Rs-Pi RTC & Temp module Board User Manual

RTC **DS1307** with CR1220 Battery

TMP102 Temperature Sensor

i2c bus device detect status and active TMP102 & RTC DS1307

48 -> tmp102   68 -> RTC DS1307

First Install battery for RTC , " + " mark on top

RTC DS1307 - 68   in i2cdetect –y 0   or

i2cdetect –y 1   for Rs-Pi V2 you will see 68 in the

screen   68 -> RTC DS1307

48 -> tmp102

This requires a Raspberry Pi running a
kernel with the RTC module and DS1307 module included. This is not
true of the "Wheezy" distros

or Occidentalis v0.1. This is for use with   Occidentalis v0.2 or greater

then, load up the RTC module by running
sudo modprobe rtc-ds1307
Then, as root (type in **sudo bash**) run
echo ds1307 0x68 > /sys/class/i2c-adapter/i2c-0/new_device (if you
have a rev 1 Pi)
echo ds1307 0x68 > /sys/class/i2c-adapter/i2c-1/new_device (if you
have a rev 2 Pi)

hwclock –r   read time

hwclock –w   write time in RTC

*TMP102 information

modprobe tmp102

echo tmp102 0x48 > /sys/class/i2c-adapter/i2c-0/new_device
  (if you have a rev 1 Pi)

echo tmp102 0x48 > /sys/class/i2c-adapter/i2c-1/new_device
  (if you have a rev 2 Pi)

sensors   show the temp

you'll want to add the RTC kernel module & temp tmp102 to the
/etc/modules list, so its loaded when the machine boots. Run **sudo
nano /etc/modules** and add **rtc-ds1307 & tmp102** at the end of the
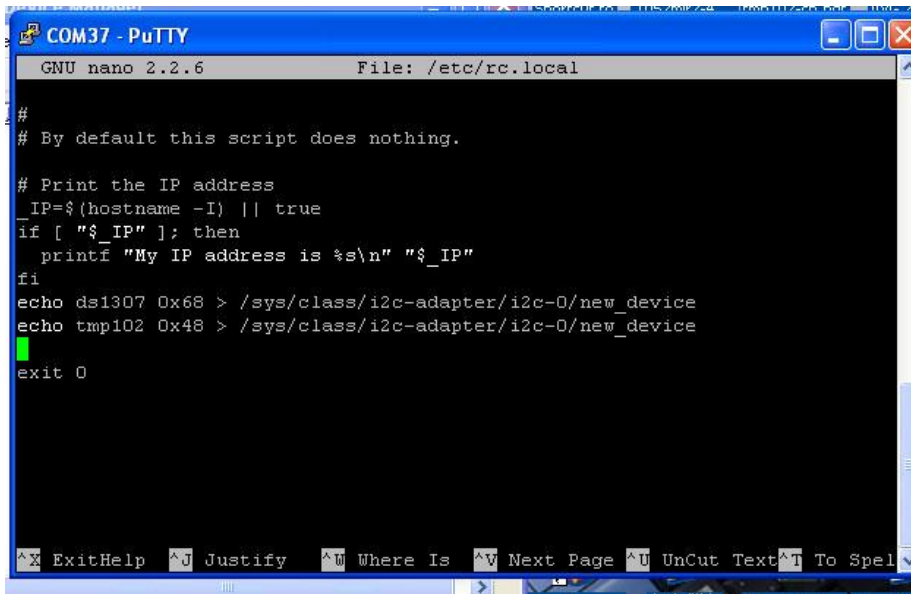file

Then you'll want to create the DS1307 device creation at boot, edit /etc/rc.local by running
sudo nano /etc/rc.local

and add **echo ds1307 0x68 > /sys/class/i2c-adapter/i2c-0/new_device** before **exit 0**

```
GNU nano 2.2.6                  File: /etc/rc.local

#
# By default this script does nothing.

# Print the IP address
_IP=$(hostname -I) || true
if [ "$_IP" ]; then
  printf "My IP address is %s\n" "$_IP"
fi
echo ds1307 0x68 > /sys/class/i2c-adapter/i2c-0/new_device
echo tmp102 0x48 > /sys/class/i2c-adapter/i2c-0/new_device

exit 0

^X ExitHelp  ^J Justify  ^W Where Is  ^V Next Page  ^U UnCut Text  ^T To Spel
```

* Adafruit **Occidentalis v0.2** image support the TMP102 and RTC DS1307 if you need this driver, you can choose this.

The image can be download from
http://learn.adafruit.com/adafruit-raspberry-pi-educational-linux-distro/occidentalis-v0-dot-2

tmp102 information

http://www.element14.com/community/groups/raspberry-pi/blog/2012/07/26/is-it-done-yet-temperature-sensing-with-the-raspberry-pi#comment-16249

Information about TMP102

http://www.agilart.com/blog/tmp102-raspberry-pi

http://www.rpiblog.com/2012/07/raspberry-pi-temperature-sensor-using.html

DS1307 RTC information

http://learn.adafruit.com/adding-a-real-time-clock-to-raspberry-pi/set-rtc-time

Package Content

1x Rs-Pi RTC & Temp module board
1x CR1220 3V Battery
1x Manual