



CUBIEBOARD
<http://cubieboard.org>

USB-UART Cable Introduction

Apply to all type of Cubieboard

Website: <http://cubieboard.org/>
Support: support@cubitech.com



Version	Author	Modification	Check
V-0.1-20150324	Payne	Init version	Aaron.K



Table of Contents

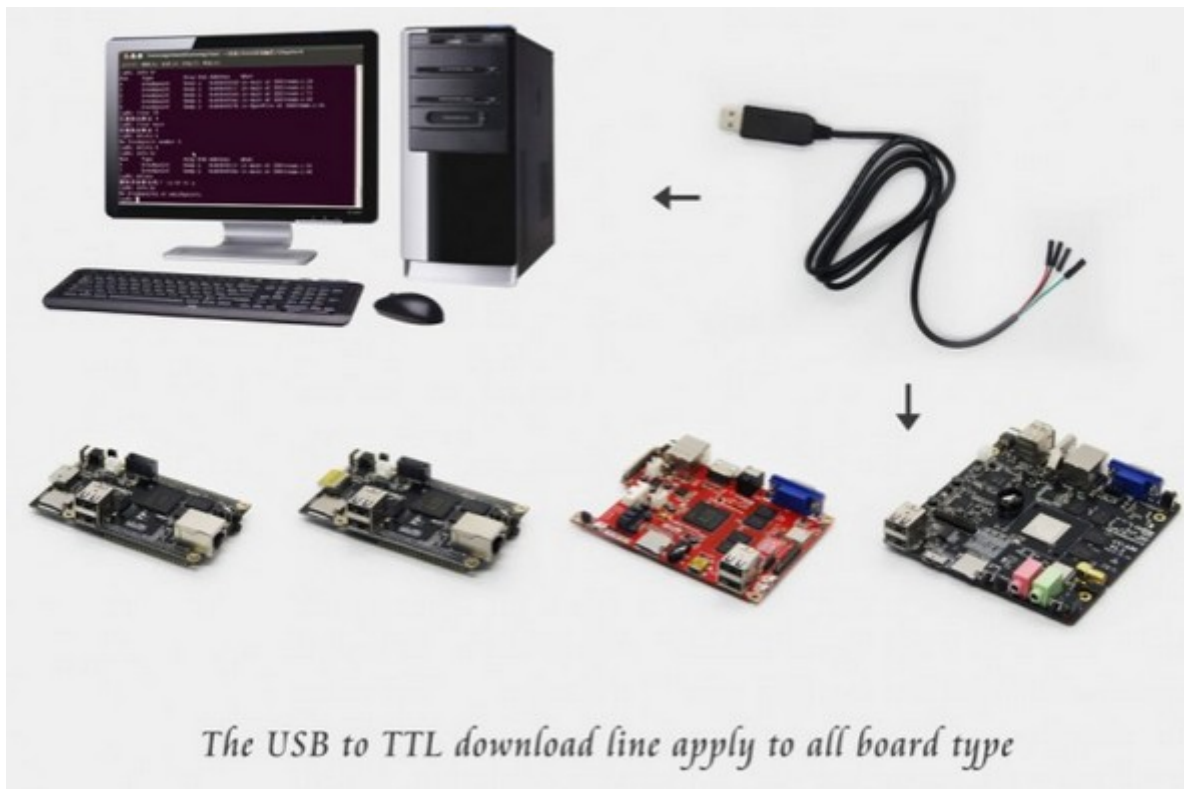
1. USB-UART Cable Introduction	4
2. The experiment equipment	4
3. Hardware connection	5
4. The application platform	5
4.1.Windows.....	5
4.1.1. Set up debugging environment.....	6
4.1.2. Two ways.....	6
4.2. Ubuntu	8
4.2.1. Use the minicom.....	8
5. Log in serial consol.....	11

1. USB-UART Cable Introduction

USB - UART Cable, called USB serial port that is a very common debugging tools .The tool can redirect a serial console to your PC and you can use any command. The terminal can obtain lots of printed information, so that can easily monitoring and debug your Cubieboards . This document introduces to use Cubietech USB - UART Cable which connect Cubieboard development board of debugging .Mainly introduce how to use the USB - UART Cable debugging Cubieboard under Windows and Ubuntu.

2. The experiment equipment

- 1) PC
- 2) Cubieboard with installed system
- 3) USB-UART Cable



3. Hardware connection

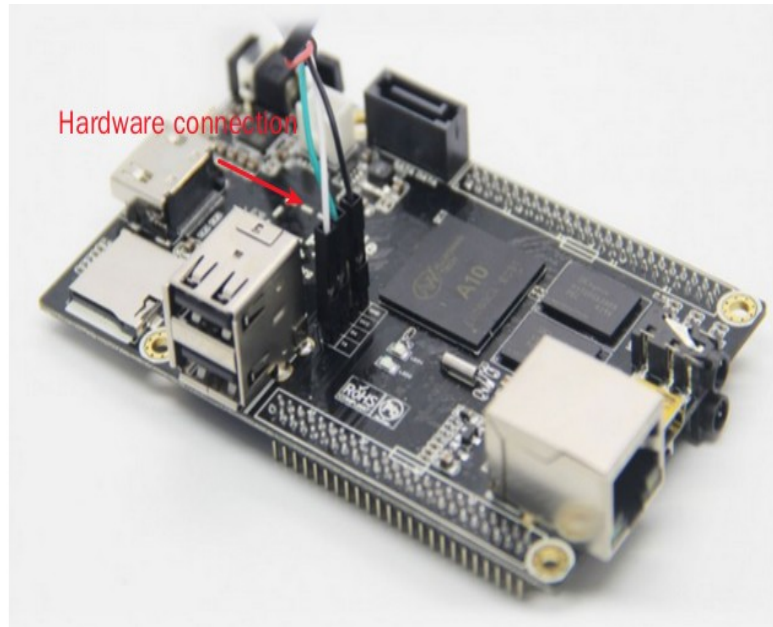
1) Use USB-UART Cable connected to the development board UART debugging interface,for example:

black — GND

red — Don't connect it

green — RX

white — TX



4. The application platform

The serial debugging of Cubieboard development board can use in Windows and Linux platform, we can use Linux Ubuntu system and the Windows system using USB - UART Cable debugging Cubieboard.

4.1. Windows

We can use the relevant software to connect to the Cubieboard terminal to complete serial debugging under Windows , this is two kinds of software are introduced : putty and SecureCRT.

4.1.1. Set up debugging environment

Driver installation

Installed USB serial port driver (HL2303) in PC, connect to the PC with USB - UART Cable. The driver and software under the attachment (<http://dl.cubieboard.org/tools/Usb-Uart-Cable/>).

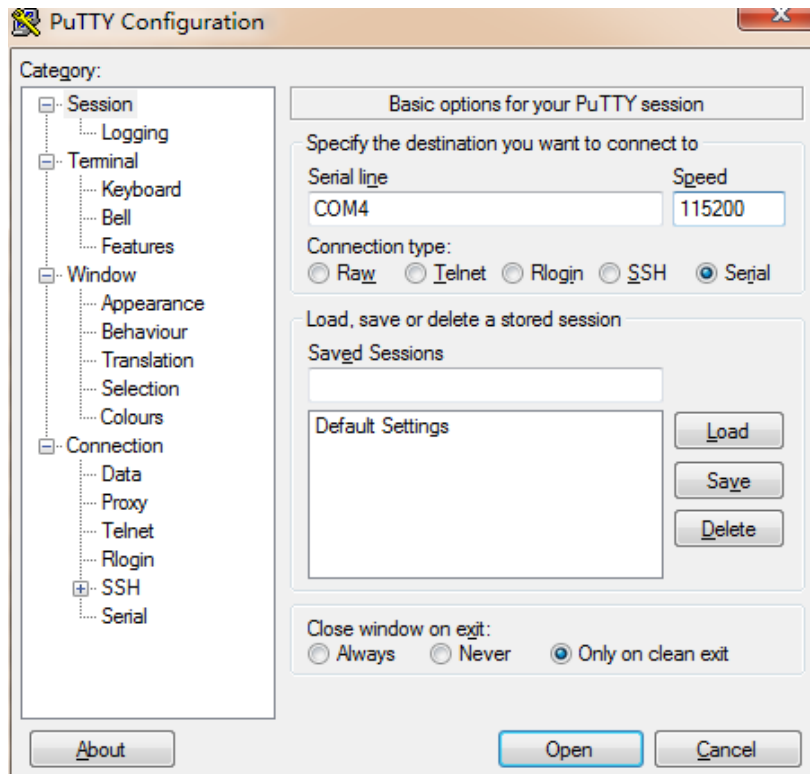
Right click computer choose management \ device manager port, check your PC using the port(according to their actual port number). The port number will be used in behind.

4.1.2. Two ways

Here are two kinds of methods, you can choose one.

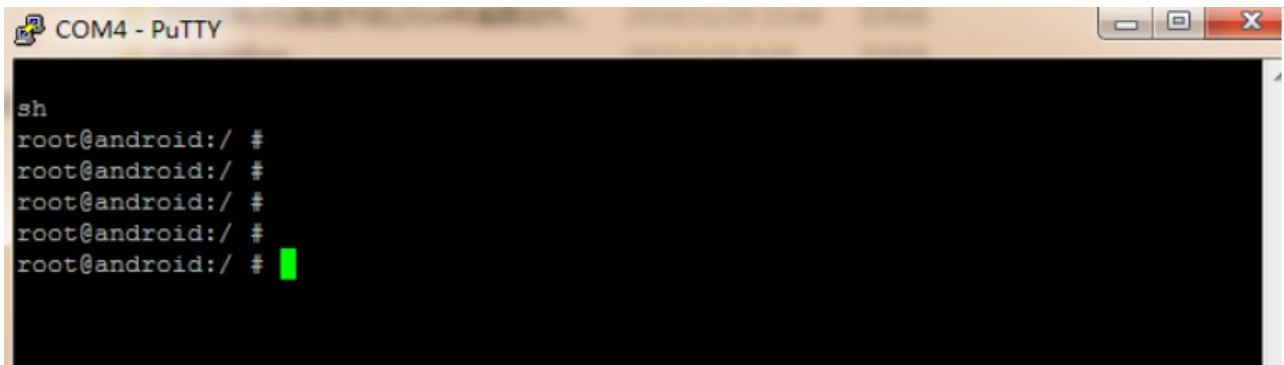
1) Use the putty

Download putty (see appendix for installation package) and run it.



Select the Connection type for “Serial”, Serial line to select the port number above, Speed enter “115200”. Click on the "open" to open the serial port debugging terminal (you can input “sh” entered into the system).

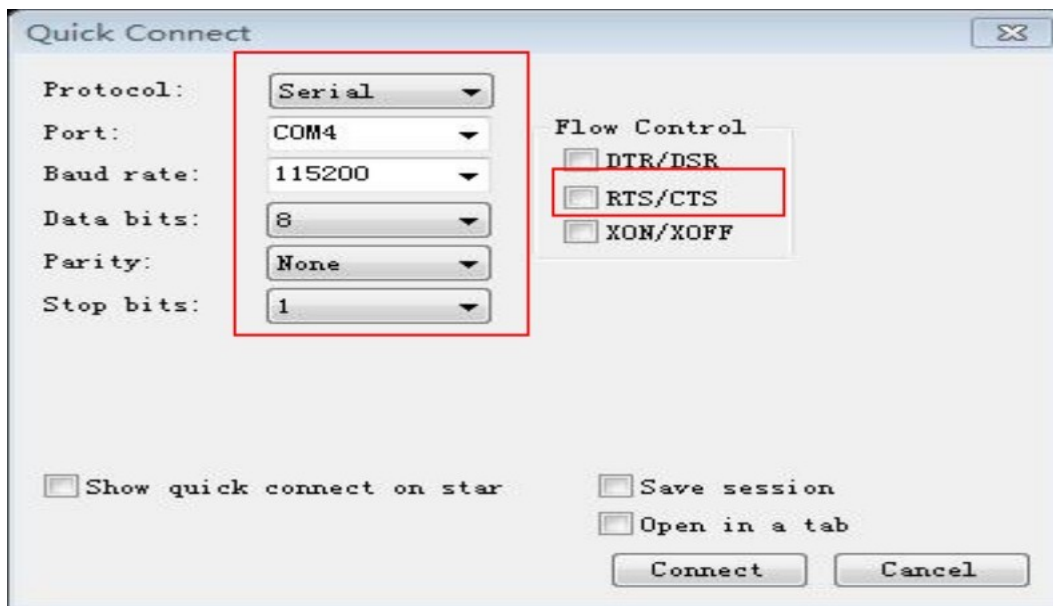
As follow :



Shut down using the command : `reboot -p`. **Pay attention to** , many orders are in busybox , such as “vi” .Please use the command : “`busybox vi`” and you can input “`busybox`” check all the command for busybox support.
As same as the Linux system, linux shut down using the command: ” `poweroff`” .

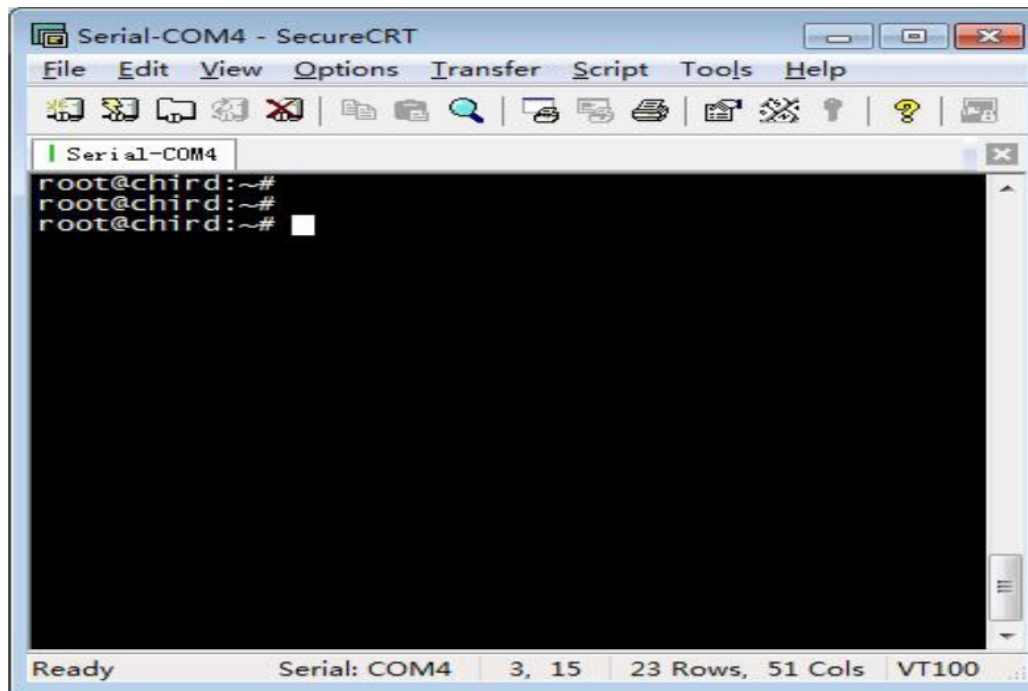
2) Use the SecureCRT

Download SecureCRT (see appendix for installation package) , install and register .Then runing to set the connection parameters, as shown in the figure below:



Click on the Connect, connect to the Linux serial port terminal. If no response, press the enter key several times , look to whether have a response.

As shown in the figure below:



Now, Cubieboard debugging environment is set up. You can do what you do.

4.2. Ubuntu

You can use minicom debugging under the Ubuntu .

4.2.1. Use the minicom

1)Install minicom:

```
$ sudo apt-get install minicom
```

2)Set up minicom:

```
$ sudo minicom -s
```




As follow:

```
le@le: ~  
  
+-----[configuration]-----+  
| Filenames and paths          |  
| File transfer protocols      |  
| Serial port setup           |  
| Modem and dialing           |  
| Screen and keyboard         |  
| Save setup as dfl           |  
| Save setup as..             |  
| Exit                         |  
| Exit from Minicom           |  
+-----+
```

Choose the third line “erial port setup”S, press enter

```
le@le: ~  
  
+-----[configuration]-----+  
| Filenames and paths          |  
| File transfer protocols      |  
| Serial port setup           |  
| Modem and dialing           |  
| Screen and keyboard         |  
| Save setup as dfl           |  
| Save setup as..             |  
| Exit                         |  
| Exit from Minicom           |  
+-----+
```

Modify the configuration as shown below:

```
le@le: ~  
  
+-----+  
| A -   Serial Device       : /dev/ttyUSB0  
| B - Lockfile Location    : /var/lock  
| C -   Callin Program     :  
| D -   Callout Program    :  
| E -   Bps/Par/Bits       : 115200 8N1  
| F - Hardware Flow Control : No  
| G - Software Flow Control : No  
|  
| Change which setting? |  
+-----+  
| Screen and keyboard |  
| Save setup as dfl   |  
| Save setup as..    |  
| Exit                |  
| Exit from Minicom  |  
+-----+
```

Press A to enter Serial Device options ,will be changed to/dev/ttyUSB0, after enter the F , then press enter , Then press enter to return to this interface ,Select the sixth row”Save setup as dfl” .

```
le@le: ~  
  
+-----[configuration]-----+  
| Filenames and paths |  
| File transfer protocols  
| Serial port setup  
| Modem and dialing  
| Screen and keyboard  
| Save setup as dfl  
| Save setup as..    |  
| Exit                |  
| Exit from Minicom  |  
+-----+
```

Then select the Exit, press enter to Exit.

According to the USB - UART Cable connection mode and connect to CubieBoard ,power on and open computer terminal then input:

\$ sudo minicom

Enter into the terminal Cubieboard systems:

```
le@le: ~
Welcome to minicom 2.5

OPTIONS: I18n
Compiled on May  2 2011, 10:05:24.
Port /dev/ttyUSB0

Press CTRL-A Z for help on special keys

sh: ♦♦♦♦♦♦: not found
127|root@android:/ # AT S7=45 S0=0 L1 V1 X4 &c1 E1 Q0
[1] 19265
sh: c1: not found
sh: AT: not found
127|root@android:/ #
[1] + Done (127)          AT S7=45 S0=0 L1 V1 X4
127|root@android:/ #
127|root@android:/ # cd
root@android:/data #
root@android:/data #
```

5. Log in serial consol

The Android system can enter to the serial console requires input \$sh.

Linux system need to use the account and password ,Cubieboard firmware password below :

-Linaro Ubuntu : linaro/linaro

-Debian : cubie/cubieboard root/cubieboard