

## Pin mapping

The table below shows all the pin connections for ecotron hardware. It's possible to reconfigure the connections in multiple ways, but some pitfalls regarding the SoftwareSerial interface exist. Also, prior to booting in debug mode, one should remove any devices (normally an HC-SR04) connected to digital pins 0 and 1 to ensure stable serial communication.

There is a comprehensive list of pin connections within the firmware itself - one can refer to it to make sure the code runs as intended. Prototype pins are laid out as follows:

<b>sim808</b>	
TX	8
RX	10
only use PWM enabled pins for serial	
DTR	11
RI	12
PWR	13
RST	not used!
avoid using pin 13 as input	
VIO	any Vcc
GND	any GND
<b>temperature sensor</b>	
Vcc	any Vcc
GND	any GND
Signal	A0
<b>HC-SR04 sensors</b>	
Vcc	any Vcc
GND	any GND
required for each sensor	
positions refer to the actual container with 5 separate bins	
left and right as seen by device from within the container (not outside viewer!)	
from the outside, cans are conveniently ordered 1-5 from left to right	
far right (can 1)	
Trigger	1
Echo	0
far left (can 5)	
Trigger	5
Echo	4
middle left (can 4)	
Trigger	7
Echo	6
close right (can 2)	
Trigger	A2
Echo	A1
close left (can 3)	
Trigger	3(digital!)
Echo	A3
<b>RTC</b>	
I2C SDA	A5

I2C SCL hardware interrupt built into the PCB	A4 2(digital!)
<b>sensor power switch</b>	
enable pin works as high on	9

Not mentioned in the table are solar panel, battery, GSM and GPS antennae connected to sim808 breakout via their reserved connections.