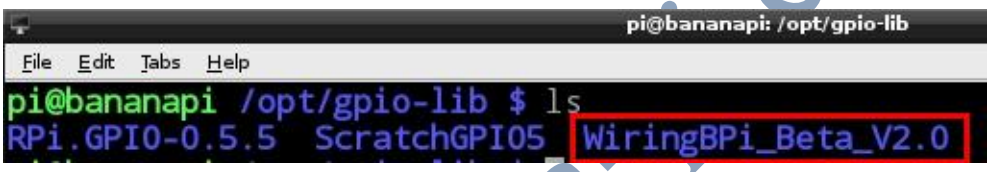
BananaPi uses DVK-511

RTC_PCF8563

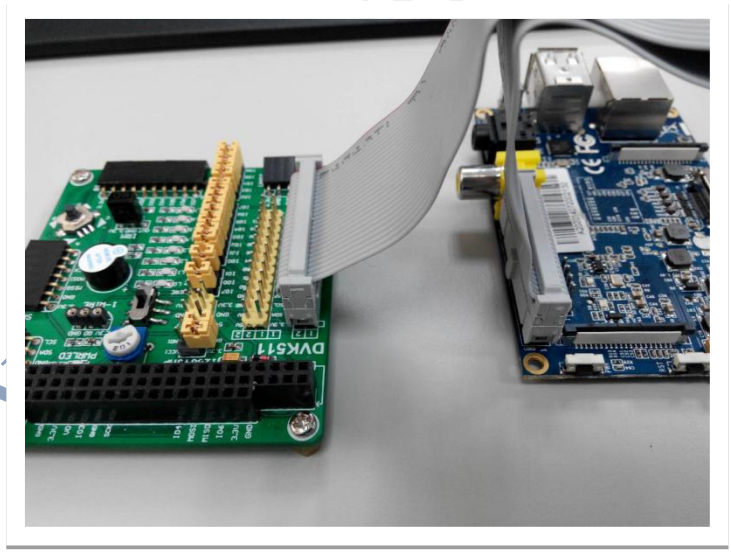
By Justin Chen

1. First go to website http://www.bananapi.com/ download BananaPi customized Raspbian Image; about how to burn the image into SD http://www.bananapi.com/index.php/download?layout=edit&id=42.

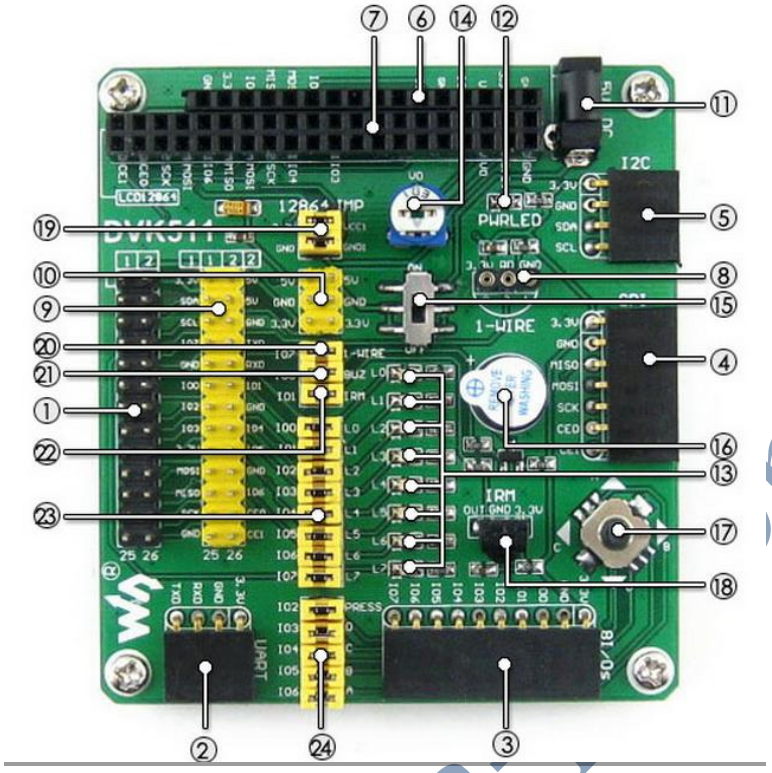
2. The Image burn in SD card has preload the customized WiringPi Lib before, if download WiringPi Lib by yourself, you will need to modify it, otherwise it can't use; WiringPi Lib can find in /opt/gpio-lib.

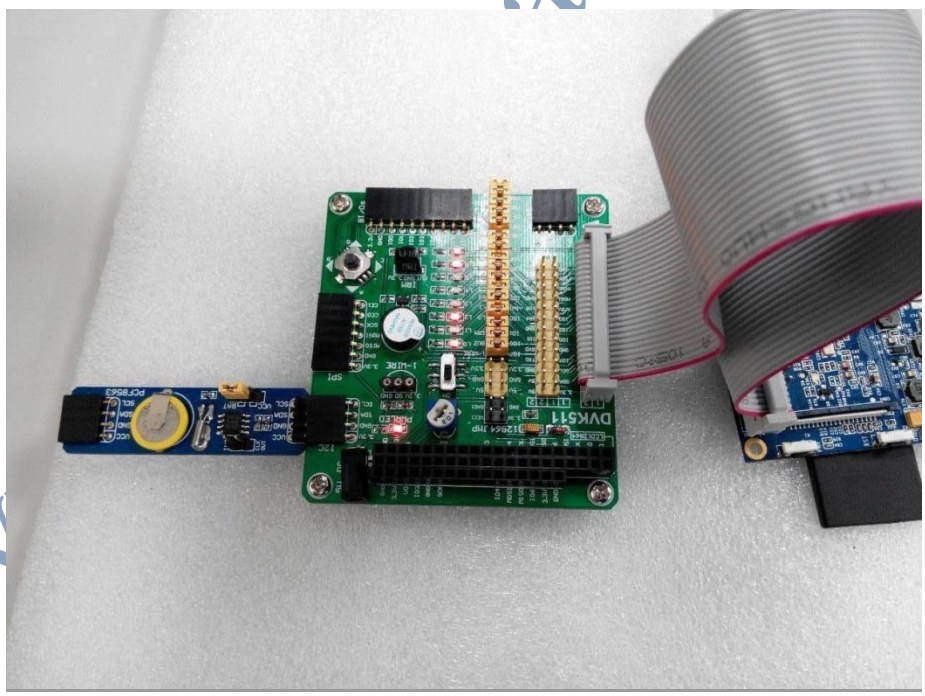


3. BananaPi connect pinboard of DVK511.

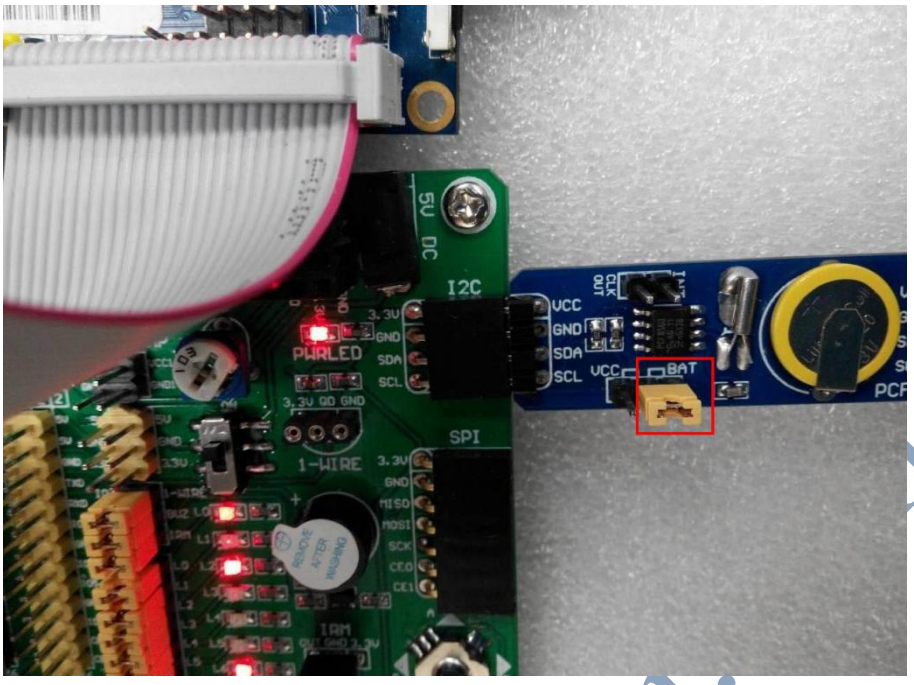


4. DVK-511 fifth pins is I2C Interface,and make RTC_PCF8563 device insert into this one.

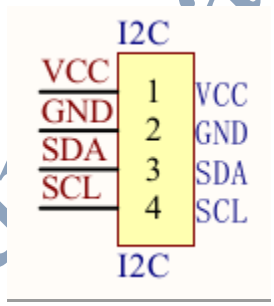




5. the jumper on RTC_PCF8563 device should connect with BAT。

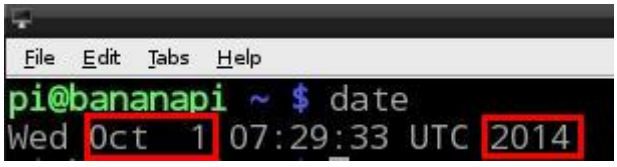


6. Check RTC_PCF8563 and DVK-511 corresponding layout to know each pin's definition。

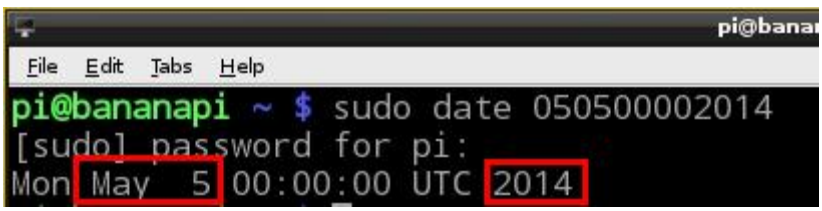


RTC_PCF8563 PINs

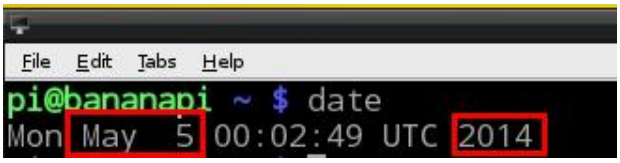
7. Open LXTerminal software，check current Systematic date:



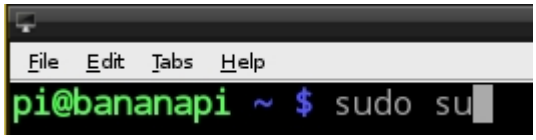
Know frow above Current systematic 1/10/2014；Next revise systematic date 5/5/2014



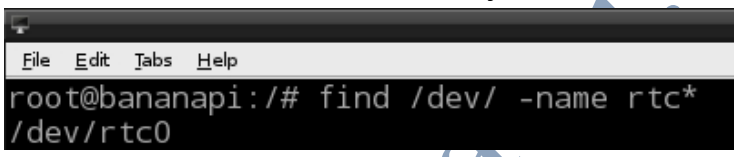
Use date order to check if systematic date if was changed



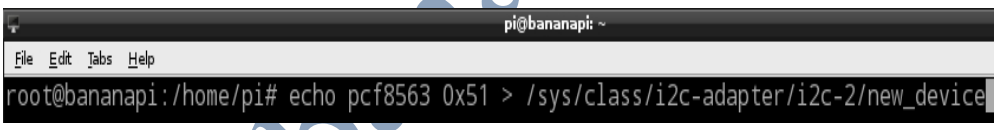
Know from above current systematic date was changed 5/5/2014;then and switch to root mode.



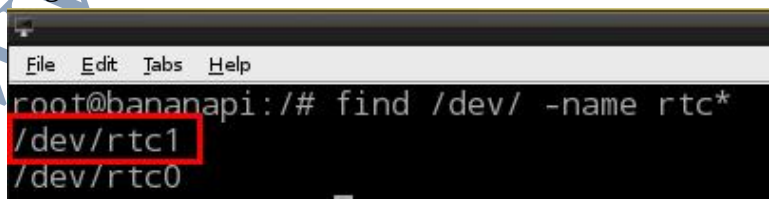
Checking What are RTC devices under current system，know have one pre-set RTC devices mount to /dev/rtc0 in the current system from following:



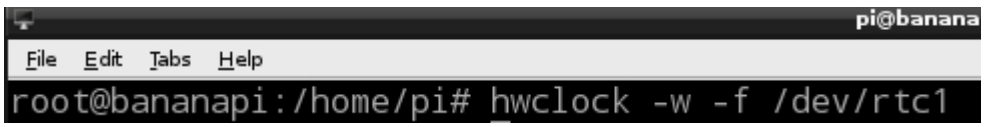
Next mount RTC_PCF8563to I2C_2(please note BananaPi's I2C interface is I2C_2)



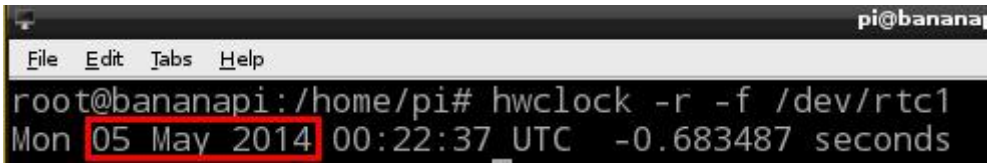
Checking mount successful,knowing RTC_PCF8563 mount to /dev/rtc1 well from following:



Wirting date to RTC_PCF8563 (/dev/rtc1)



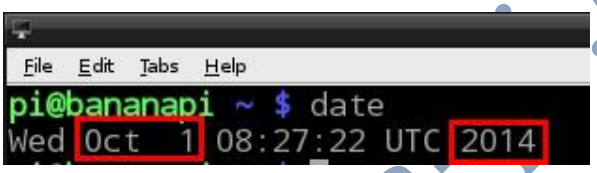
And read RTC_PCF8563(/dev/rtc1) check if read in well.



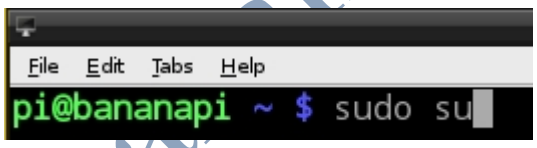
Confirm read well RTC_PCF8563 from above

8. Please turn off and remove power,start after 3-5 minutes 3-5。

9. Re-start and open LXTerminal software checking systemmatic time firstly；
10. Systematic time 1/10/2014 (As remove power for turn-on ,so BananaPi hardware not including RTC function,so that can't read into RTCstorager. System will check original RTC storager found no origianl data After Re-start,then taken internet time to Calibrate 1/10/2014)。

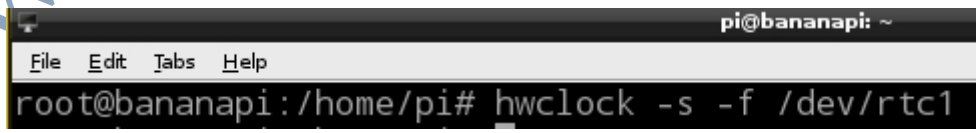


Before mount RTC_PCF8563 devic,please confirm switch toRoot

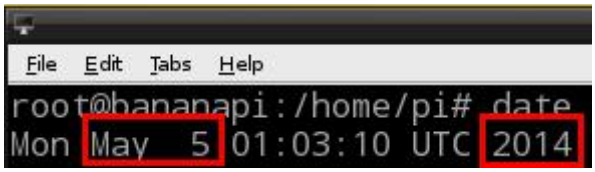


Mount RTC_PCF8563 to I2C_2

Read RTC_PCF8563 date and read into system



Finally confirm systematic time，successfully from RTC_PCF8563 read into system



11. Above operation process as following:
    1. Re-setting systematic time(5/5/2014)and read into RTC_PCF8563。
    2. Turn-on and remove power，for making Banana Pi's hardware remove pre-setting RTC data。
    3. Taken internet time after Re-start(1/10/2014)，we read the date of RTC_PCF8563,making it write into system date.
    4. It verify RTC_PCF8563 device can be executed normally on BananaPi from above steps。