EB-SAM9G45 Andriod User Manual

Revision History

Rev	Date	Description
1.0	2011-05-27	Initial version

catalogue

Chapter1 Linux source inatall and compile

1.1 build the working directory

#mkdir /home/Linux
#cd /home/Linux
Copy 05-Linux_Source and 07-Anriod_Source to the package of /home/Linux.Please do not modify the package name.

1.2install the cross compile tools

tar xvjf
05-Linux_Source/Official_Code/CrossTool/arm-2007q1-10-arm-none-linux-gnueabi.tar.bz2 –C
/usr/local

1.3 install and compile AT91Bootstrap

install
unzip 05-Linux_Source/Official_Code/AT91Bootstrap/Bootstrap-v1.14.zip
compile
cd Bootstrap-v1.14/board/at91sam9g45ekes/nandflash/
make clean
make CROSS_COMPILE=/usr/local/arm-2007q1/bin/arm-none-linux-gnueabi-
ls
You can see the file of nandflash_at91sam9g45ekes.bin，this is what we need AT91Bootstrap.

1.4 install and compile U-boot

Install
tar xvjf 05-Linux_Source/Official_Code/U-boot/u-boot-1.3.4.tar.bz2 -C ./
cd u-boot-1.3.4/
compile
#make clean
#make at91sam9g45ekes_nandflash_config
#make CROSS_COMPILE=/usr/local/arm-2007q1/bin/arm-none-linux-gnueabi-
ls
You can see the file of u-boot.bin,this is what we need U-boot

1.5install and compile Linux source code

Install

tar xvjf 05-Linux_Source/Official_Code/linux_kernel_2.6.30/linux-2.6.30.tar.bz2 -C ./

cd linux-2.6.30/

patch -p1 < ../05-Linux_Source/Official_Code/linux_kernel_2.6.30/2.6.30-at91.patch.gz

tar xvzf ../05-Linux_Source/Official_Code/linux_kernel_2.6.30/2.6.30-at91-exp.4.tar.gz -C ./

for p in 2.6.30-at91-exp/*; do patch -p1 < $p;done

patch –p1 < ../ 07-Anriod_Source/Embest_code/Kernel_patch/embest_andriod_all_patches.diff

Configure the file (according the LCD size)

LCD type	Configure file
LCD_4.3	embest_EM-SAM9G45_4.3LCD_Android
LCD_7.0	embest_EM-SAM9G45_7.0_LCD_Android
LCD_10.2	embest_EM-SAM9G45_10.2_LCD_Android

cp arch/arm/configs/embest_EM-SAM9G45_4.3LCD_Android .config

Compile

#make ARCH=arm menuconfig

make uImage ARCH=arm

CROSS_COMPILE=/usr/local/arm-2007q1/bin/arm-none-linux-gnueabi-

Chapter2 the compile environment of Andriod

2.1install the environment

see：http://source.android.com/source/initializing.html
Notice：you should select the version of JDK is 1.6

2.2 download the andriod source code

See ： http://source.android.com/source/downloading.html
Notice：we have offered the andriod-2.3.1_r1 version patches，so you should use the command as follows:
$ repo init -u git://android.git.kernel.org/platform/manifest.git -b Android-2.3.1_r1

2.3 install the patches code

Build a working directory package in the section 2.2,we assume that the package name is Android-2.3.1_r1

- Copy 07-Android/Embest_code/Android_Patch/atmel.tar.bz2 to /Android-2.3.1_r1/device,and execute the command as follows:

  # cd Android-2.3.1_r1/device
  # tar xvjf atmel.tar.bz2
- Copy 07-Android/Embest_code/Generate_jffs2_image/Generate_jffs2_image.tar.bz2 to /Android-2.3.1_r1

Chapter3 Compile the Andriod system

3.1 configure and compile the Andriod

#cd Android-2.3.1_r1(Notice：this name is the same as the package name of section 2.2)
#make clean
source build/envsetup.sh
partner_setup sam9g45
choosecombo Device release sam9g45 eng
make

3.2 make the jffs2 file

#cd Android-2.3.1_r1
tar xvjf Generate_jffs2_image.tar.bz2
cd Generate_jffs2_image
./jffs2.sh -b sam9g45 –l 4.3 //This assign the LCD size

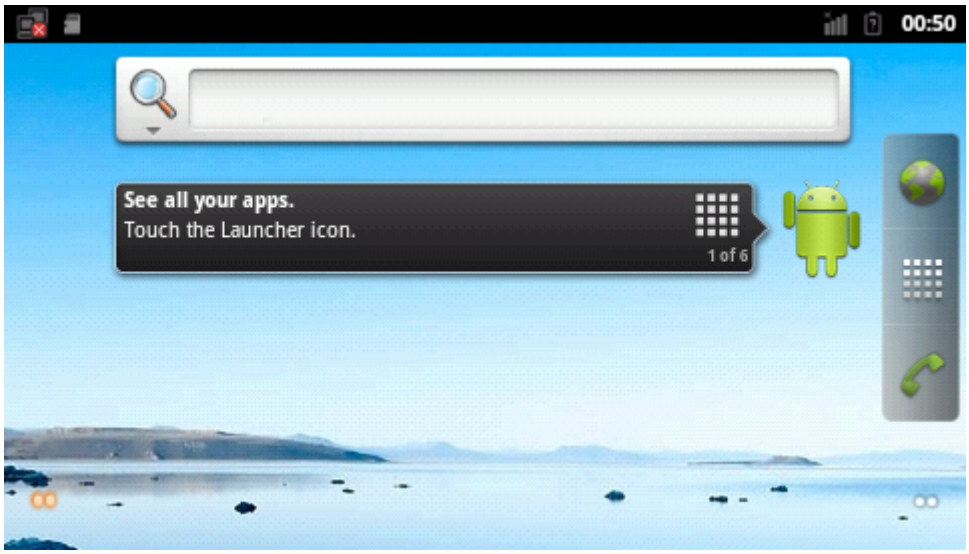
Chapter4 The use of Andriod System

4.1 SD card connect

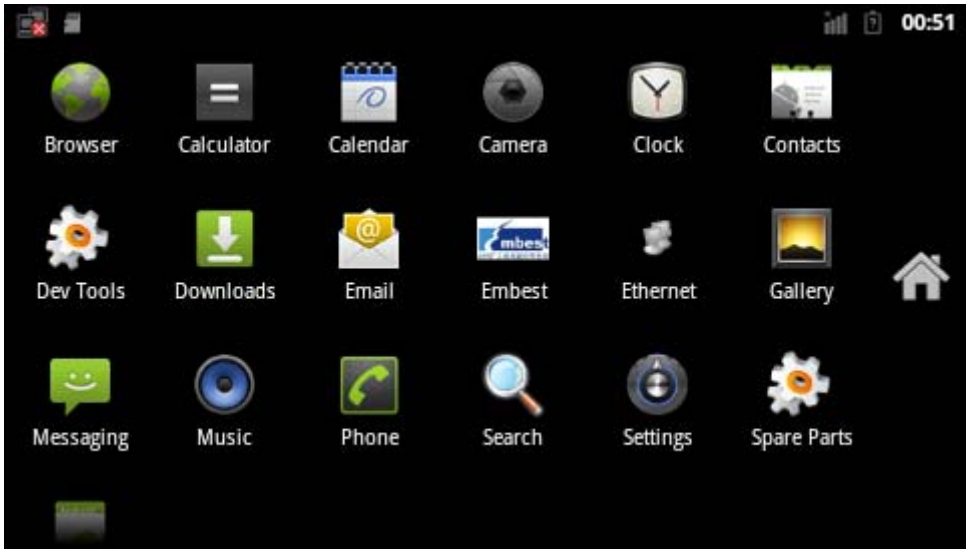
- First,Enter the interface

- When inserting the SD card ,you can see

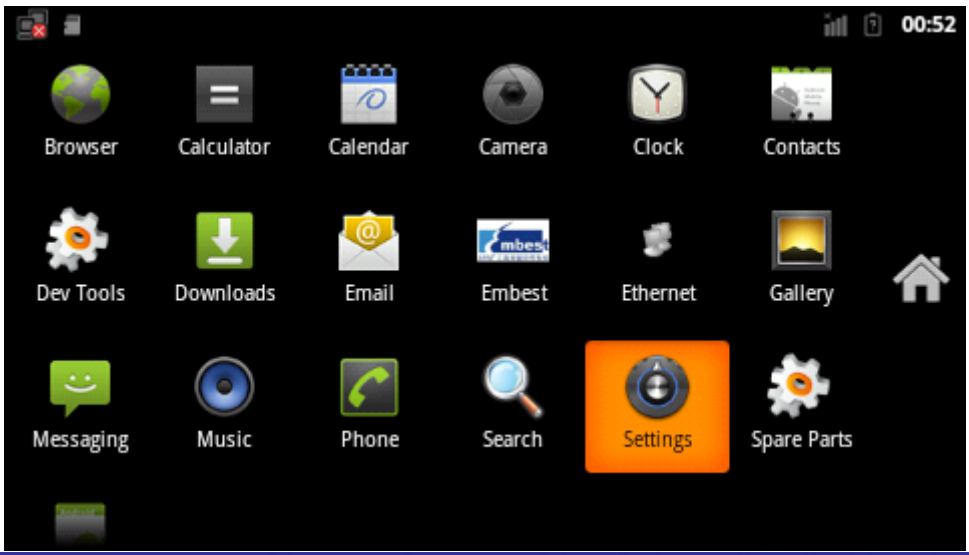
- Press the user1 key， or use the F1 of usb keyboard，you can open the lock interface，Then you can see



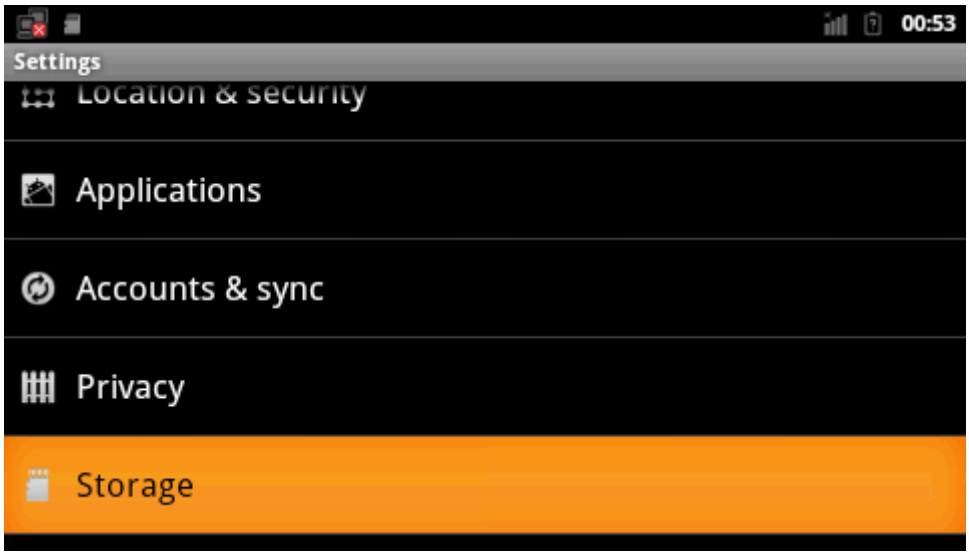
➢ Press  sign，you can see the interface



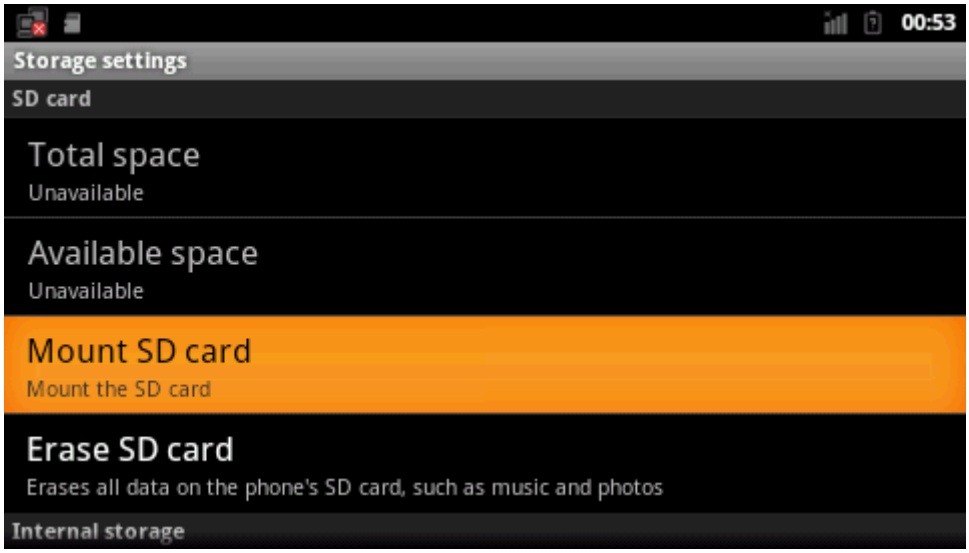
➢ select “setting” selection



- Then, select the “Storage” selection



- select “mount SD card”



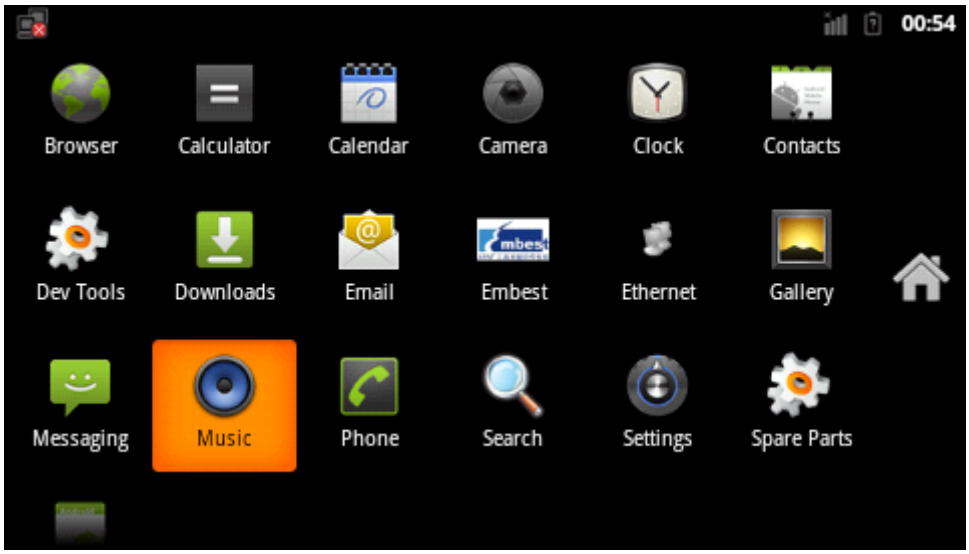
- After mounting successfully，you can use the SD card

4.2 the use of USB keyboard

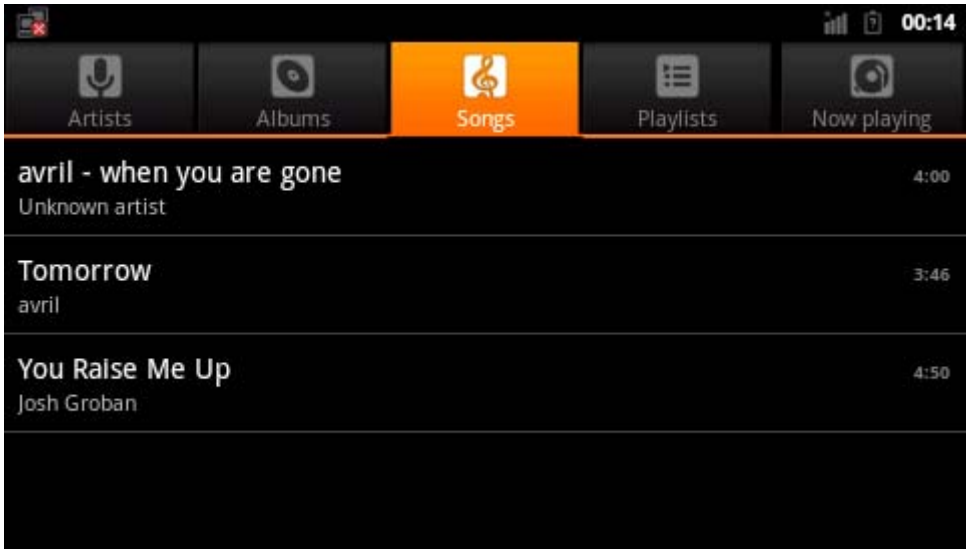
After inserting the USB keyboard to the Host port ,you can use it。

4.3 Audio test

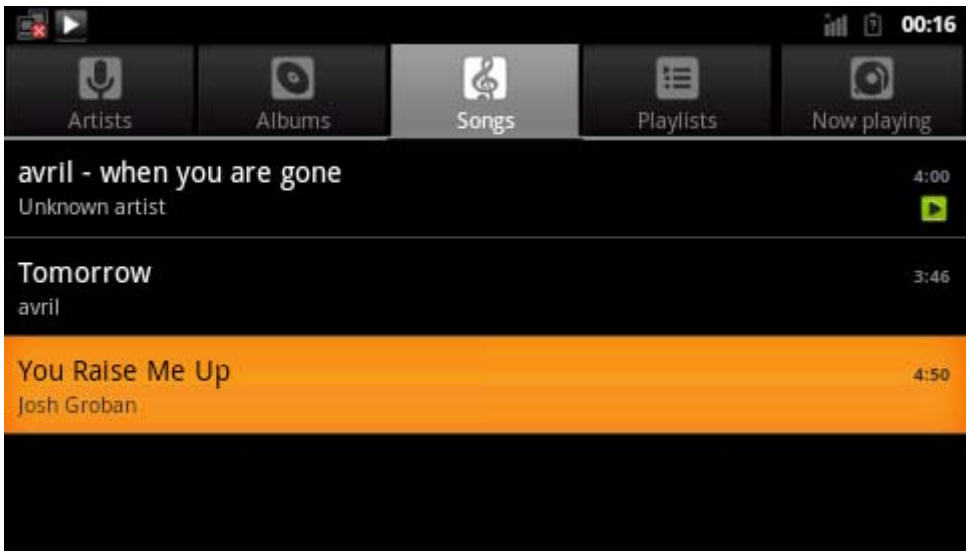
- Enter “music” window interface



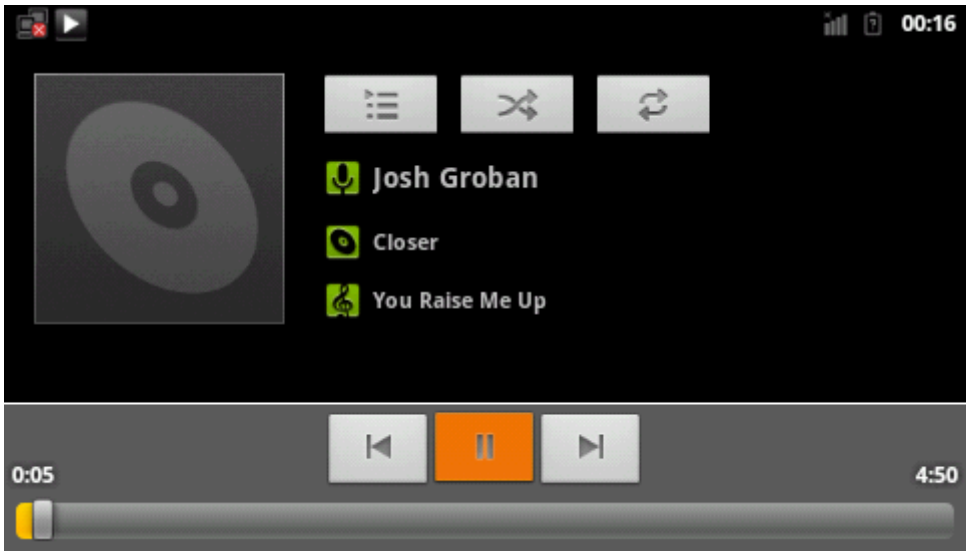
➢ Then you can see the selection，select the“songs”,you can see the songs



➢ Select the song and play



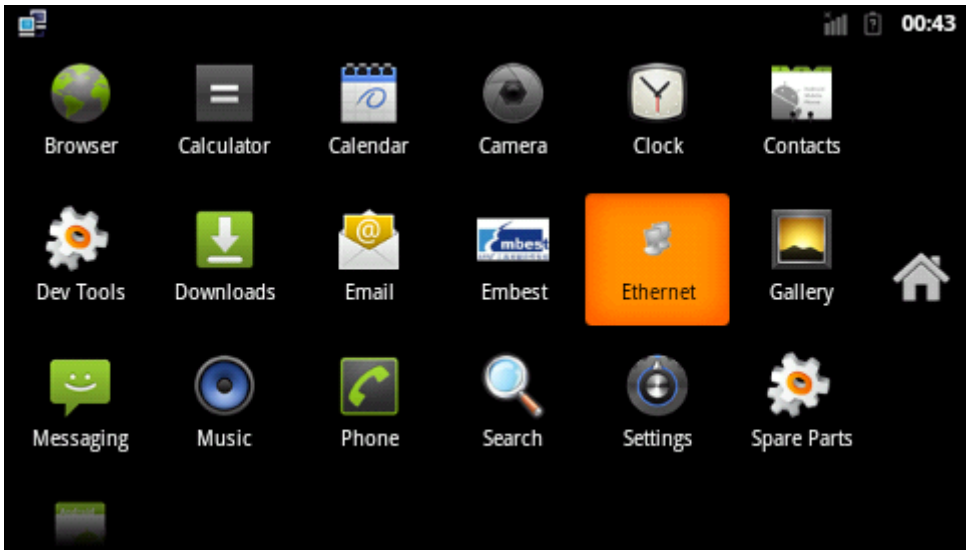
➢ You can see the playing interface as follows



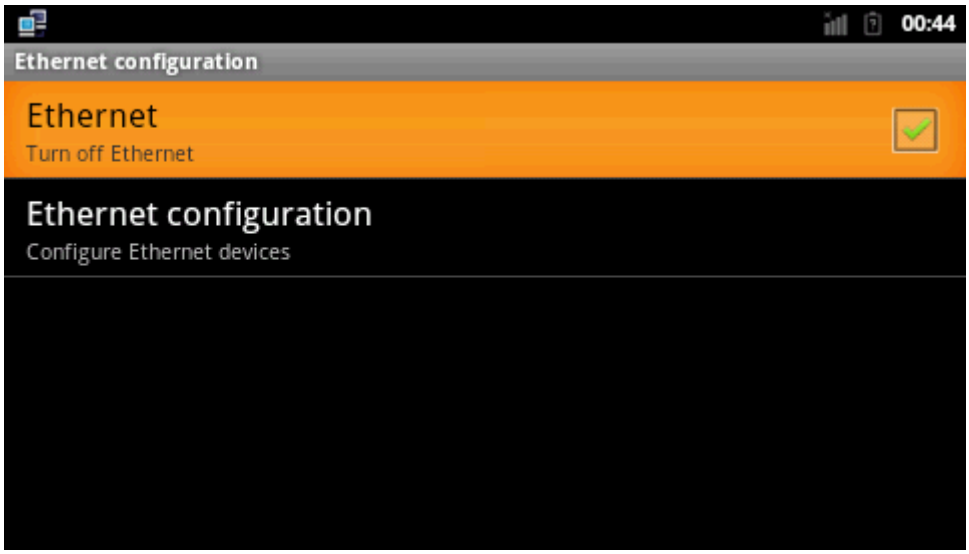
4.4the Ethernet test

Notice：you must first use the network wire connect the board to the router

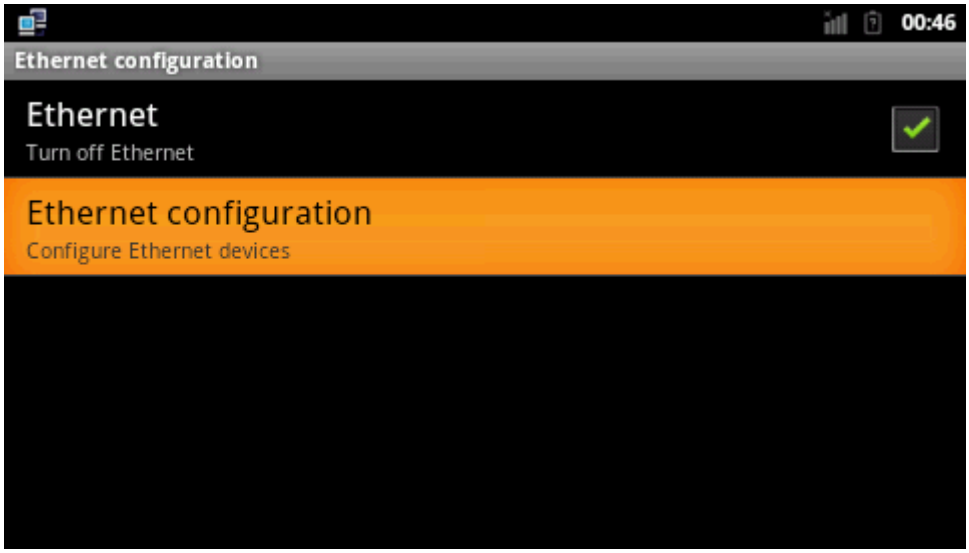
➢ Enter the interface，select the “Ethenet” window



➢ Open the Ethernet



- Configure the Ethernet



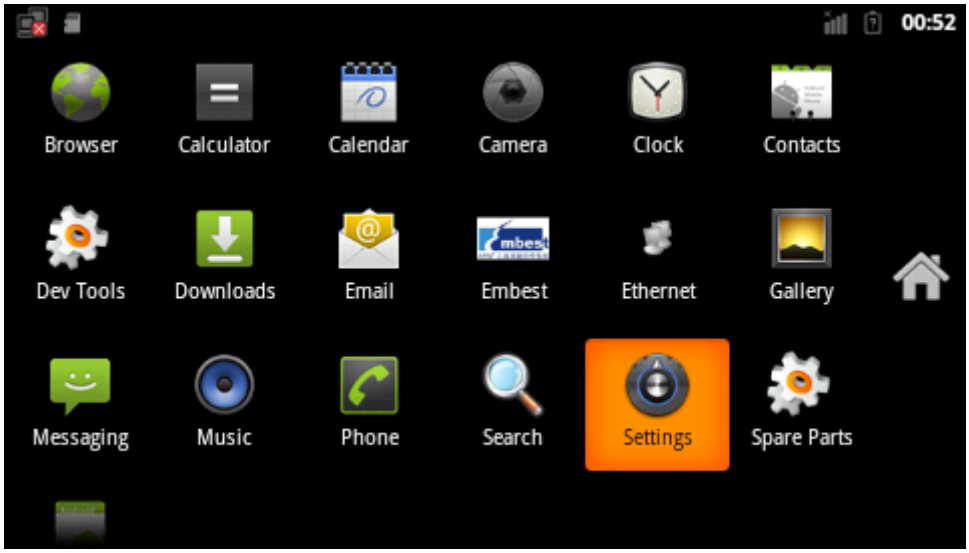
You should configure the IP address、Mask、DNS server、and default gate.

- After configuring successfully，open the browser，input：www.baidu.com

4.5 WIFi test

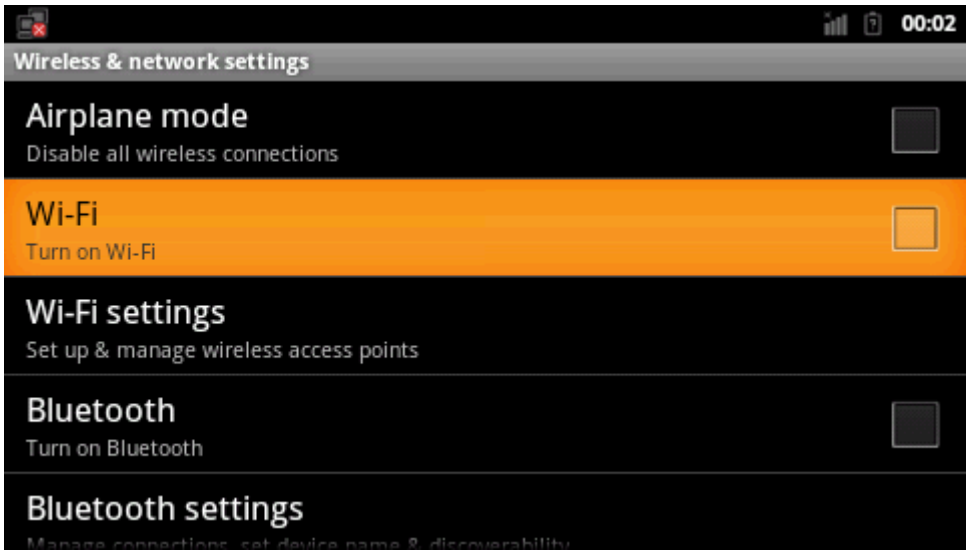
Notice：insert the wifi（only support rt2070 and rt3070）to the usb Host interface

- Firstly,Enter the “setting”interface

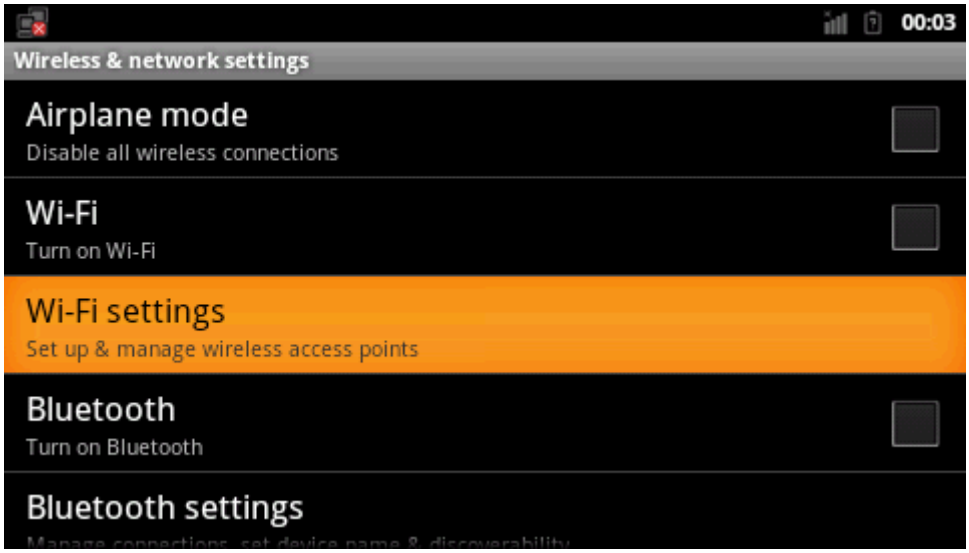


- Use the wireless configure

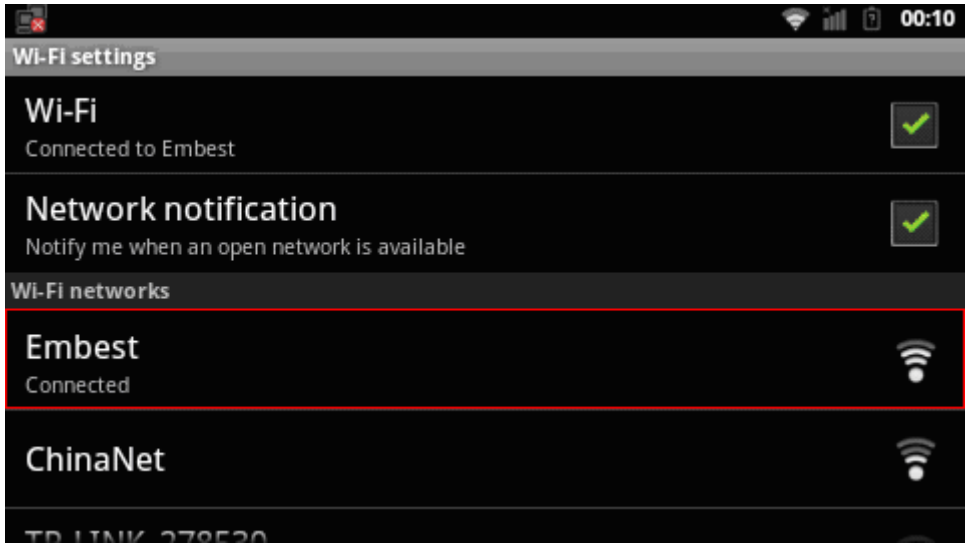
- Open the wifi



- Configure the wifi



- Select the appropriate Internent，here we select the Embest



- After finishing the configure，open the browser and input：www.baidu.com

Wifi tests successfully.