MC801A 5G Wireless Router
After-sales Service Manual (Level 1)

Version 1.0

ZTE

LEGAL INFORMATION

Revision History

Revision No.	Revision Date	Revision Reason
R1.0	August 24, 2020	First Edition

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Publishing Date: August 24, 2020

Contents

1. Product Summary

1.1 Attention

Before performing any maintenance to the MC801A device, you need to verify that the MC801A is in a secure network.

1.2 Product Overview
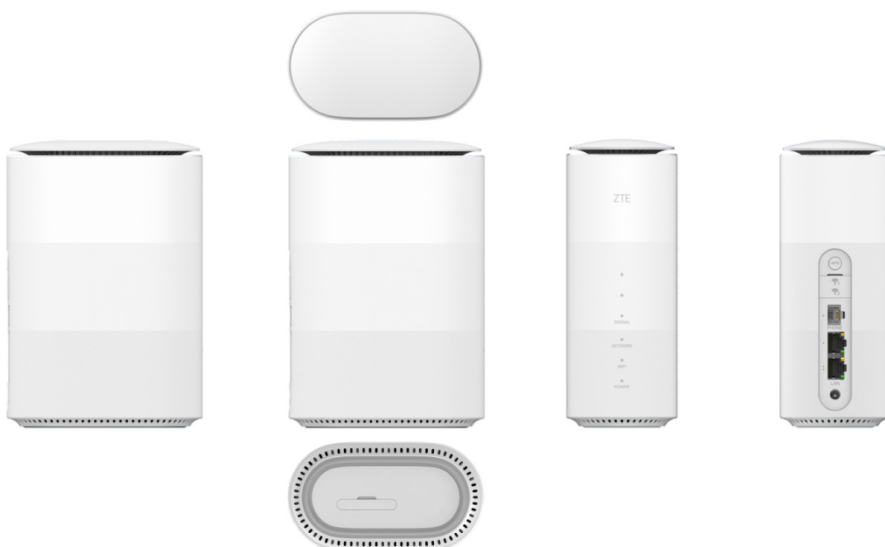
NOTE:

The picture is for reference only. The actual product may be different.

1.3 Standard Configuration

No.	Name	Quantity
1	MC801A 5G router	1
2	LAN cable	1
3	Power adapter	1
4	Quick start guide	1

1.4   Specifications

Category	Parameter	Specification
Physical parameters	Dimensions (Height × Width × Depth)	182 mm × 124 mm × 70 mm
	Weight	About 592 g
	Frequency bands	5G NR: sub 6 n40/41/78 FDD-LTE: B1/3/8/20/28 TDD-LTE: B40/41 (2540~2640 MHz) WCDMA: band 1/8
Technical parameters	Chipsets	SDX55, QCA6391+QCA8337
	Storage	512 MB + 512 MB
	Interfaces	RJ45*2, RJ11*1, USB Type-C*1
	Wi-Fi	802.11 b/g/n/a/ac/ax, 2*2 MIMO for both 2.4 G & 5 G
	Max. connected Wi-Fi clients	30
	Power supply	12 V / 1.5 A

2. Function Test

2.1 NFF Test

Test Flow Chart	Test Item	Test Method and Requirements	Test device
Customer → PASS → Meet basic requirements (NG) → PASS → Confirm failure recurrence (NG) → PASS → Test network connection (NG) → PASS → Test Wi-Fi connection (NG) → PASS → NFF / Faulty machine	(1) Basic requirements	1. The accessories are complete. 2. The anti-dismantle tag is not damaged. 3. The waterproof tag has no color changes. 4. The device is not physically damaged. 5. The device is still under warranty.	None
	(2) Failure recurrence	1. (Optional) Check whether the screen is lit. 2. (Optional) Test the touch screen and confirm it is functional. 3. Test the failures described by the customer, and confirm that the failures do not recur.	Test card
	(3) Network connection test	1. Connect to MC801A through Wi-Fi. 2. Open the web UI of MC801A and confirm the web UI pages can be accessed.	Test card Computer
	(4) Wi-Fi connection test	Use a mobile phone to connect to the Wi-Fi network of MC801A. Check whether the phone can be connected and whether the Internet can be accessed.	Test card Mobile phone
Summary	Perform steps 1 to 4. • If a fault occurs at a step, terminate the test. This terminal is faulty. • If no fault is found until the test is completed, NFF is determined.		

NOTE:

For the test items that are not included in steps 1 to 4, refer to the user manual of MC801A.

2.2 Test Web UI

1. Connect to MC801A by either of the following ways:

    ▶ Connecting through LAN cable

    Connect the **LAN1** port or the **LAN2** port of MC801A to the computer with the LAN cable.

    NOTE:

    You need to set the IP address as **Obtain an IP address automatically**. Or, you need to set the IP address as **192.168.0.x** (x: 2~255) manually.

    ▶ Connecting through Wi-Fi

    a) Enable the Wi-Fi function on your computer, mobile phone or tablet.

    b) Select the Wi-Fi hotspot name of MC801A (SSID).

    c) Type the Wi-Fi password to connect to MC801A.

    NOTE:

    The default Wi-Fi SSID and password can be found on the bottom of MC801A.

2. Open the web UI.

    a) Open the browser and visit the address **192.168.0.1** on the client to open the web UI.

    b) Type the management password to log in to the web UI.

    NOTE:

    Check the default management password on the bottom of the device.

3. Confirm each function is available, including Internet connection, settings, etc.

    NOTE:

    A valid nano-SIM card is needed to access the Internet.

3. Software Download

3.1 Preparations

- USB Type-C cable
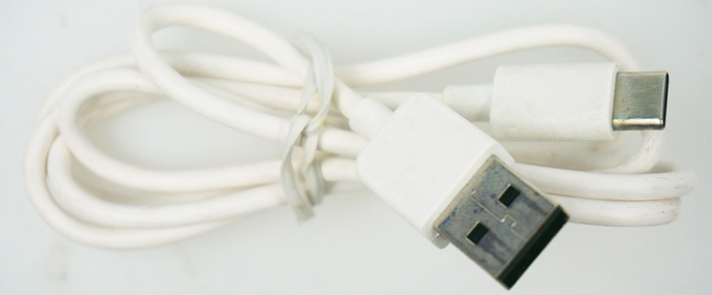
- Service software

Type	Name/Version	Description
Driver	**AS_PCDrvSetupV1.0.0B03**	The software versions are for reference only. Please use the latest versions for the software download.
Download platform	**ZTSUFV1.0.1B10**	
Plug-in	**SUF_DL_MC801AV1.00.00**	
Software	**MC801AV1.0.0B01**	

3.2 Install Driver

1. Unzip the driver package **AS_PCDrvSetupV1.0.0B03.zip**.
2. Find and double-click **ZTEDrvSetup.exe** to start the installation.
3. Wait until the installation is completed and click **Finish**.
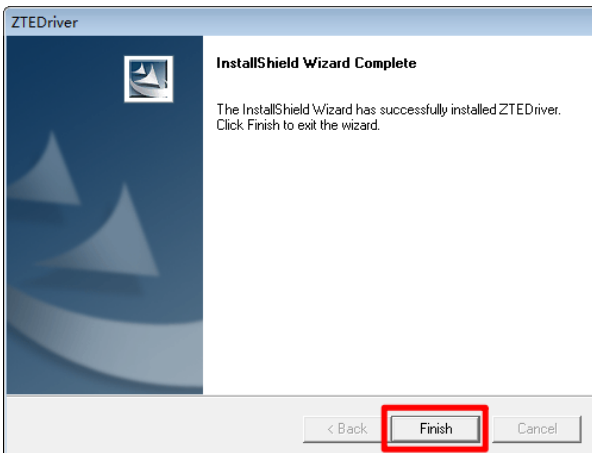
3.3 Install Download Platform

1. Unzip the package of the download platform and double-click the program icon **Setup.exe** to start the installation.
2. Select the installation language and click **OK**.
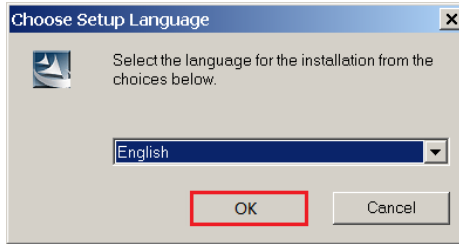
3. Click **Next**.
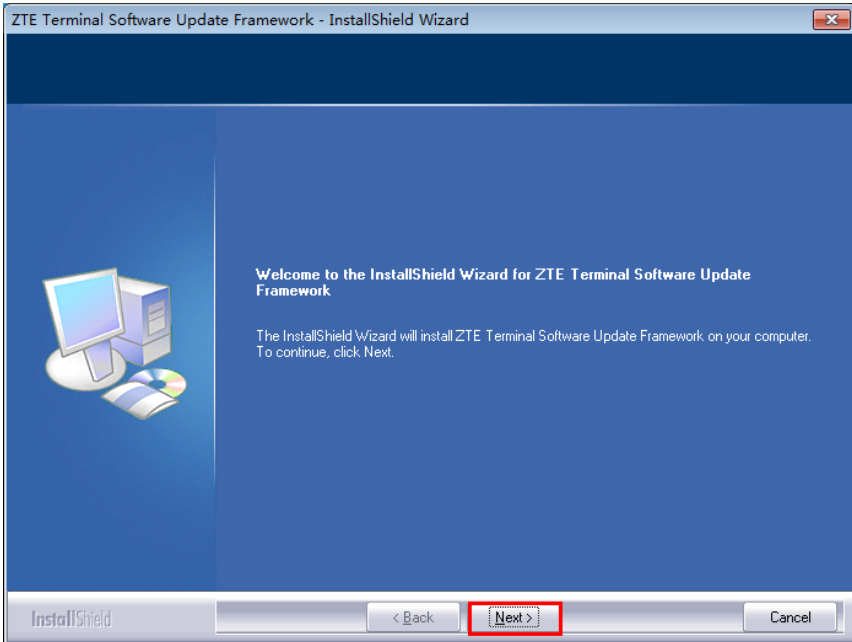
4. Accept the terms of the license agreement and click **Next**.
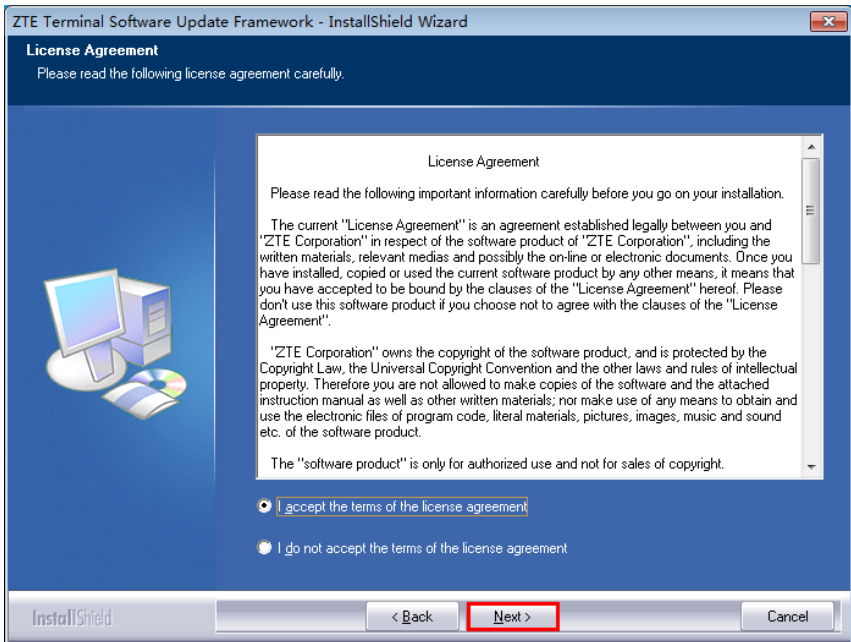
5. Type the User Name and Company Name and click **Next**.
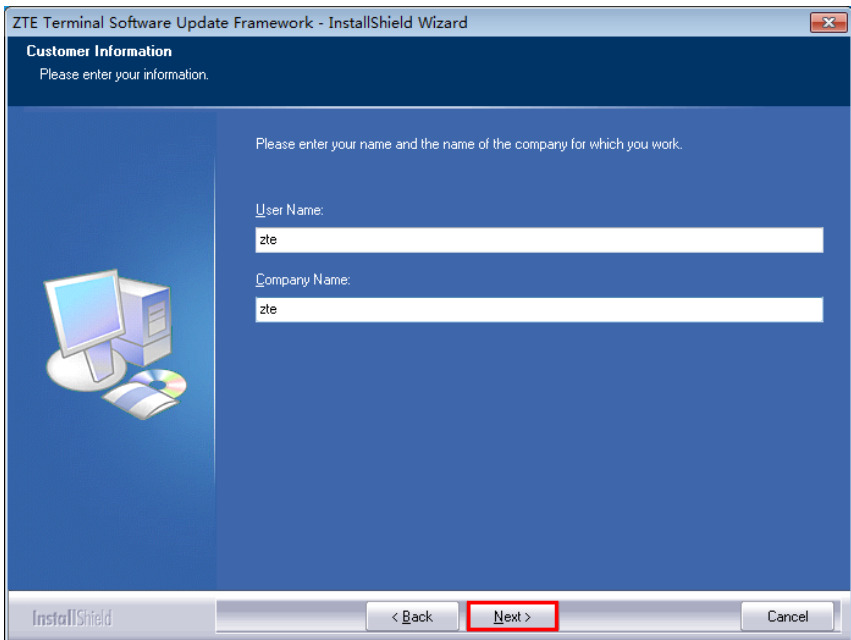
6. Select the installation directory and click **Next**.
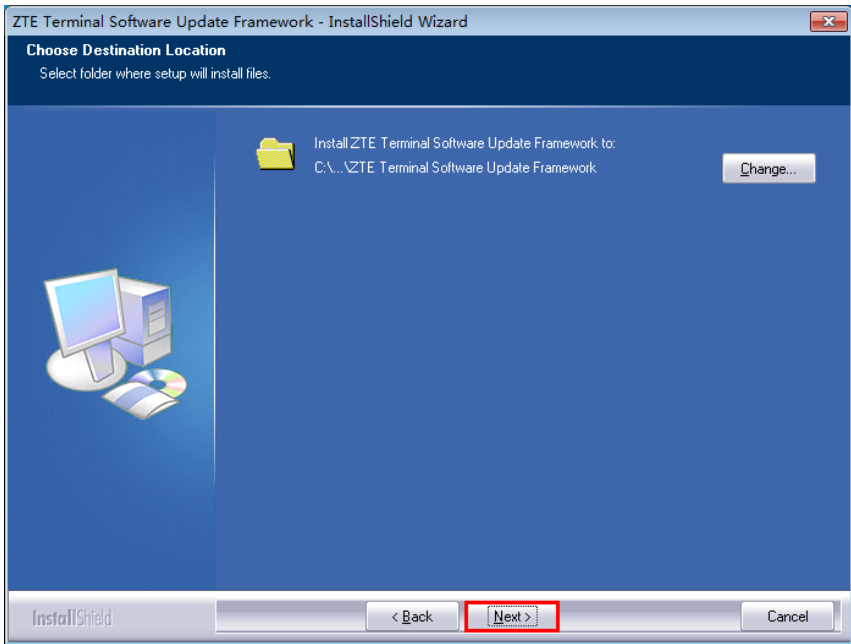
7. Click **Install**.
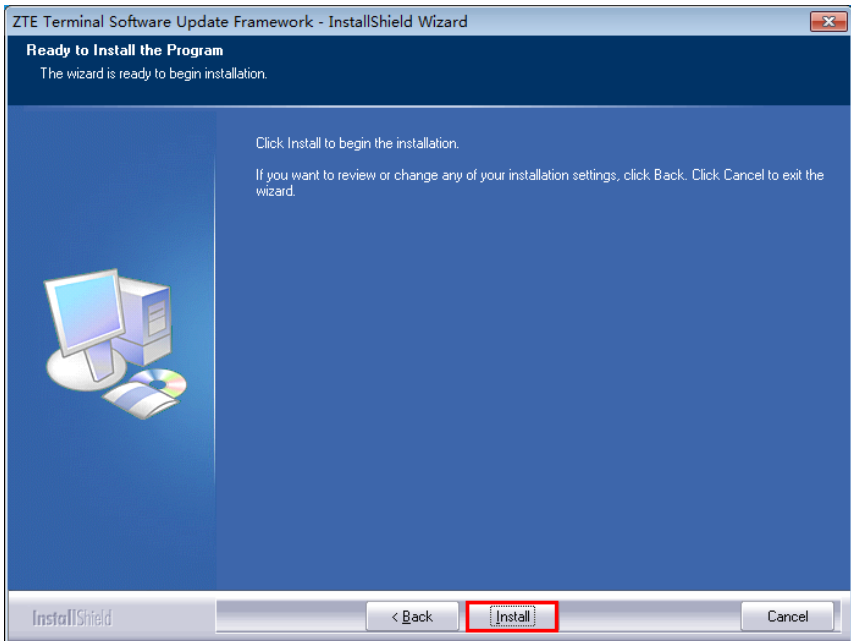
8. When the installation is completed, click **Finish**.
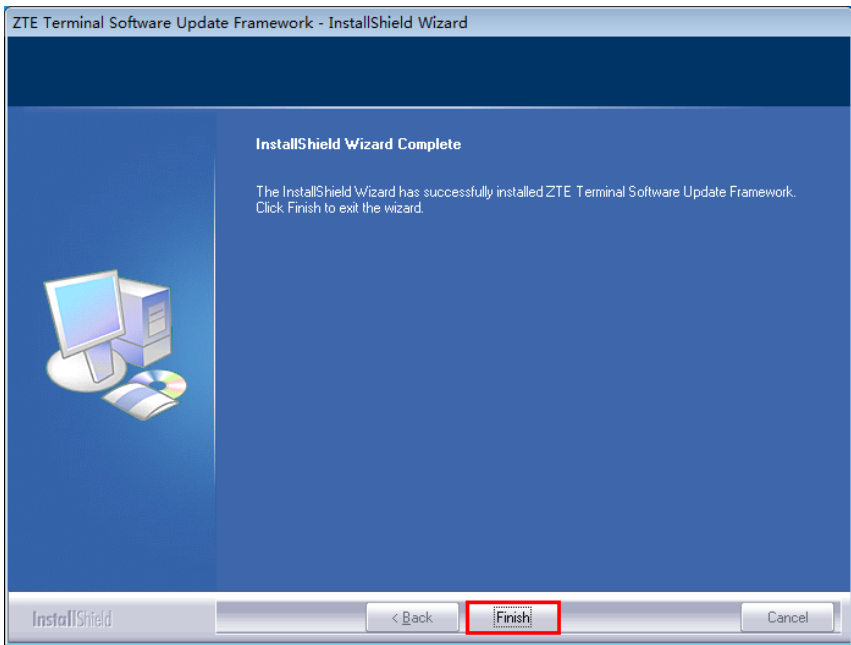
3.4 Install Plug-in

1. Unzip the plug-in package and double-click **SUF_DL_MC801AV1.00.00.zas** to start the installation.

2. Click **Install** to import the plug-in to the download platform.
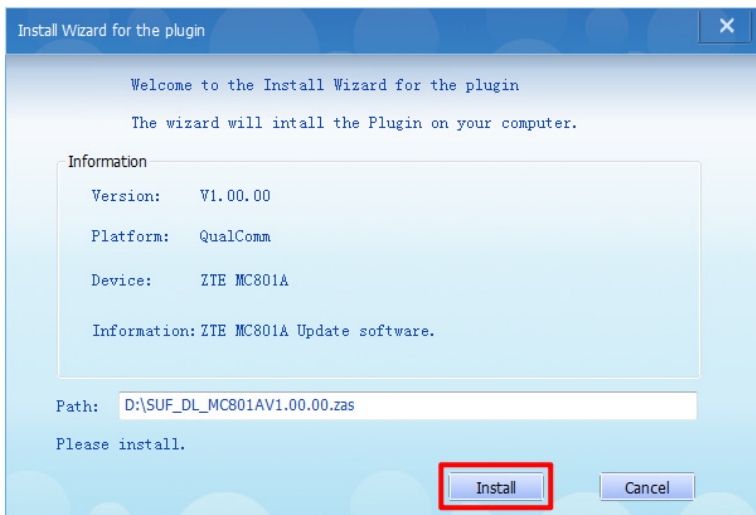
3. When the installation is completed, click **Yes** to run the download platform.
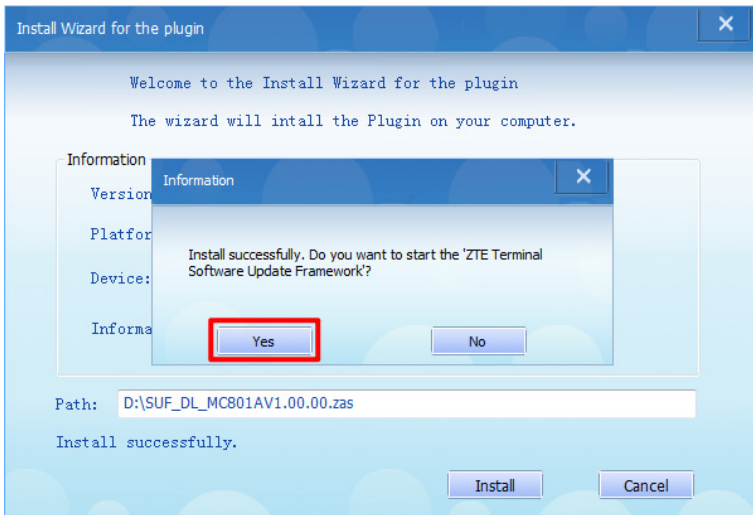
The main interface of the download platform is as below.
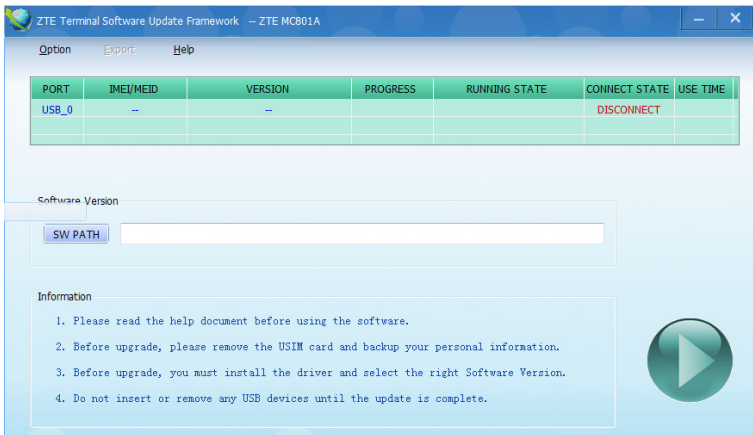
3.5　Download Software

1.　Unzip and software package.
2.　Open the download platform and click **SW PATH** to select **3.Download_File** in the software package as the software directory.
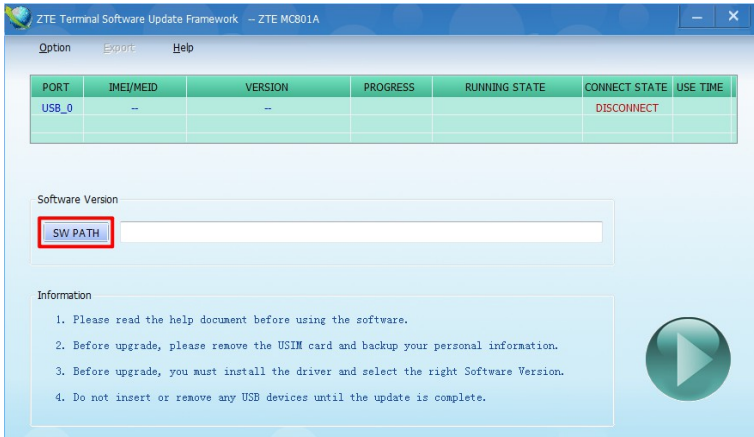
3.　Connect MC801A to a power source and to the computer via USB. Wait until the device is identified by the download platform and click the start button to start the download.
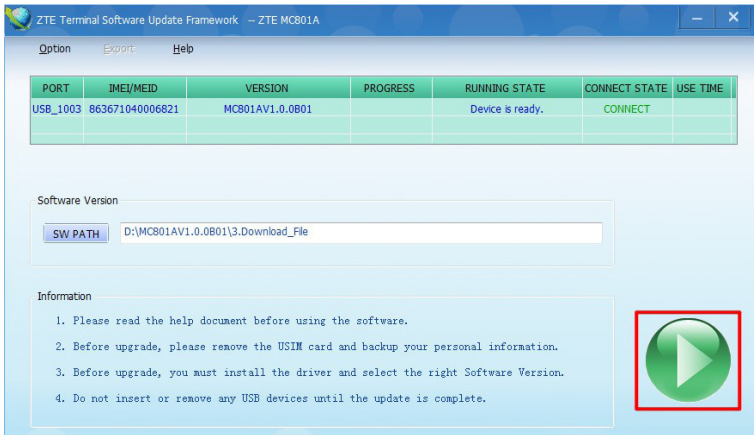
4.　Wait for the download to finish, as indicated on the progress bar.

5.   After the download is finished, restart MC801A.

4. Disassembly

4.1 Disassembly Tools
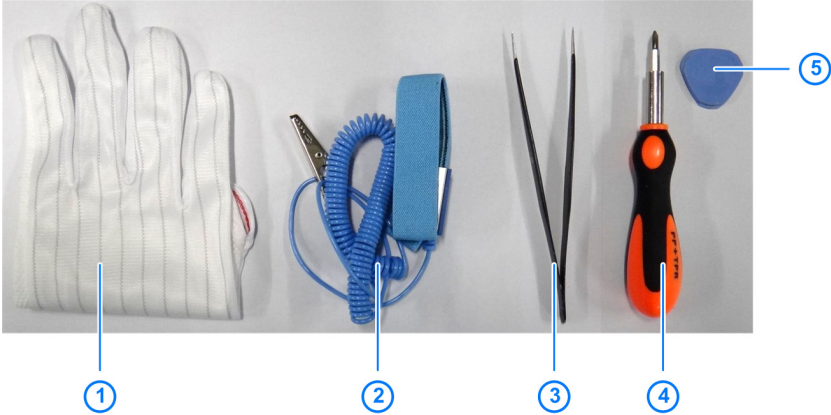
No.	Name
1	Anti-electrostatic gloves
2	Anti-electrostatic wrist strap
3	Tweezers
4	Screwdriver
5	Housing disassembly tool

NOTE:

In addition to the commonly used tools above, you need to prepare a plastic rod.

4.2 Exploded View
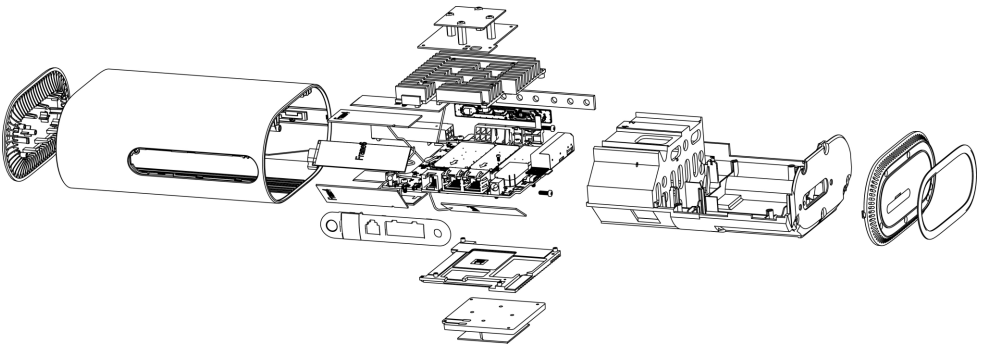
4.3   Disassembly Steps

The device for disassembly demonstration is for reference only. It might not be completely identical with yours.

1.   Remove the top cover.

2.   Remove the 4 screws from the top of the front cover assembly.
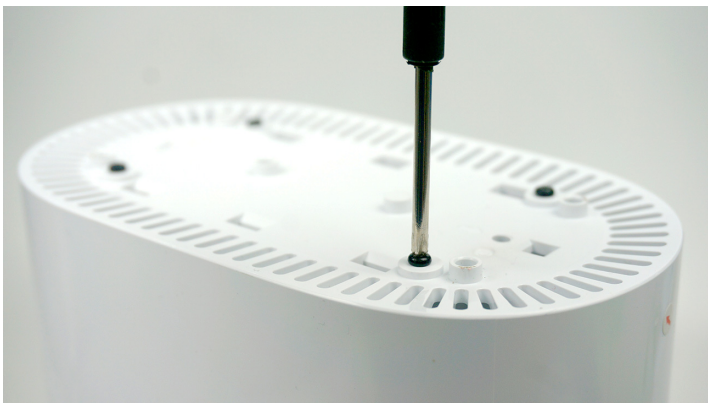
3. Separate the foot pad from the bottom of the device.

4. Remove the 6 screws from the bottom of the lower cover.
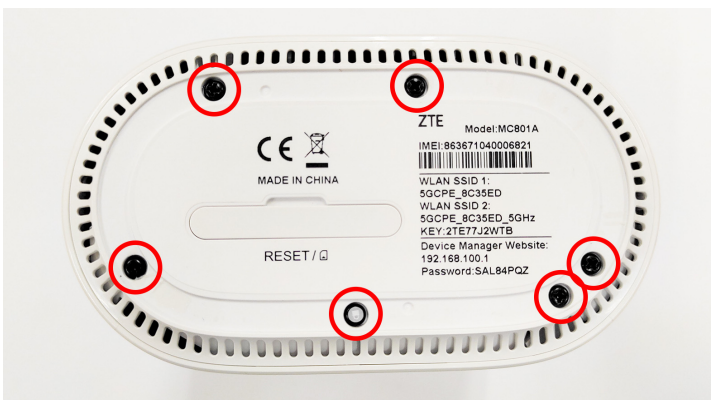
5. Remove the lower cover.

6. Remove the decorative interface plate.
   NOTE:
   Use a plastic crowbar. Using a metal crowbar may scratch the interface plate.

7. Pull out and remove the mainboard bracket assembly from the bottom of the front cover.

8. Remove the 4 screws from the directional antenna 2.
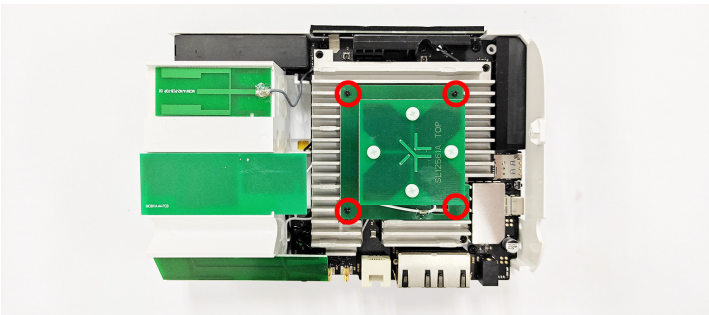
9. Remove the 4 screws from the heat sink 2 and remove the heat sink 2.
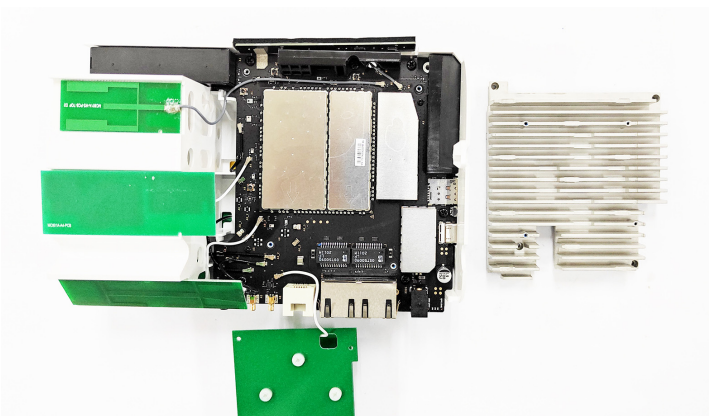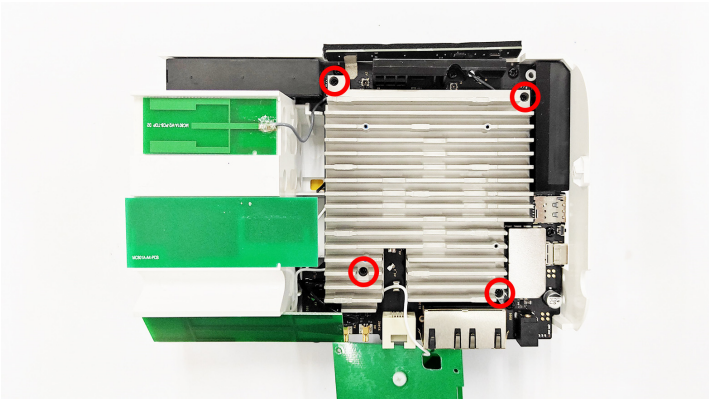
10. Disconnect the RF cable of the directional antenna 2 from the mainboard.
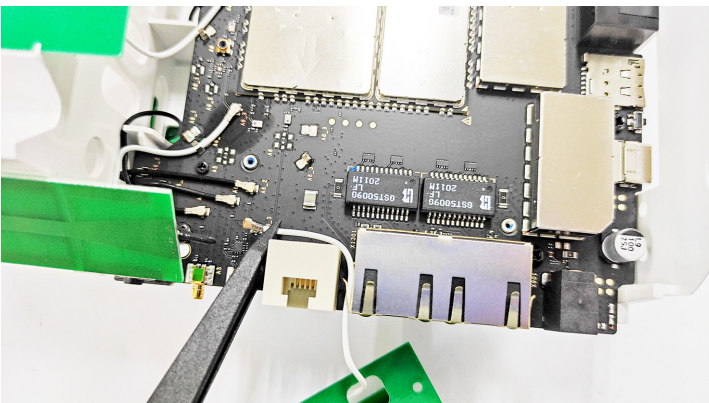
11. Disconnect the RF cables from the mainboard and remove the A4, A6, and W2 antennas.
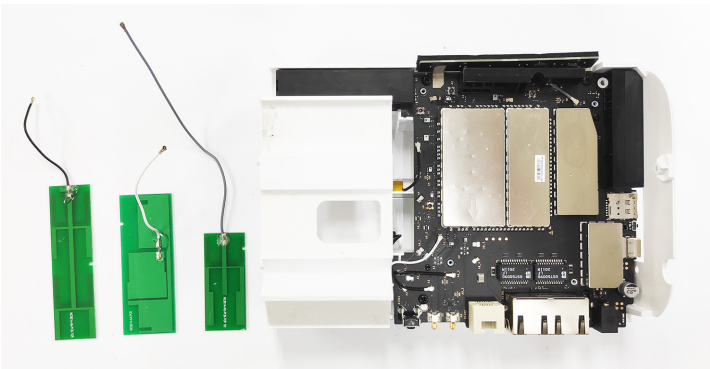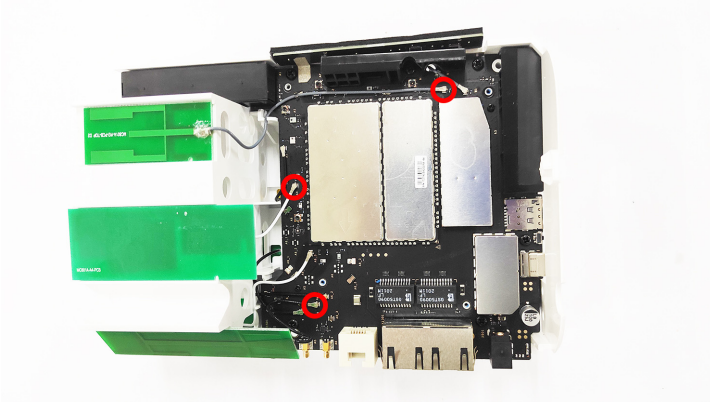
12. Unlock and remove main antenna 1 from the mainboard bracket.
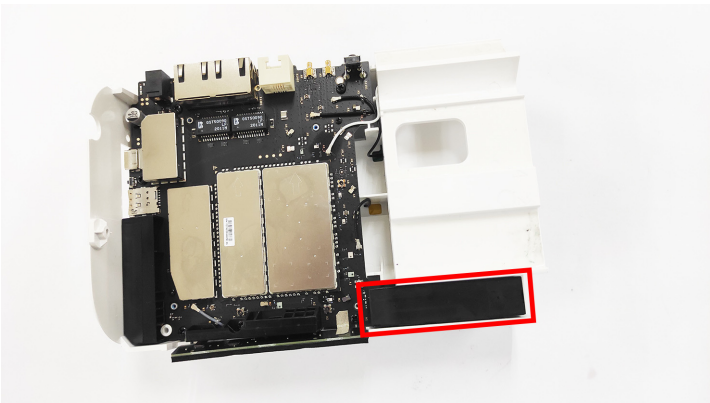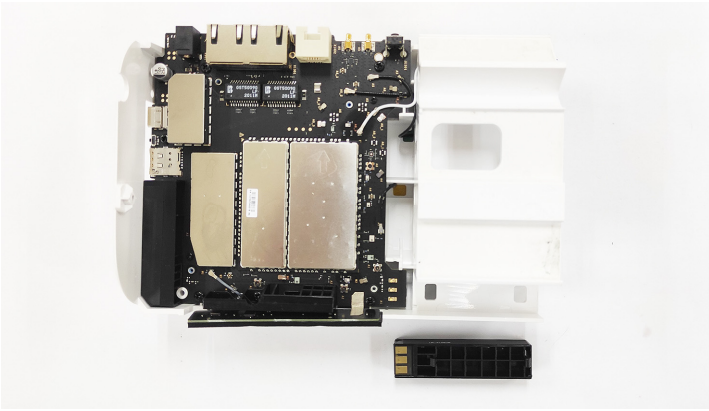
13. Disconnect the RF cables from the mainboard.
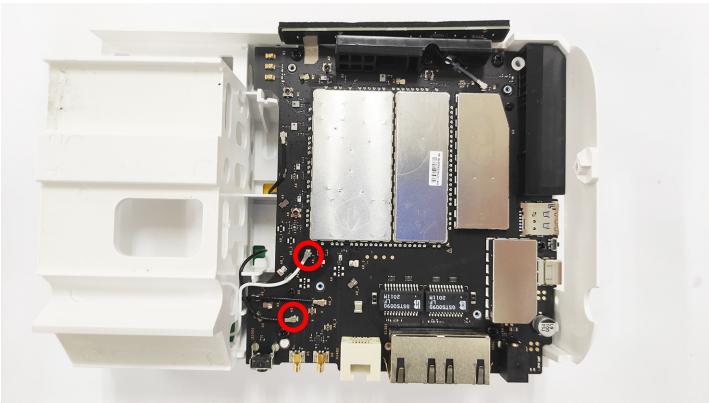
14. Remove the A5 and A8 antennas on the other side of the bracket.
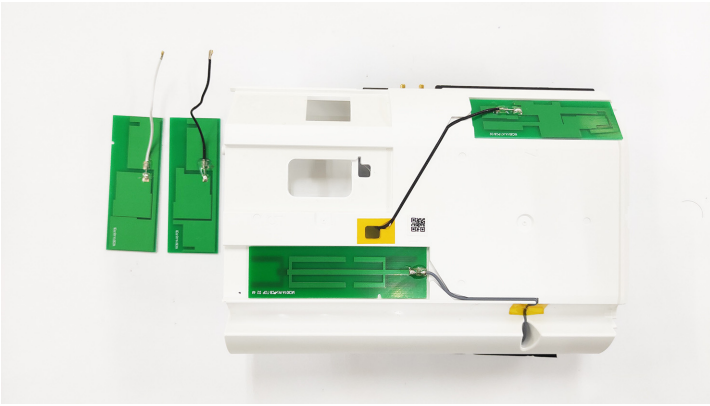
15.   Remove the RF cables from the mainboard.
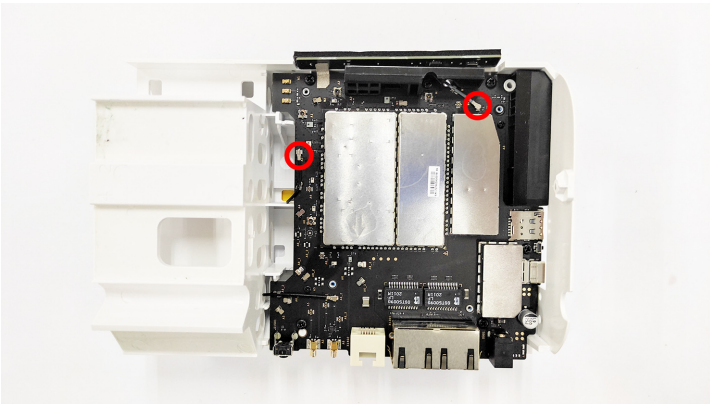
16.   From the other side of the bracket, remove the insulating tapes and the W1 and A7 antennas.
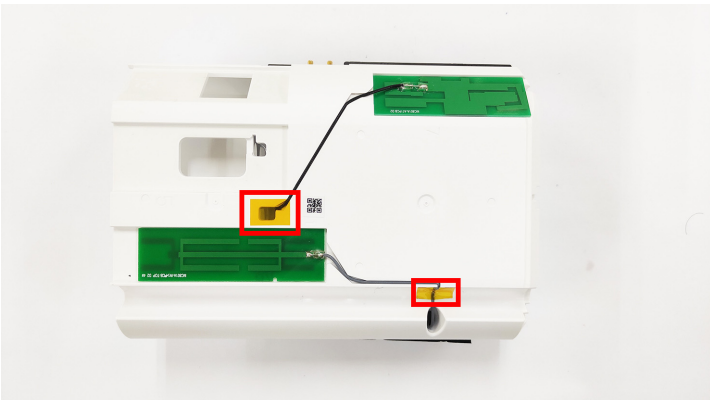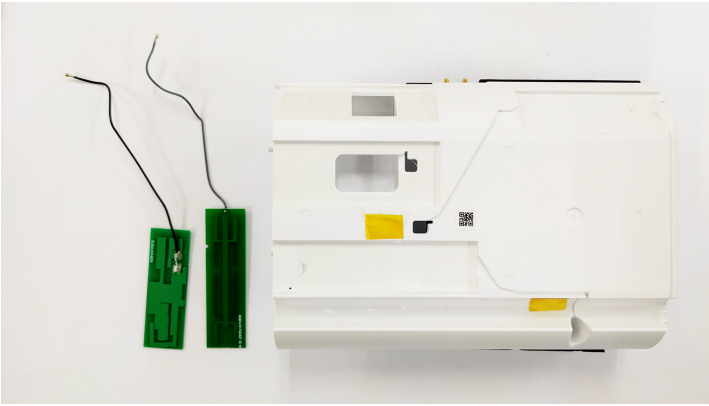
17. Remove the 6 screws securing the mainboard to the bracket.
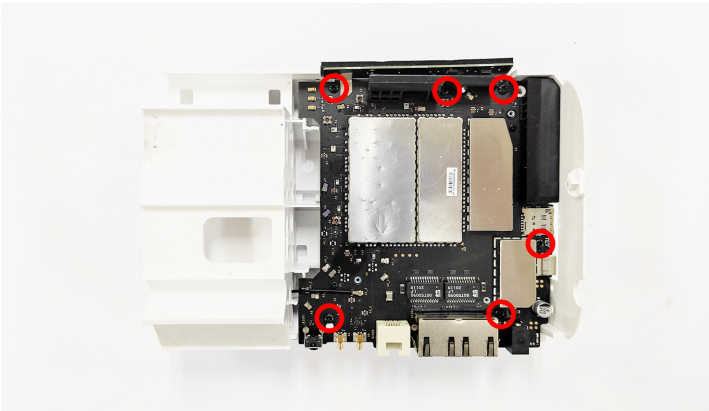
18. Take the mainboard out of the bracket.
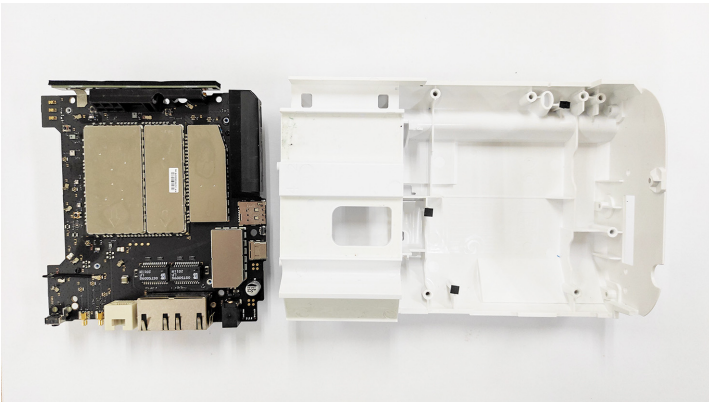
19. Disconnect the LED sub-board from the mainboard.
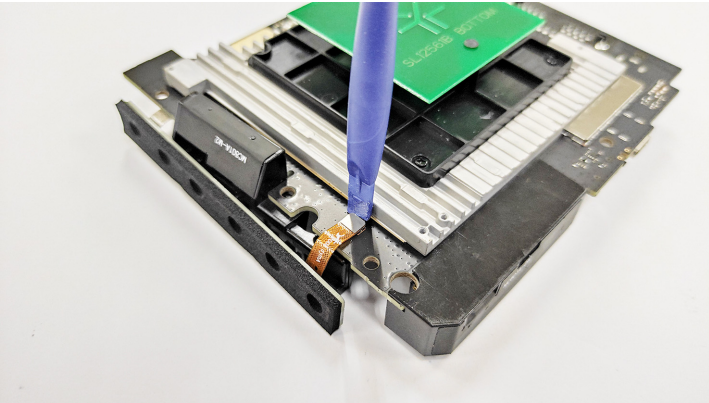
20. Remove the conductive cloth on the sub-board and the mainboard.
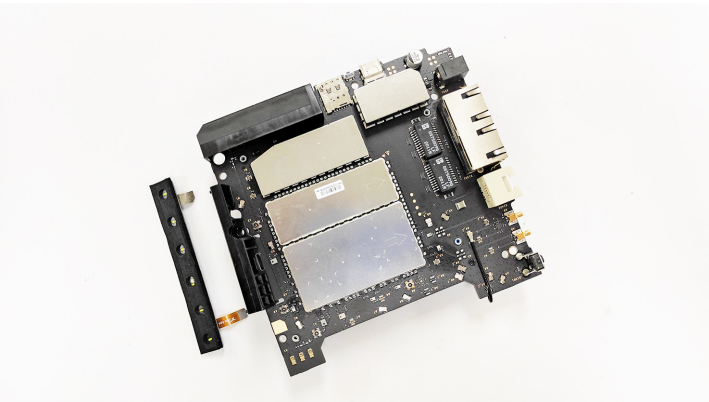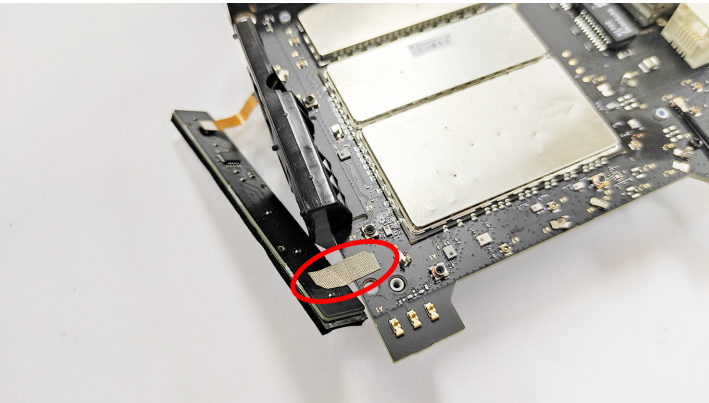
21. Unlock and remove the diversity antenna and the main antenna 2.
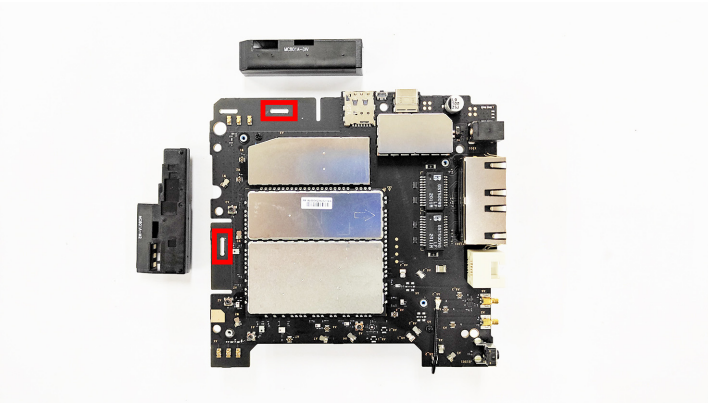
22. Disconnect the RF cable from the mainboard.
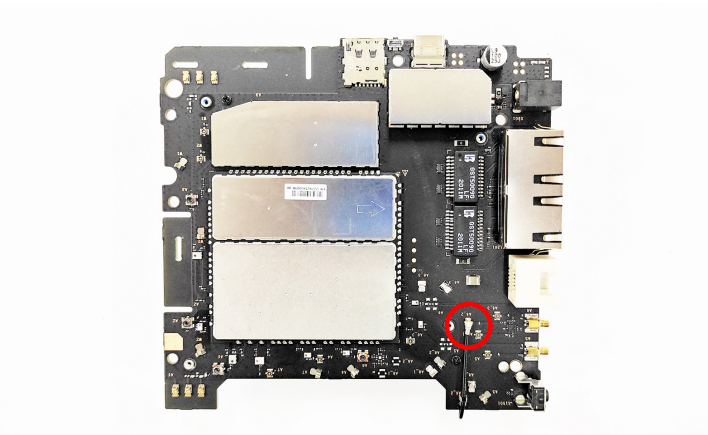
23. On the other side, remove the screws securing the directional antenna 1 and remove the antenna.
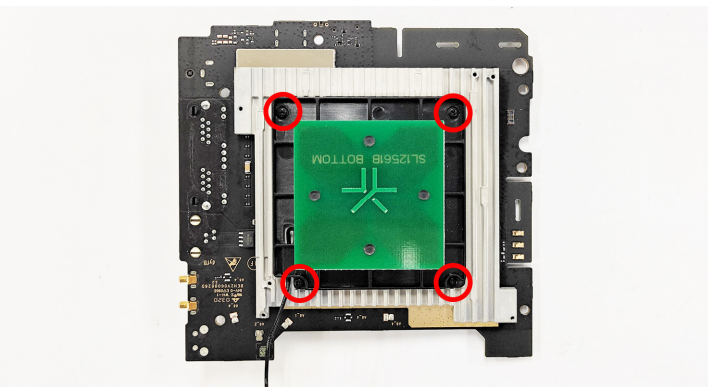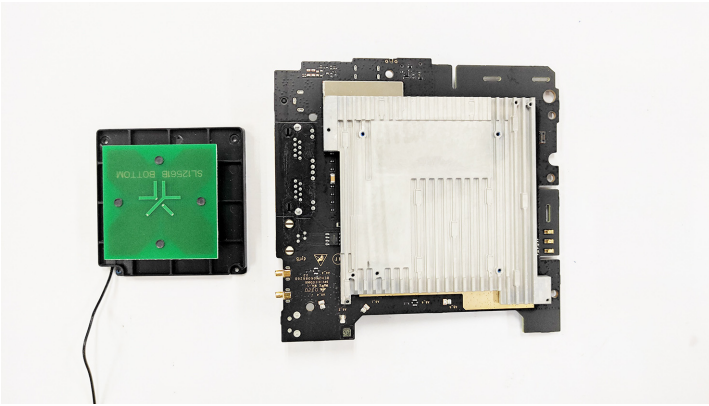
24. Remove the screws from the mainboard and remove the heat sink 1.
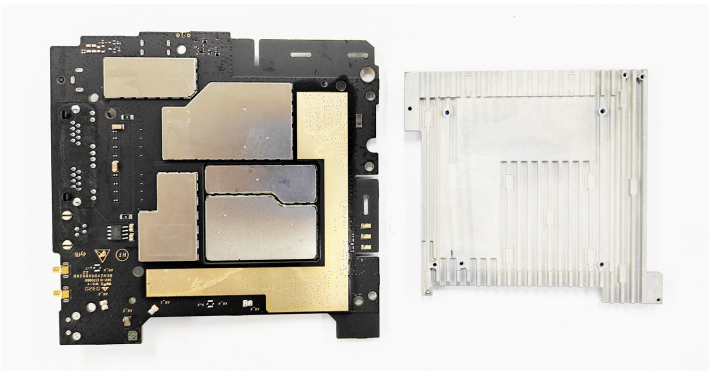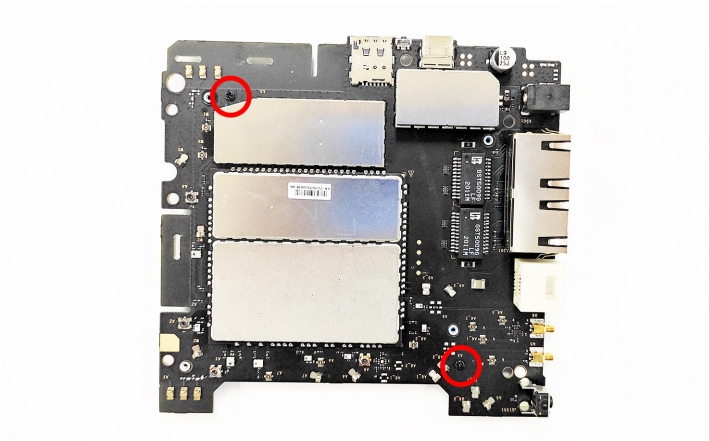
4.4 Composing
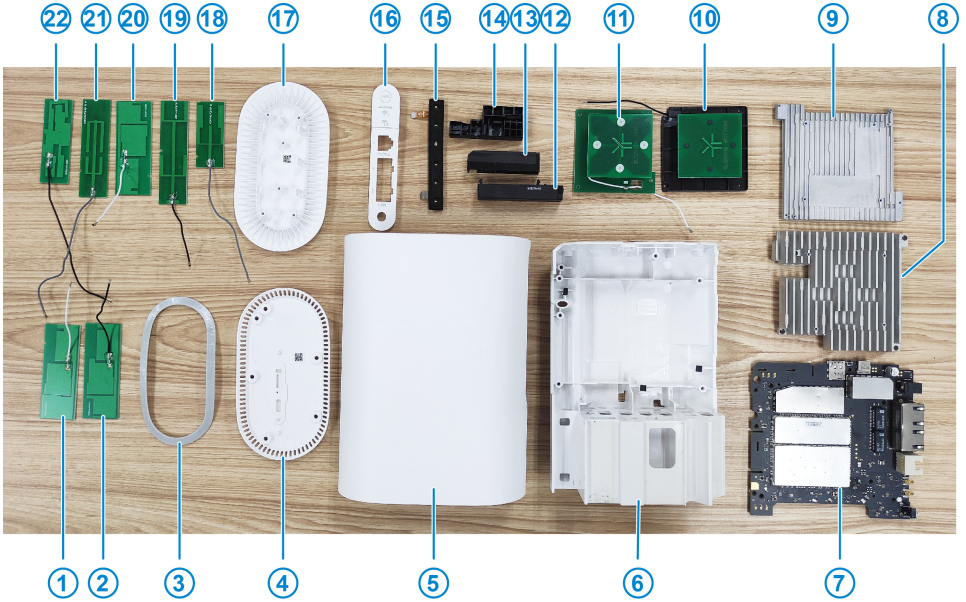
No.	Name	No.	Name
1	A8 antenna	12	Main antenna 1
2	A5 antenna	13	DIV antenna
3	Foot pad	14	Main antenna 2
4	Lower cover	15	LED sub-board
5	Front cover	16	Interface decorative plate
6	Mainboard bracket	17	Top cover
7	Mainboard	18	W2 antenna
8	Heat sink 2	19	A6 antenna
9	Heat sink 1	20	A4 antenna
10	Directional antenna 1	21	W1 antenna
11	Directional antenna 2	22	A7 antenna

5. Principle and Logic Boards

5.1 Principle Block Diagram
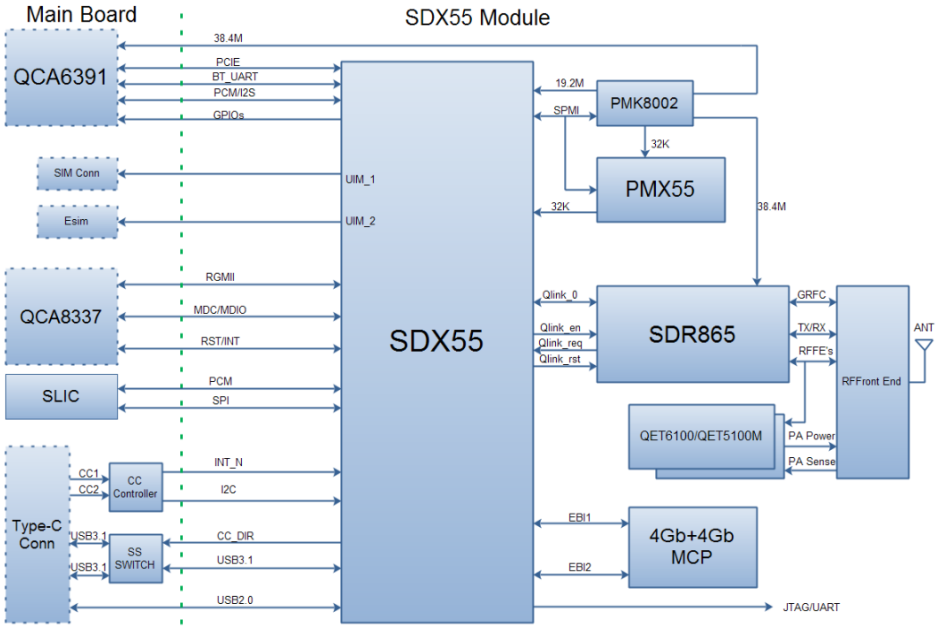
5.2 Basic Component Distribution

- Mainboard top view
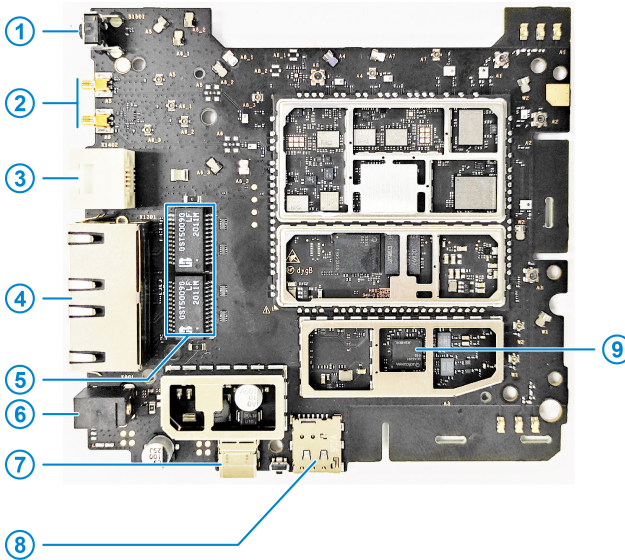
No.	Name	No.	Name
1	WPS button	6	DC power connector
2	External antenna connectors	7	USB Type-C jack
3	RJ11 interface	8	nano-SIM card slot
4	RJ45 interfaces	9	Bluetooth/Wi-Fi chip
5	Ethernet transformer	-	-

- Mainboard bottom view

No.	Name	No.	Name
1	Ethernet switch	-	-

6. Troubleshooting

6.1 Startup Fault

```
┌──────────────────────────┐
│          Start           │
└──────────────────────────┘
              │
              ▼
┌──────────────────────────┐
│ The system fails to be   │
│       started up         │
└──────────────────────────┘
              │
              ▼
        ╱─────────────╲              ┌──────────────────────────┐
       ╱ Is the battery/╲     N      │ Replace the battery/power│
       ╲ adapter normal? ╱──────────▶│         adapter          │
        ╲─────────────╱              └──────────────────────────┘
              │ Y
              ▼
┌──────────────────────────┐
│   Replace the mainboard  │
└──────────────────────────┘
              │
              ▼
┌──────────────────────────┐
│           End            │
└──────────────────────────┘
```
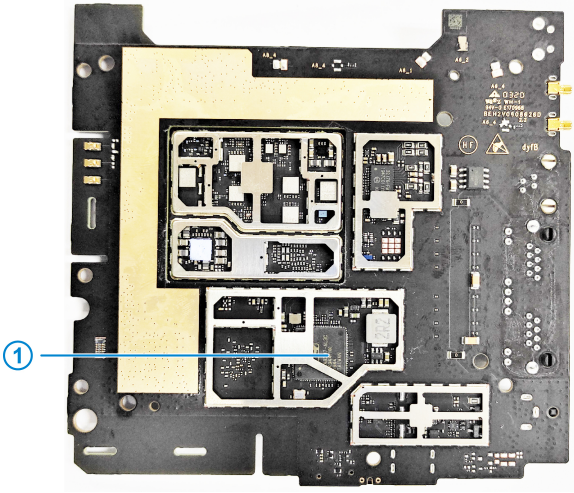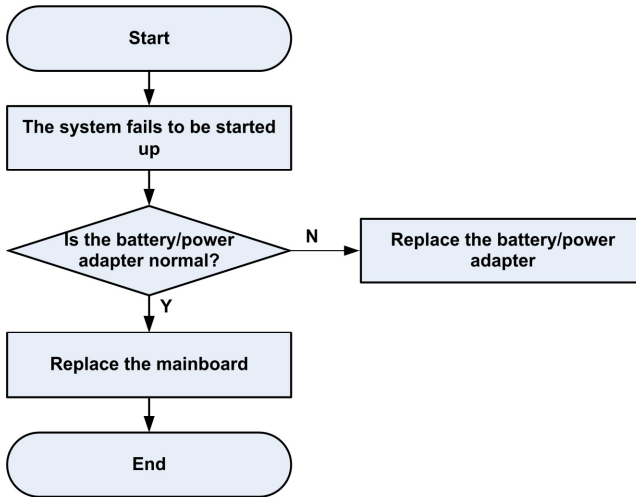
6.2 System Crashes / Automatically Powered Off

```
┌──────────────────────────┐
│          Start           │
└──────────────────────────┘
              │
              ▼
┌──────────────────────────┐
│ The system crashes or is │
│ automatically powered off│
└──────────────────────────┘
              │
              ▼
        ╱─────────────╲              ┌──────────────────────────┐
       ╱ Is the battery/╲     N      │ Replace the battery/power│
       ╲ adapter normal? ╱──────────▶│         adapter          │
        ╲─────────────╱              └──────────────────────────┘
              │ Y
              ▼
┌──────────────────────────┐
│   Replace the mainboard  │
└──────────────────────────┘
              │
              ▼
┌──────────────────────────┐
│           End            │
└──────────────────────────┘
```

6.3 Wi-Fi Connection Fault

```
                    ┌──────────────────┐
                    │      Start       │
                    └──────────────────┘
                              │
                    ┌──────────────────┐
                    │ Wi-Fi connection fault │
                    └──────────────────┘
                              │
                   ╱────────────────╲      N    ┌──────────────────────────┐
                  ╱  Is the computer IP ╲────────▶│ Reconfigure an IP address │
                  ╲  address correct?   ╱         └──────────────────────────┘
                   ╲────────────────╱
                              │ Y
                    ┌──────────────────┐
                    │ Replace the mainboard │
                    └──────────────────┘
                              │
                    ┌──────────────────┐
                    │       End        │
                    └──────────────────┘
```
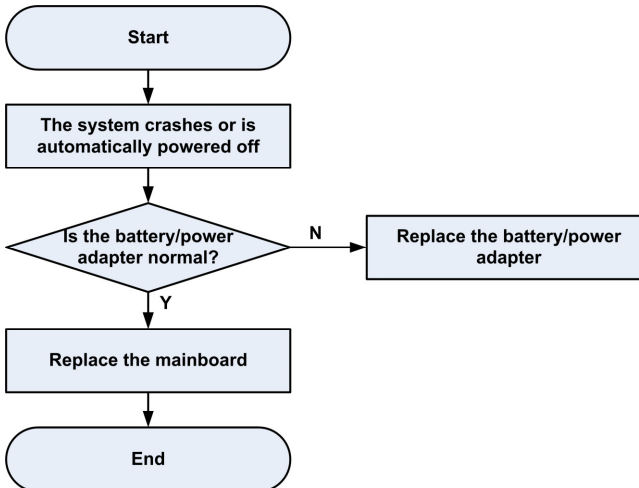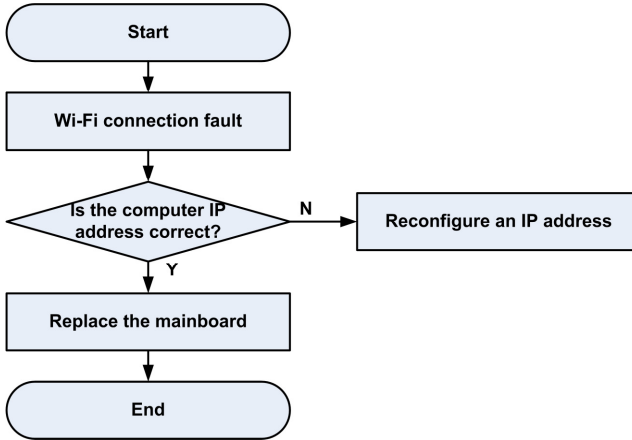
6.4 nano-SIM Card Unidentified

```
                    ┌──────────────────┐
                    │      Start       │
                    └──────────────────┘
                              │
                    ┌──────────────────────┐
                    │ The system fails to identify a │
                    │       nano-SIM card       │
                    └──────────────────────┘
                              │
                   ╱────────────────╲      N    ┌──────────────────────────┐
                  ╱ Is the card normal? ╲────────▶│ Reinstall or replace the nano- │
                  ╲                    ╱         │        SIM card          │
                   ╲────────────────╱           └──────────────────────────┘
                              │ Y
                   ╱────────────────╲      N    ┌──────────────────────────┐
                  ╱   Is the card     ╲────────▶│ Clean or adjust the contact chip │
                  ╲   slot normal?    ╱         │   of the nano-SIM card    │
                   ╲────────────────╱           └──────────────────────────┘
                              │ Y
                   ╱────────────────╲      N    ┌──────────────────────────┐
                  ╱ Is the module board ╲────────▶│ Reinstall the module board │
                  ╲ installed securely? ╱         └──────────────────────────┘
                   ╲────────────────╱
                              │ Y
                   ╱────────────────╲      N    ┌──────────────────────────┐
                  ╱  Is the module    ╲────────▶│ Replace the module board │
                  ╲  board normal?    ╱         └──────────────────────────┘
                   ╲────────────────╱
                              │ Y
                    ┌──────────────────┐
                    │ Replace the mainboard │
                    └──────────────────┘
                              │
                    ┌──────────────────┐
                    │       End        │
                    └──────────────────┘
```

6.5 Download Fault

```
              ┌──────────────────────┐
              │        Start         │
              └──────────┬───────────┘
                         ↓
              ┌──────────────────────┐
              │ The system has a     │
              │ download failure     │
              └──────────┬───────────┘
                         ↓
                  ◇ Is the computer IP ◇    N    ┌──────────────────────┐
                  ◇ address correct?   ◇ ──────→ │ Reconfigure an IP    │
                         │                        │ address              │
                         │ Y                      └──────────────────────┘
                         ↓
                  ◇ Are the download  ◇    N    ┌──────────────────────┐
                  ◇ platform and      ◇ ──────→ │ Use the correct      │
                  ◇ software version  ◇          │ download platform    │
                  ◇ correct?          ◇          │ and software version │
                         │                        └──────────────────────┘
                         │ Y
                         ↓
                  ◇ Is the network    ◇    N    ┌──────────────────────┐
                  ◇ cable in good     ◇ ──────→ │ Replace the network  │
                  ◇ condition?        ◇          │ cable                │
                         │                        └──────────────────────┘
                         │ Y
                         ↓
                  ◇ Is the module     ◇    N    ┌──────────────────────┐
                  ◇ board normal?     ◇ ──────→ │ Replace the module   │
                         │                        │ board                │
                         │ Y                      └──────────────────────┘
                         ↓
              ┌──────────────────────┐
              │ Replace the          │
              │ mainboard            │
              └──────────┬───────────┘
                         ↓
              ┌──────────────────────┐
              │         End          │
              └──────────────────────┘
```

6.6 Abnormal Indicators

```
              ┌──────────────────────┐
              │        Start         │
              └──────────┬───────────┘
                         ↓
              ┌──────────────────────┐
              │ Indicators are       │
              │ abnormal             │
              └──────────┬───────────┘
                         ↓
              ┌──────────────────────┐
              │ Replace the          │
              │ mainboard            │
              └──────────┬───────────┘
                         ↓
              ┌──────────────────────┐
              │         End          │
              └──────────────────────┘
```

6.7 No Signal

```
                    ┌──────────────────────┐
                    │        Start         │
                    └──────────────────────┘
                               │
                               ▼
                    ┌──────────────────────┐
                    │ The system has no signal │
                    └──────────────────────┘
                               │
                               ▼
                      Is the nano-SIM      N    Reinstall or replace the nano-
                      card normal?     ─────────►   SIM card
                               │ Y
                               ▼
                    Is the antenna normal?  N    Reinstall or replace the
                               │        ─────────►      antenna
                               │ Y
                               ▼
                    Is the module board    N    Reinstall the module board
                    installed securely? ─────────►
                               │ Y
                               ▼
                    Is the module          N    Replace the module board
                    board normal?      ─────────►
                               │ Y
                               ▼
                    ┌──────────────────────┐
                    │ Replace the mainboard │
                    └──────────────────────┘
                               │
                               ▼
                    ┌──────────────────────┐
                    │         End          │
                    └──────────────────────┘
```

6.8   Wi-Fi Module Fault

```
                    ┌─────────────────────┐
                    │        Start        │
                    └─────────────────────┘
                              │
                    ┌─────────────────────┐
                    │  Wi-Fi module fault │
                    └─────────────────────┘
                              │
                      ╱───────────────╲
                     ╱  Is the Wi-Fi   ╲       N    ┌──────────────────────────────┐
                    ╱  antenna well     ╲──────────▶│ Reconnect the Wi-Fi antenna  │
                    ╲  connected to the ╱            └──────────────────────────────┘
                     ╲   mainboard?    ╱
                      ╲───────────────╱
                              │ Y
                      ╱───────────────╲
                     ╱  Is the Wi-Fi   ╲   N        ┌──────────────────────────────┐
                    ╱   antenna in good ╲──────────▶│  Replace the Wi-Fi antenna   │
                    ╲    condition?     ╱            └──────────────────────────────┘
                     ╲───────────────╱
                              │ Y
                      ╱───────────────╲
                     ╱ Is the module   ╲   N        ┌──────────────────────────────┐
                    ╱   board installed ╲──────────▶│  Reinstall the module board  │
                    ╲    securely?      ╱            └──────────────────────────────┘
                     ╲───────────────╱
                              │ Y
                      ╱───────────────╲
                     ╱  Is the module  ╲   N        ┌──────────────────────────────┐
                    ╱   board normal?   ╲──────────▶│  Replace the module board    │
                    ╲                   ╱            └──────────────────────────────┘
                     ╲───────────────╱
                              │ Y
                    ┌─────────────────────┐
                    │ Replace the mainboard│
                    └─────────────────────┘
                              │
                    ┌─────────────────────┐
                    │         End         │
                    └─────────────────────┘
```

7. Contact Us

- Website

  You can get product introductions and service support from our terminal website (https://www.ztedevices.com). You can also download product manuals and software and check FAQs. Your online query will be replied within 24 hours.

- E-mail

  If you have any advice, suggestions, or requirements on our products, please send them to **mobile@zte.com.cn**. Replies will be given within 2 working days.

- Hotline

  To learn about the hotline and service time for your country or region, please visit https://www.ztedevices.com/en/support/hotlines.

ZTE Service Hotline

Country/Region	Service Number	Service Hour	Service Language
Australia	1-300-789-475	Monday to Friday 10:00-16:00	English
Brazil(Kis Mobile)	11 4837 9301 (to metropolitan areas)	Monday to Friday:8:00 - 20:00 Saturday: 8:00 - 14:00	Portuguese
Brazil(Kis Mobile)	08000044242 (to others areas)	Monday to Friday:8:00 - 20:00 Saturday: 8:00 - 14:00	Portuguese
Brazil(General)	08007010983 (to others areas)	Monday to Friday:8:00 - 20:00 Saturday: 8:00 - 14:00	Portuguese

You can also dial the ZTE Customer Service Hotline for terminals **+86-755-26779999** (service time (China): 8:30 - 20:30) to learn more about our technical support for ZTE terminals.

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