPi repo otherwise
23 # it will overwrite our modifications when recompiling
24 cd ~/pi4j/pi4j-native/src/main/native/
25 nano wiringpi-build.sh
26 # edit the line 33 and comment it to be
27 #git clone git://git.drogon.net/wiringPi
28
29 # Add 50000 in the list of supported baud rate
30 cd ~/pi4j/pi4j-native/target/native/wiringPi/wiringPi
31 nano wiringSerial.c
32 #After the line 66 add the following line
33     case 50000:          myBaud = 50000 ; break ;
34
35 # Recompile with the custom baud rate added
36 cd ~/pi4j/
37 mvn install -P native -Dpi.host=127.0.0.1
38
39 # The custom pi4j jar is in the folder
40 cd ~/pi4j/pi4j-core/target/
41
42 # The custom libpi4j.so is in folder
43 cd ~/pi4j/pi4j-core/target/lib/

```

