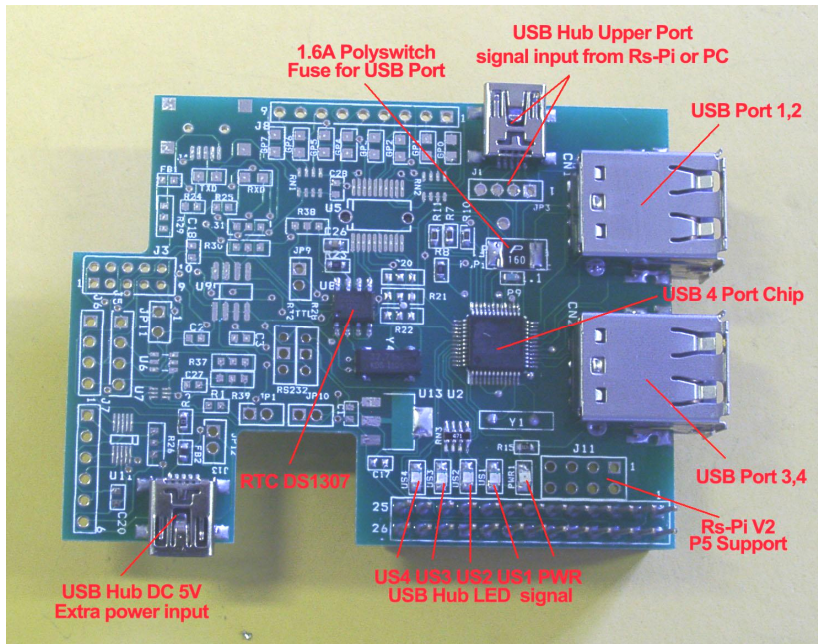


# Rs-Pi 4 USB Hub & RTC User Manual



1. U8 RTC DS1307 with CR1220 Battery
2. U2 - USB 4 Ports HUB chipset
  - J1 (JP3) USB HUB upper port input from Rs-Pi
  - US1,US2,US3,US4 4 LED for indicate 4 USB ports status
3. J13 Extra Mini USB 5V input for USB HUB
4. J11 for RS-Pi V2 GPIO connector

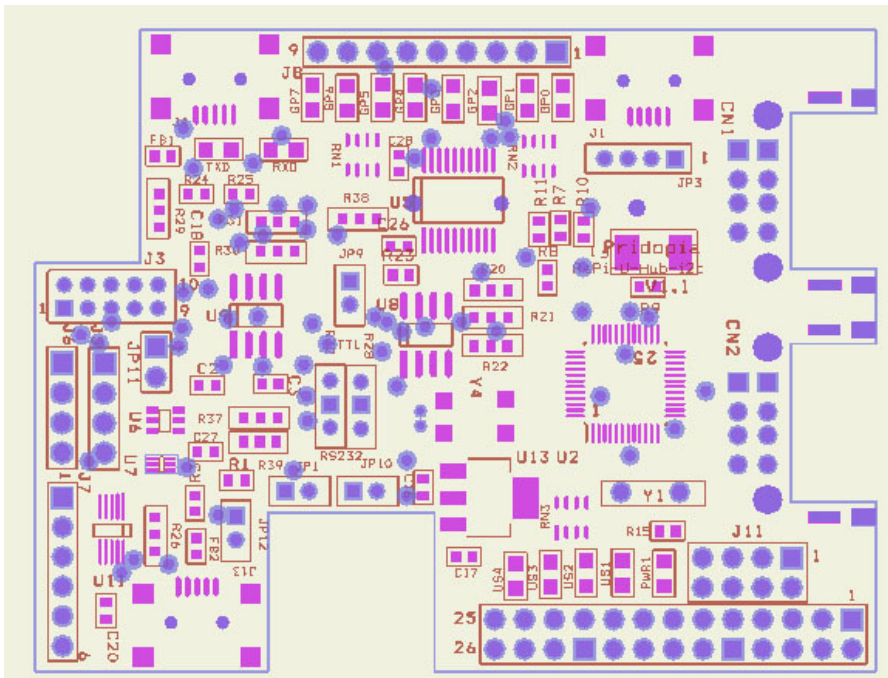
```
COM21 - PuTTY
Type 'startx' to launch a graphical session

root@raspberrypi:~# i2cdetect -y 0
   0 1 2 3 4 5 6 7 8 9 a b c d e f
00:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
10:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
20:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
30:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
40:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
50:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
60:  --  --  --  --  --  --  --  68  --  --  --  --  --  --  --  --
70:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --

root@raspberrypi:~# modprobe rtc-ds1307
root@raspberrypi:~# echo ds1307 0x68 >/sys/class/i2c-adapter/i2c-0/new_device
root@raspberrypi:~# hwclock -r
Mon 04 Feb 2013 23:28:19 UTC -0.961667 seconds
root@raspberrypi:~# hwclock -w
root@raspberrypi:~# hwclock -r
Mon 04 Feb 2013 23:27:57 UTC -0.628994 seconds
```

68 -> RTC DS1307 i2c bus device detect status and active 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



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**

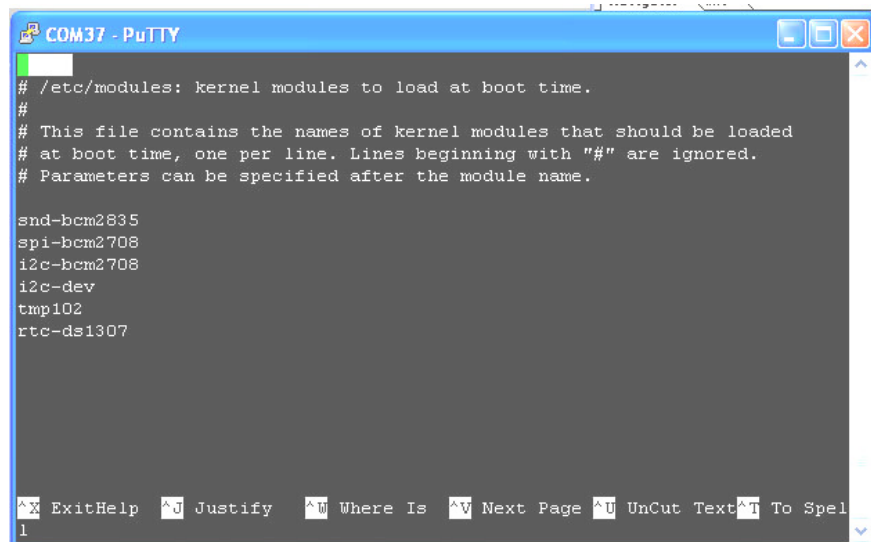
**hwclock -w write time in RTC**

**hwclock -s write time in System**

**hwclock --set --date="2013-08-21 08:00:12" --utc**

**write in custom Time in RTC**

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



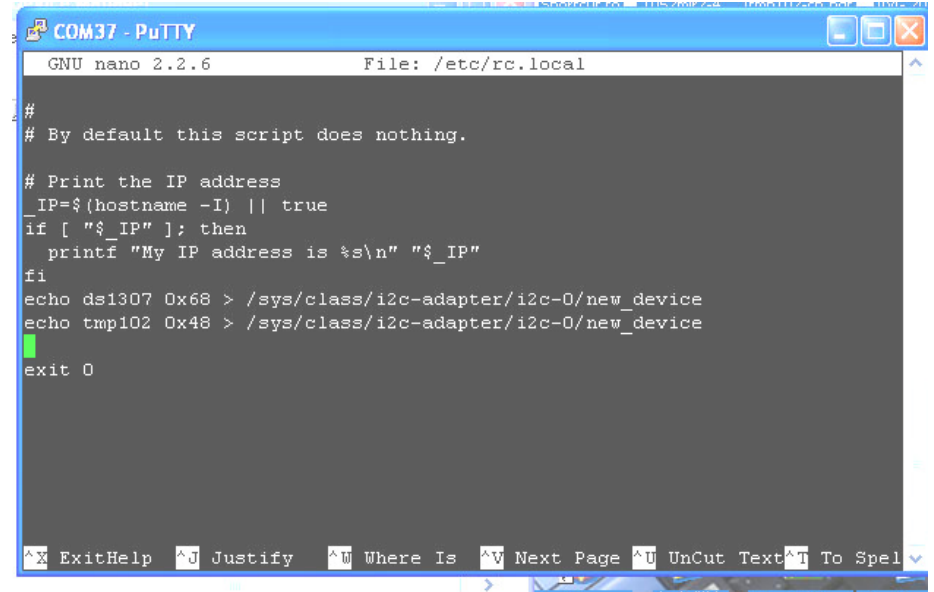
```
COM37 - PuTTY
# /etc/modules: kernel modules to load at boot time.
#
# This file contains the names of kernel modules that should be loaded
# at boot time, one per line. Lines beginning with "#" are ignored.
# Parameters can be specified after the module name.

snd-bcm2835
spi-bcm2708
i2c-bcm2708
i2c-dev
tmp102
rtc-ds1307
```

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**



```
COM37 - PuTTY
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
```

\* Adafruit **Occidentalis v0.2** image support the 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>

**To keep Rs-Pi USB Hub board working properly, you need make sure the Vcc input for Rs-Pi above 4.75V, JP3 pin 1 Vcc, pin4 GND**

**new Scratch GPIO control software**

<http://www.pridopia.co.uk/rs-pi-set-scratch.html>

## Package Content

- 1x Rs-Pi 4 USB Hub & RTC board
- 1x USB to MINI USB hub input cable ( for USB Hub input )
- 1x CR1220 3V Battery
- 1x Manual