



**CUBIEBOARD**  
<http://cubieboard.org>

## Cubieboards Wcdma Zte-mf210 guide

USB 3G Module



Version	Author	Modification	Check
V-1.0	Aaron	Init version	Linux



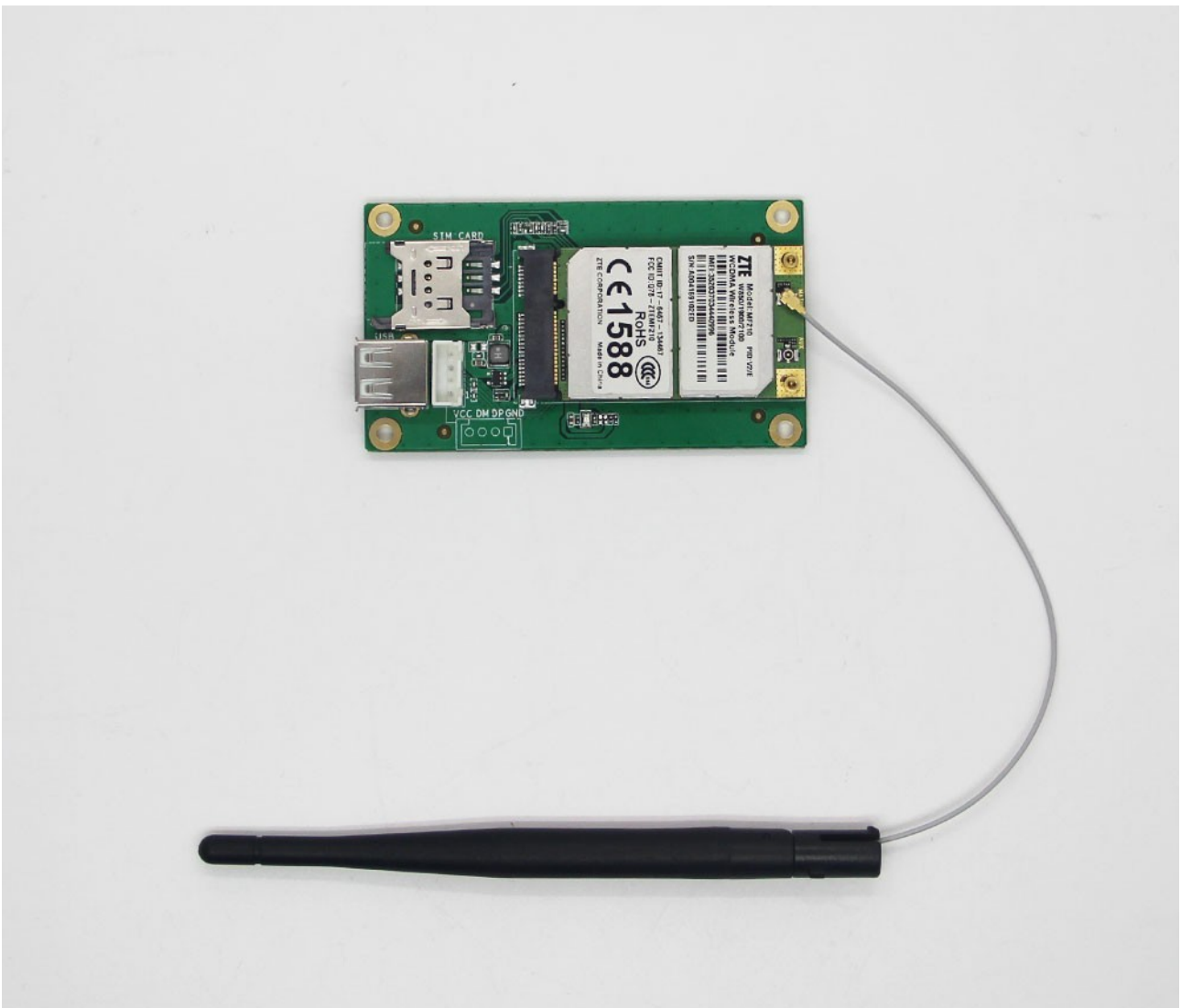
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## 1. Overview

### 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

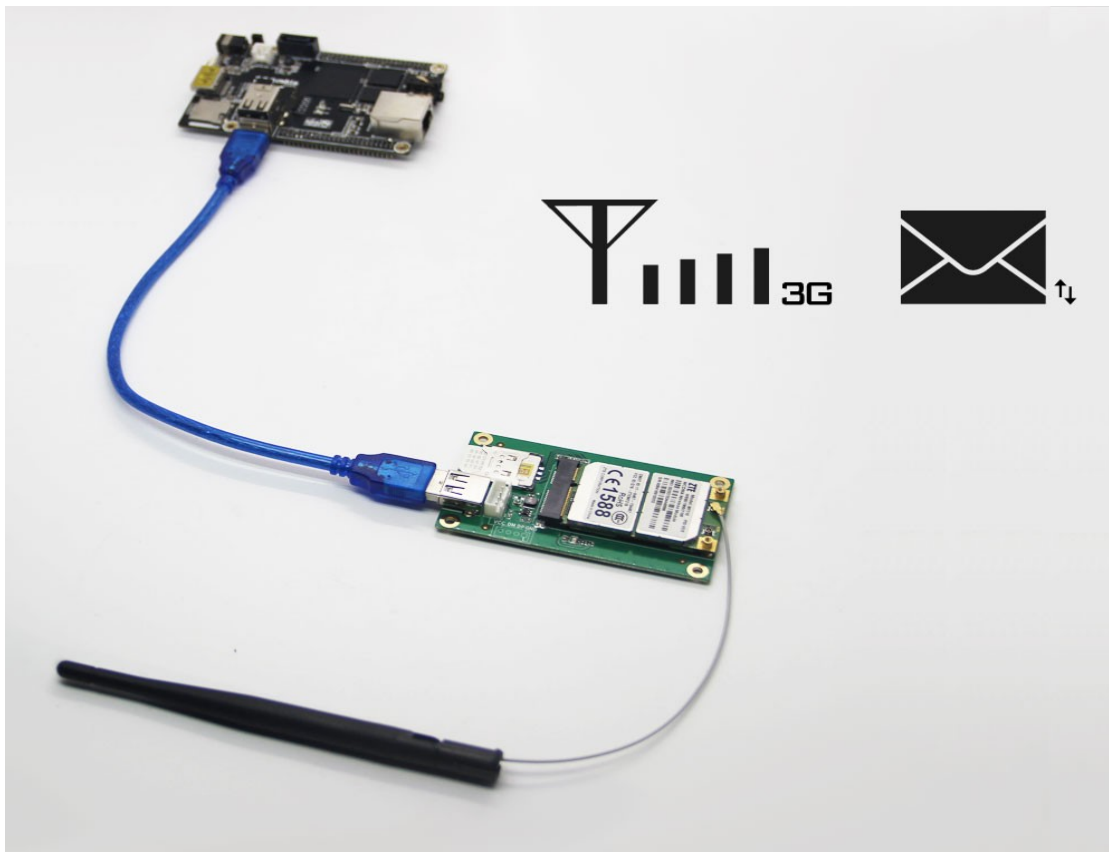
### 4. Get start with zte-mf210

#### 4.1. Make bootable Micro-sd Card

You can follow 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
```

```
+-----[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           |
+-----+
```

#### 4.3.1. Setting Serial Port as ttyUSB1

```
A - Serial Device      : /dev/ttyUSB1
B - Lockfile Location  : /var/lock
C - Callin Program    :
D - Callout Program   :
E - Bps/Par/Bits      : 115200 8N1
F - Hardware Flow Control : Yes
G - Software Flow Control : No

Change which setting?
```







## 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

...

```
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

AT S7=45 S0=0 L1 V1 X4 &c1 E1 Q0
OK
at
OK
ATD13800138000;
OK

RINGBACK

ANSWER
█
```



### 5.3. Message

```
$ minicom
```

```
$ AT
```

```
OK
```

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

```
OK
```

```
$ AT+cmgs="13800138000"
```

```
>
```

```
$ ABC <ctrl/z> // Sent "ABC" by "Ctrl+z"
```

```
> ABC
```

```
+CMGS: 2
```

```
OK
```

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

```
OK
```

```
AT+CMGF=1
OK
AT+CMGS="13800138000"
> ABD
>
+CMGS: 3
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