CUBIEBOARD
http://cubieboard.org

Cubieboards Wcdma Zte-mf210 guide

USB 3G Module

Website:http://cubieboard.org/
Support: support@cubietech.com

Version	Author	Modification	Check
V-1.0	Aaron	Init version	Linux

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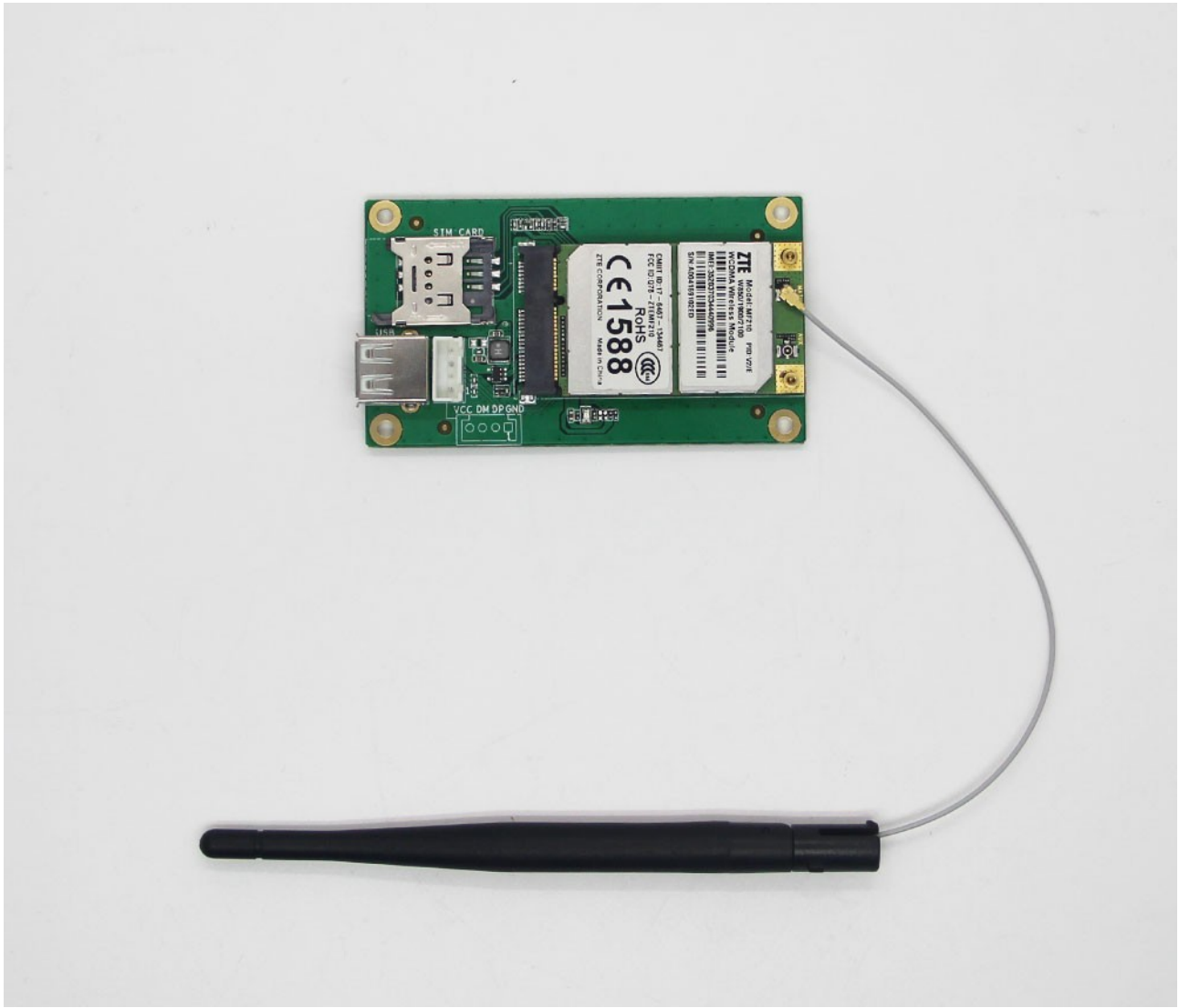
1. Overview

1.1. About WCDMA Zte-Mf210

MF210 is designed to provide customers with global network coverage on the connectivity of UMTS. It delivers 5.76Mbp-up and 7.2Mbps-down data rates on HSPA networks and can also be fully backward compatible with existing EDGE and GSM/GPRS networks.



1.2. Purpose

This is a guide of wcdma zte-mf210 usb 3g module for Cubieboard users , all Cubieboards can support this module,Cubieboard1,Cubieboard2,Cubieboard3,Cubieboard4 .

2. Hardware List

- Zte-mf210 x1 ,Usb cable ,Antenna
- Zte-mf210 Baseboard x1
- Cubieboards ,Power, Usb uart cable
- Hdmi monitor ,Keyboard&Mouse

3. Software List

- Linaro-server-v1.2 customized for Zte-MF210
  - USB driver for this module
  - Point-to-Point Protocol Support
- Host PC for debugging ,Ubuntu suggested

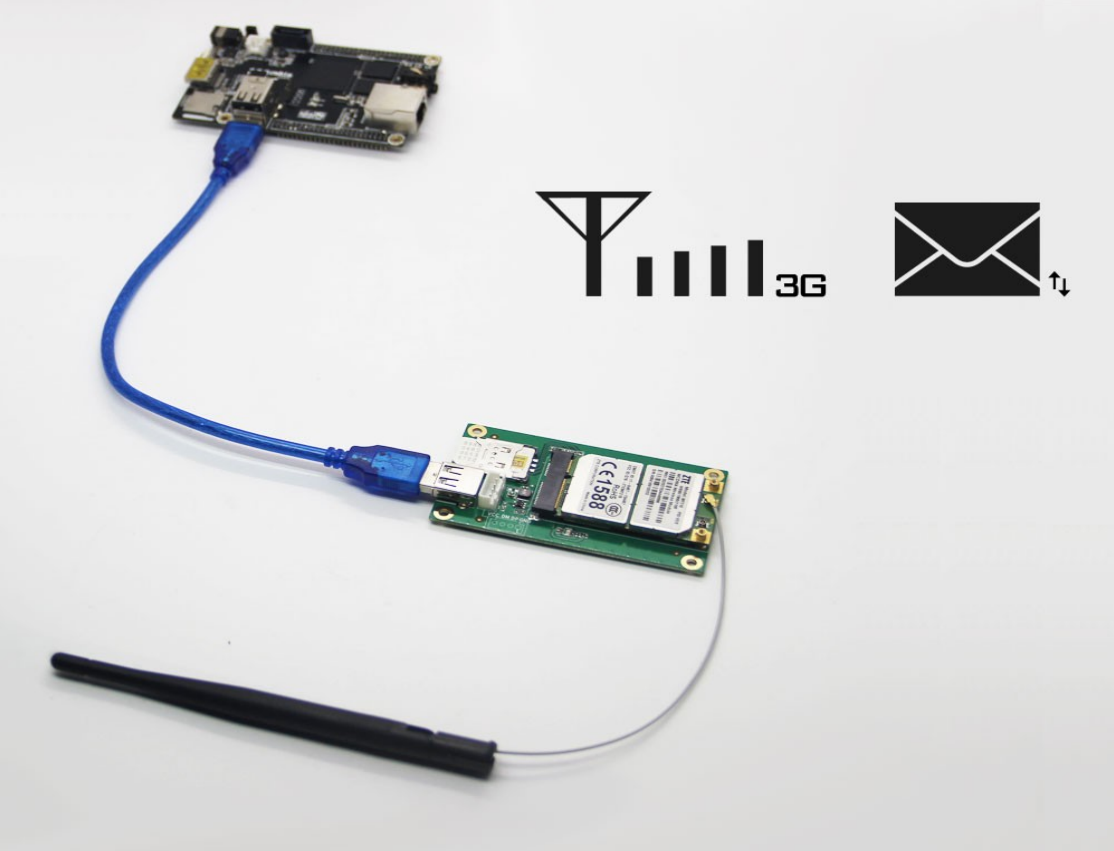
4. Get start with zte-mf210

4.1. Make bootable Micro-sd Card

You can fllow this guide to write above os into a micro-sd card :

http://dl.cubieboard.org/model/commom/docs/Linux-card-installation.pdf

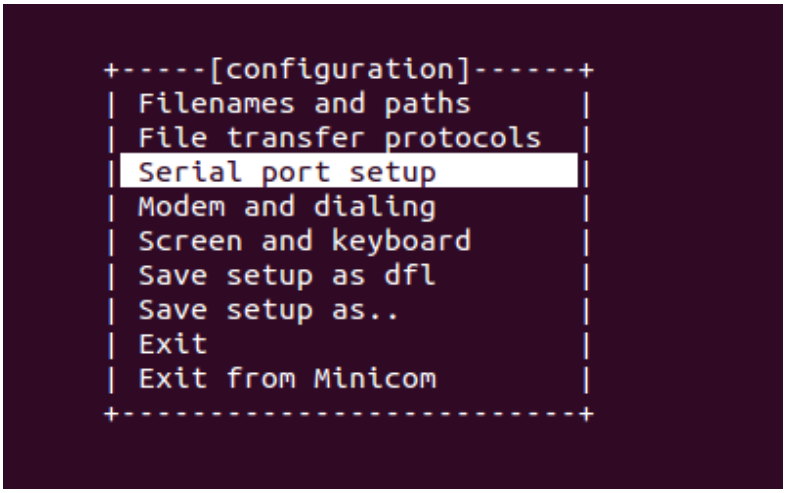
4.2. Power On



4.3. Minicom Setting

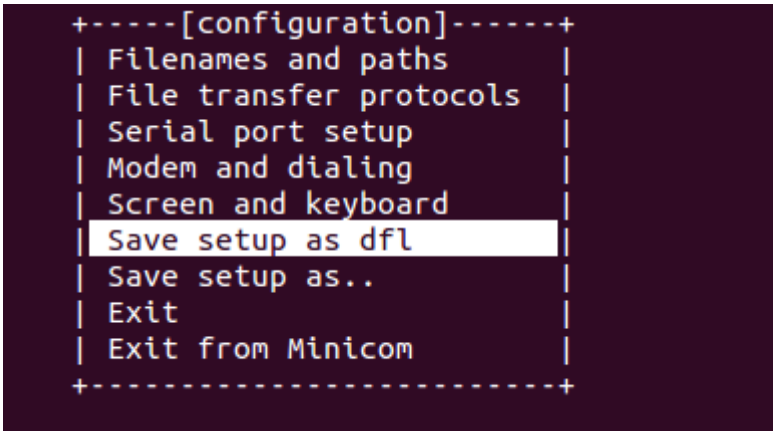
Minicom tool have pre-installed for linaro server ,but you need set debug port for this module.

$ minicom -s

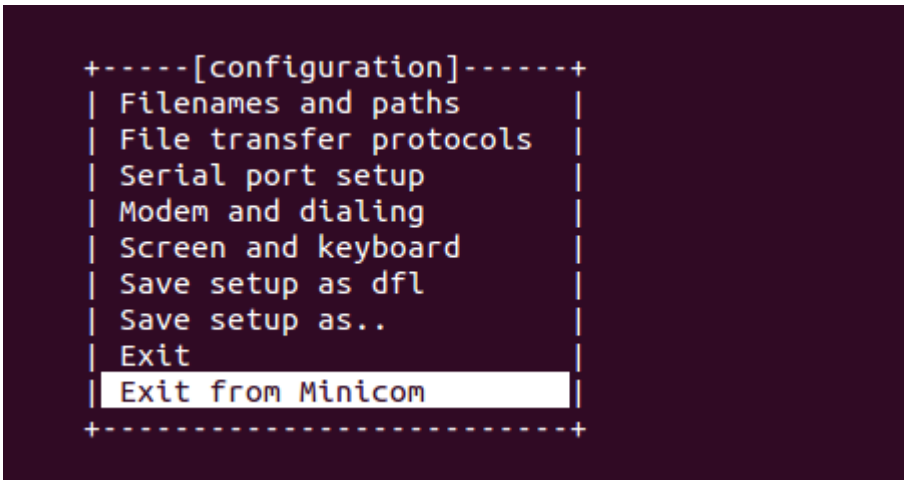


4.3.1.Setting Serial Port as ttyUSB1

4.3.2.Save setting



4.3.3.Exit Minicom



5. Functions Test

5.1. Signal test

at

OK

at+gmr

mf210v2

OK

at

OK

at+cpin?

+CPIN: READY

OK

at

OK

at+creg?

+CREG: 0,1

OK

at

OK

at+cgreg?

+CGREG: 0,1

OK

at

OK

at+csq

+CSQ: 14,99

OK

5.2. Call

$ minicom

$ AT

OK

$ ATD13800138000;<CR> // <CR> is “Enter”

OK

RINGBACK

...

5.3. Message

$ minicom

$ AT

OK

$ AT+CMGF=1 // Setting as text mode

OK

$ AT+cmgs="13800138000"

>

$ ABC <crtl/z> // Sent “ABC” by ”Ctrl+z”

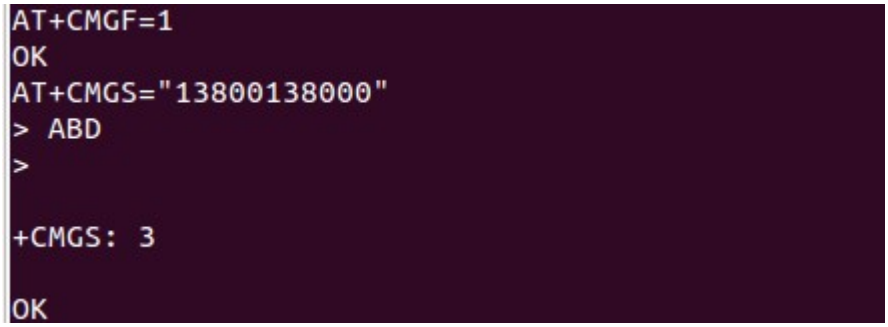
> ABC

+CMGS: 2

OK

$ AT+CMGF=0 // Resetting as PDU mode

OK



5.4. Internet

5.4.1.Updating DNS

$ ps -A | grep pppd

2421 ttyUSB2 00:00:00 pppd

$ kill 2421 // kill pppd service on pid 2421

Dial DNS negotiation

$ pppd call zte-mf210

Negotiation results in the last few lines depends on your local network operators.

primary DNS address 210.21.196.6

secondary DNS address 221.5.88.88

Updating your DNS

$ vim.tiny /etc/resolv.conf

Clear old setting ,add :

nameserver 210.21.196.6

nameserver 221.5.88.88

Notice: The Ethernet will reset the DNS,so please update DNS after you using Ethernet

5.4.2. Recall and check ip

After updating DNS ,you can reboot system to recall ,check ip :

```
ppp0      Link encap:Point-to-Point Protocol
          inet addr:10.78.85.87  P-t-P:10.64.64.64  Mask:255.255.255.255
          UP POINTOPOINT RUNNING NOARP MULTICAST  MTU:1500  Metric:1
          RX packets:13 errors:0 dropped:0 overruns:0 frame:0
          TX packets:14 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:3
          RX bytes:712 (712.0 B)  TX bytes:610 (610.0 B)
```

5.4.3.Test Internet

$ ping 163.com

```
root@cubietruck:~#
root@cubietruck:~# ping 163.com
PING 163.com (123.58.180.7) 56(84) bytes of data.
64 bytes from 123.58.180.7: icmp_seq=1 ttl=54 time=68.4 ms
64 bytes from 123.58.180.7: icmp_seq=2 ttl=54 time=128 ms
64 bytes from 123.58.180.7: icmp_seq=3 ttl=54 time=67.6 ms
64 bytes from 123.58.180.7: icmp_seq=4 ttl=54 time=86.7 ms
64 bytes from 123.58.180.7: icmp_seq=5 ttl=54 time=85.8 ms
^C
--- 163.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4002ms
rtt min/avg/max/mdev = 67.698/87.352/128.048/21.921 ms
root@cubietruck:~#
```

6. FAQ

6.1. SIM Card support list

-GSM

-WCDMA

6.2. Fail to access internet

-Check your local DNS

- Check if your SIM data service is enabled