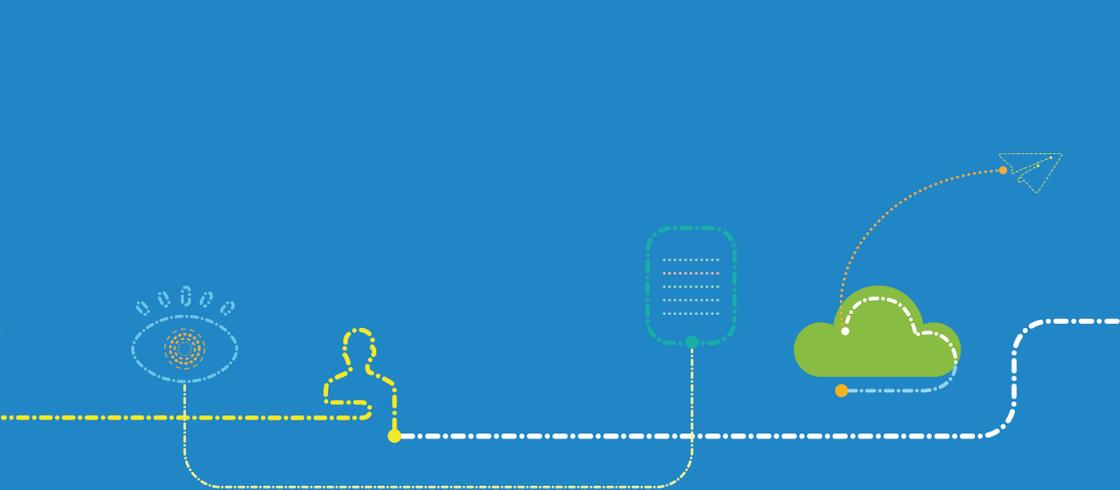


MF286D LTE Wireless Router After-sales Service Manual (Level 1)

Version 1.0



ZTE

LEGAL INFORMATION

Copyright © 2020 ZTE CORPORATION.

The contents of this document are protected by copyright laws and international treaties. Any reproduction or distribution of this document or any portion of this document, in any form by any means, without the prior written consent of ZTE CORPORATION is prohibited. Additionally, the contents of this document are protected by contractual confidentiality obligations.

All company, brand and product names are trade or service marks, or registered trade or service marks, of ZTE CORPORATION or of their respective owners.

This document is provided “as is”, and all express, implied, or statutory warranties, representations or conditions are disclaimed, including without limitation any implied warranty of merchantability, fitness for a particular purpose, title or non-infringement. ZTE CORPORATION and its licensors shall not be liable for damages resulting from the use of or reliance on the information contained herein.

ZTE CORPORATION or its licensors may have current or pending intellectual property rights or applications covering the subject matter of this document. Except as expressly provided in any written license between ZTE CORPORATION and its licensee, the user of this document shall not acquire any license to the subject matter herein.

ZTE CORPORATION reserves the right to upgrade or make technical change to this product without further notice.

Users may visit ZTE handset website <https://www.ztedevices.com> to inquire related information.

The ultimate right to interpret this product resides in ZTE CORPORATION.

Revision History

Revision No.	Revision Date	Revision Reason
R1.0	March 17, 2020	First Edition

Edited by ZTE Terminal Business Division

Publishing Date: March 17, 2020

Contents

1. Product Summary	3
1.1 Attention	3
1.2 Product Overview	3
1.3 Standard Configuration	3
1.4 Specifications	4
2. Function Test	5
2.1 NFF Test	5
2.2 Test Web UI	6
3. Software Download	7
3.1 Preparations	7
3.2 Install Download Platform	7
3.3 Install Plug-in	11
3.4 Download Software	12
4. Disassembly	14
4.1 Disassembly Tools	14
4.2 Exploded View	14
4.3 Disassembly Steps	15
4.4 Composing	22
5. Principle and Logic Boards	23
5.1 Principle Block Diagram	23
5.2 Basic Component Distribution	24
6. Troubleshooting	26
6.1 Startup Fault	26
6.2 System Crashes / Automatically Powered Off	26
6.3 Wi-Fi Connection Fault	27
6.4 (U)SIM Card Unidentified	27
6.5 Download Fault	28
6.6 Abnormal Indicators	28
6.7 No Signal	29
6.8 Wi-Fi Module Fault	30
7. Contact Us	31

1. Product Summary

1.1 Attention

Before performing any maintenance to the MF286D device, you need to verify that the MF286D 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	MF286D wireless 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)	171.64 mm × 183.51 mm × 58.51 mm
	Weight	About 458.2 g
	Frequency bands	FDD LTE: B1/B3/B7/B8/B20/B28 TDD LTE: B38 UMTS: 900/2100 MHz GSM: 850/900/1800/1900 MHz
Technical parameters	Chipsets	MDM9250-2, IPQ4019
	Storage	MDM-9250-2: 512 MB Flash + 256 MB DDR IPQ-4019: 2MB Nor Flash + 128 MB NAND Flash + 256 MB DDR3
	Interfaces	RJ45*4, RJ11*2, USB-A*1
	Wi-Fi	802.11 a/b/g/n/ac, 2*2 MIMO
	Max. connected Wi-Fi clients	64
	Power supply	+12 V DC, 1.5A

2. Function Test

2.1 NFF Test

Test Flow Chart	Test Item	Test Method and Requirements	Test device
<pre> graph TD Customer([Customer]) -- PASS --> MeetBasic{Meet basic requirements} MeetBasic -- NG --> Customer MeetBasic -- PASS --> ConfirmFailure{Confirm failure recurrence} ConfirmFailure -- NG --> FaultyMachine([Faulty machine]) ConfirmFailure -- PASS --> TestNetwork{Test network connection} TestNetwork -- NG --> FaultyMachine TestNetwork -- PASS --> TestWiFi{Test Wi-Fi connection} TestWiFi -- NC --> FaultyMachine TestWiFi -- PASS --> NFF([NFF]) </pre>	(1) Basic requirements	<ol style="list-style-type: none"> The accessories are complete. The anti-dismantle tag is not damaged. The waterproof tag has no color changes. The device is not physically damaged. The device is still under warranty. 	None
	(2) Failure recurrence	<ol style="list-style-type: none"> (Optional) Check whether the screen is lit. (Optional) Test the touch screen and confirm it is functional. Test the failures described by the customer, and confirm that the failures do not recur. 	Test card
	(3) Network connection test	<ol style="list-style-type: none"> Connect to MF286D through Wi-Fi. Open the web UI of MF286D 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 MF286D. Check whether the phone can be connected and whether the Internet can be accessed.	Test card Mobile phone
Summary	<p>Perform steps 1 to 4.</p> <ul style="list-style-type: none"> 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 MF286D.

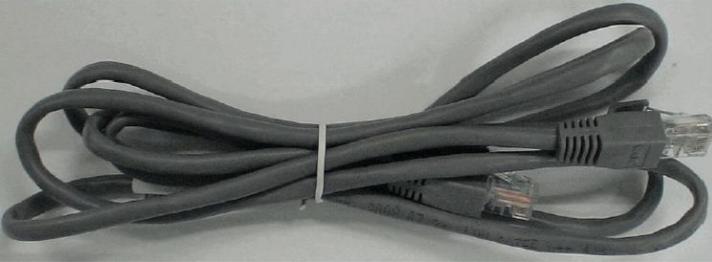
2.2 Test Web UI

1. Connect to MF286D by either of the following ways:
 - ▶ Connecting through LAN cable
Connect the **LAN2**, **LAN3**, **LAN4** port of MF286D to the computer with the LAN cable.
NOTE:
You need to set the IP address as **Obtain an IP address automatically**.
 - ▶ 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 MF286D (SSID).
 - c) Type the Wi-Fi password to connect to MF286D.**NOTE:**
The default Wi-Fi SSID and password can be found on the bottom of MF286D.
2. Open the web UI.
 - a) Open the browser and visit the address **192.168.100.1** 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 (U)SIM card is needed to access the Internet.

3. Software Download

3.1 Preparations

- LAN cable

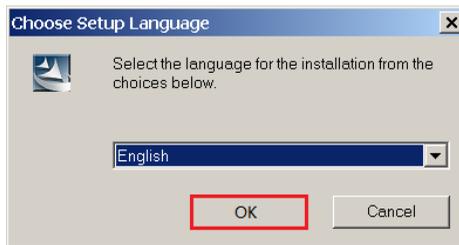


- Service software

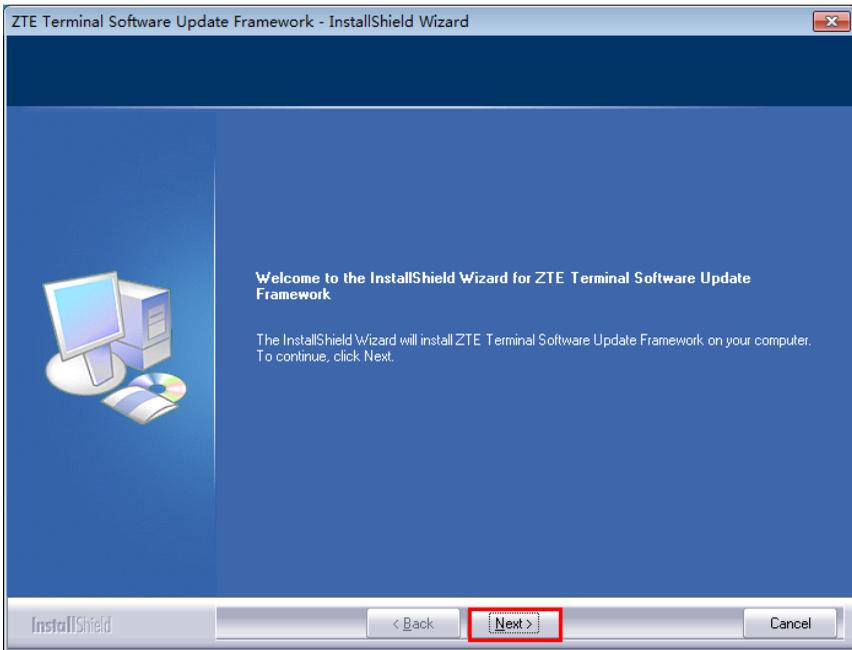
Type	Name/Version	Description
Download platform	ZTSUFV1.0.1B10	The software versions are for reference only. Please use the latest versions for the software download.
Plug-in	SUF_DL_MF286DV1.00.01	
Software	MF286DV1.0.0B02	

3.2 Install Download Platform

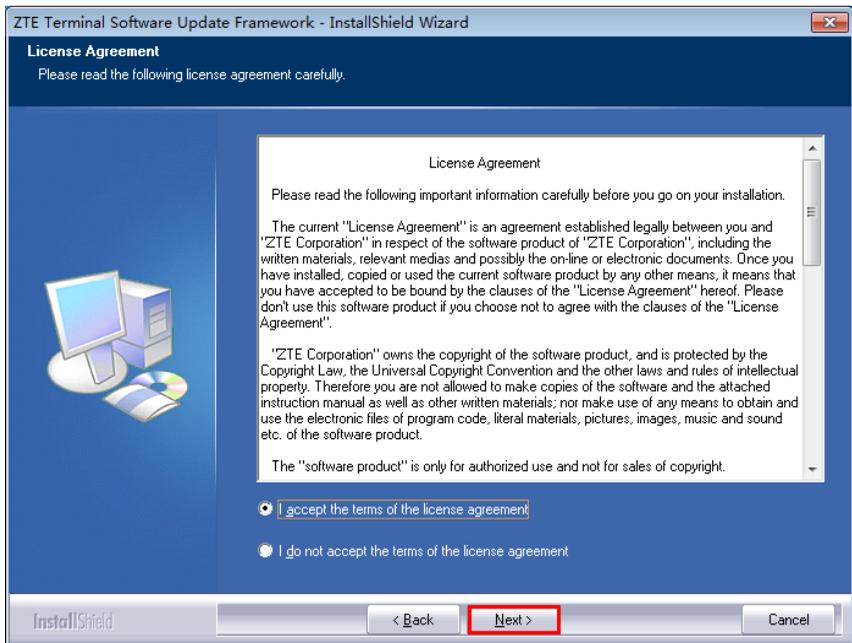
1. Unzip the package of the download platform and double-click the program icon **Setup.exe** to start the installation.
2. Select the installation language and click **OK**.



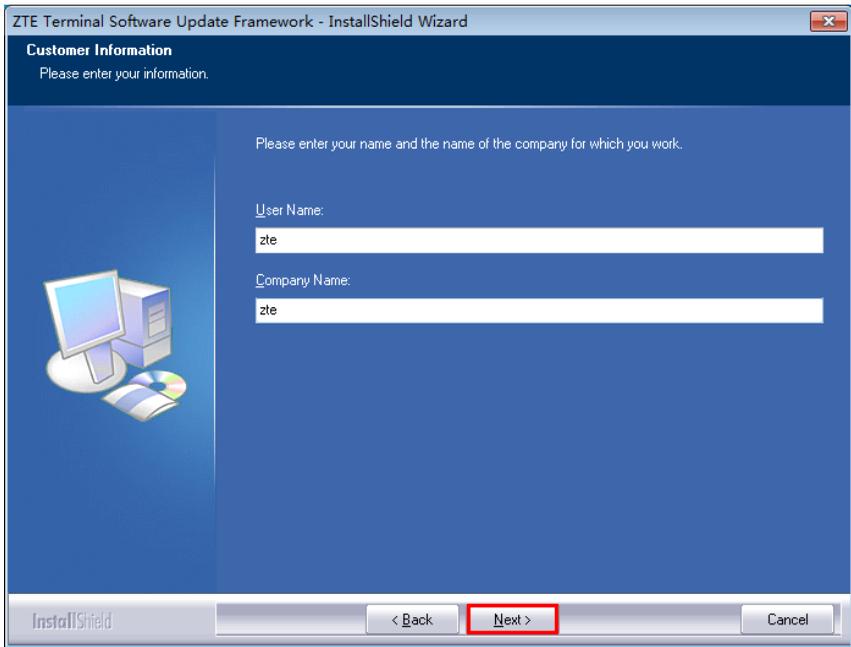
3. Click **Next**.



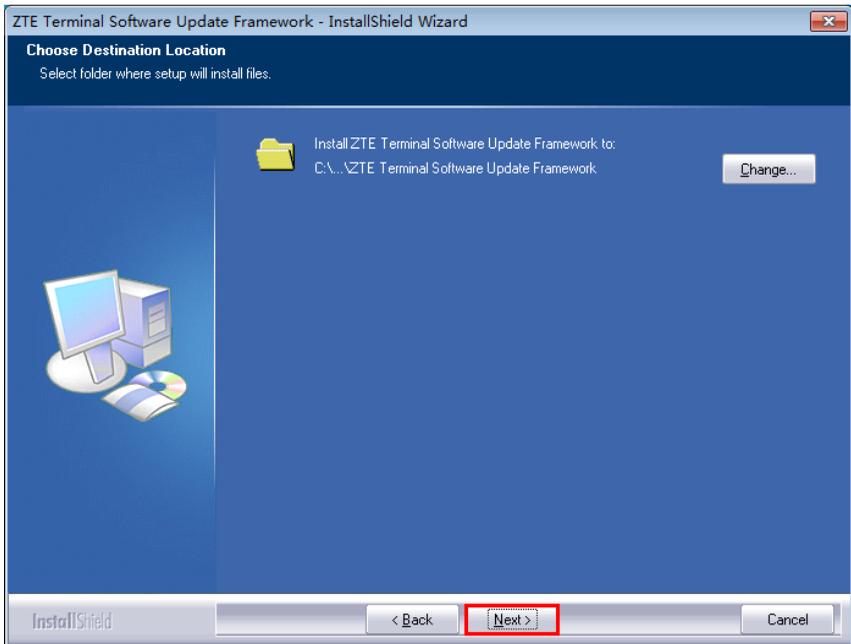
4. Accept the terms of the license agreement and click **Next**.



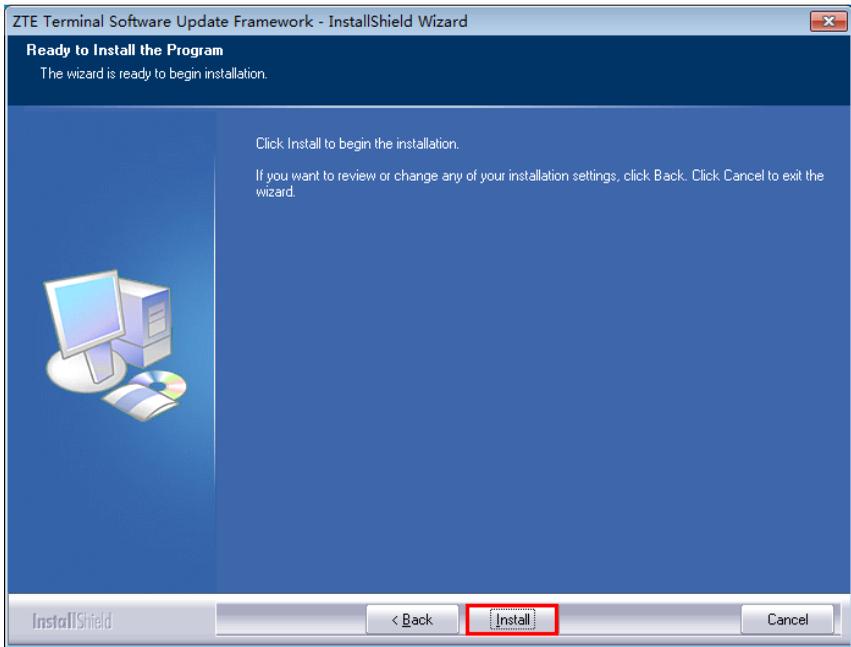
5. Type the User Name and Company Name and click **Next**.



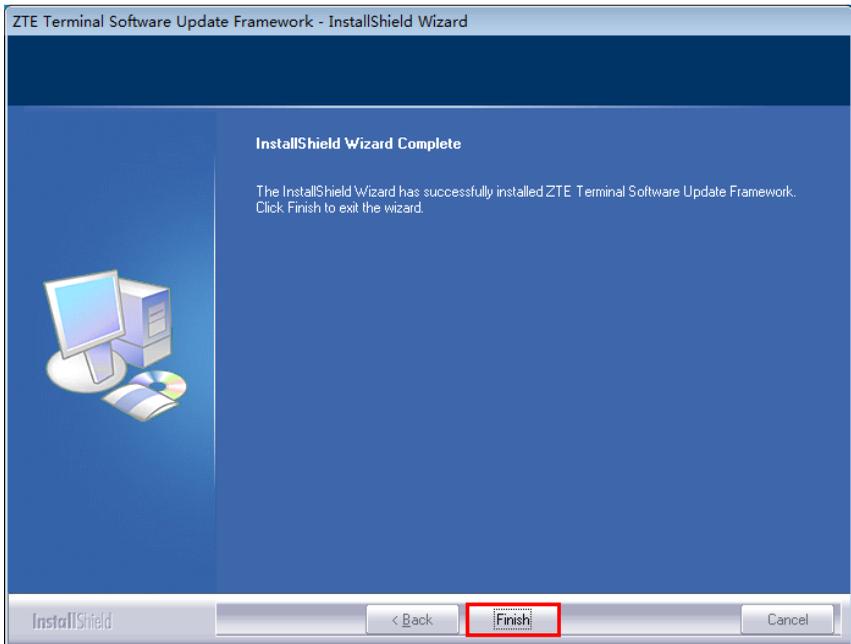
6. Select the installation directory and click **Next**.



7. Click **Install**.

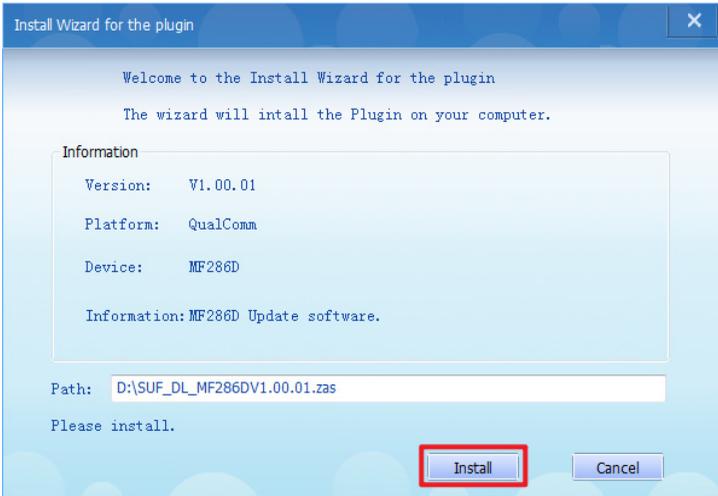


8. When the installation is completed, click **Finish**.

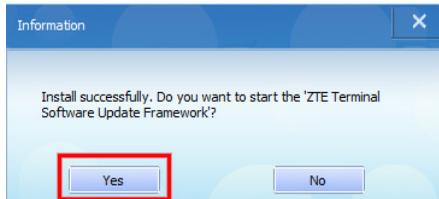


3.3 Install Plug-in

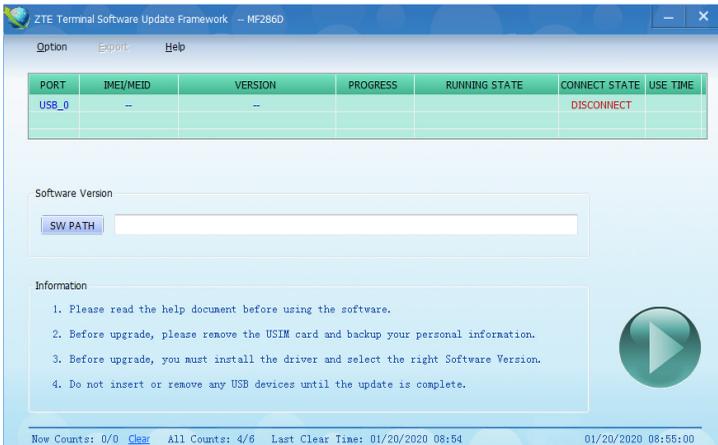
1. Double-click **SUF_DL_MF286DV1.00.01.zas** in the package **SUF_DL_MF286DV1.00.01.zip** to start the installation.
2. Click **Install**.



3. When the installation is completed, click **Yes** to run the download platform.



The main interface of the download platform is as follows.

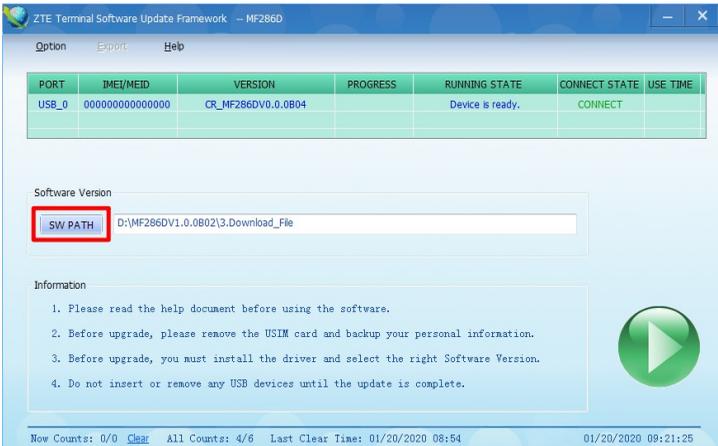


3.4 Download Software

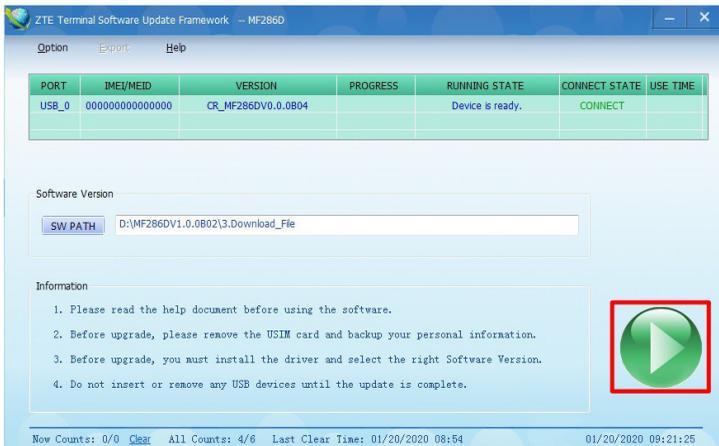
1. Unzip the software packages.
2. Copy the **root_ulimage** file from the **6.CPE_Download_File** folder and the **uboot.bin** file from the **7.CPE_Boot_File** folder (both in the CR package) to the **3.Download_File** folder in the MODULE package.
3. Connect MF286D to a power source with the power adapter.
4. Power on MF286D and connect its **WAN/LAN1** port to the computer with the LAN cable.
5. Run the download platform ZTE Terminal Software Update Framework and wait until MF286D is identified.



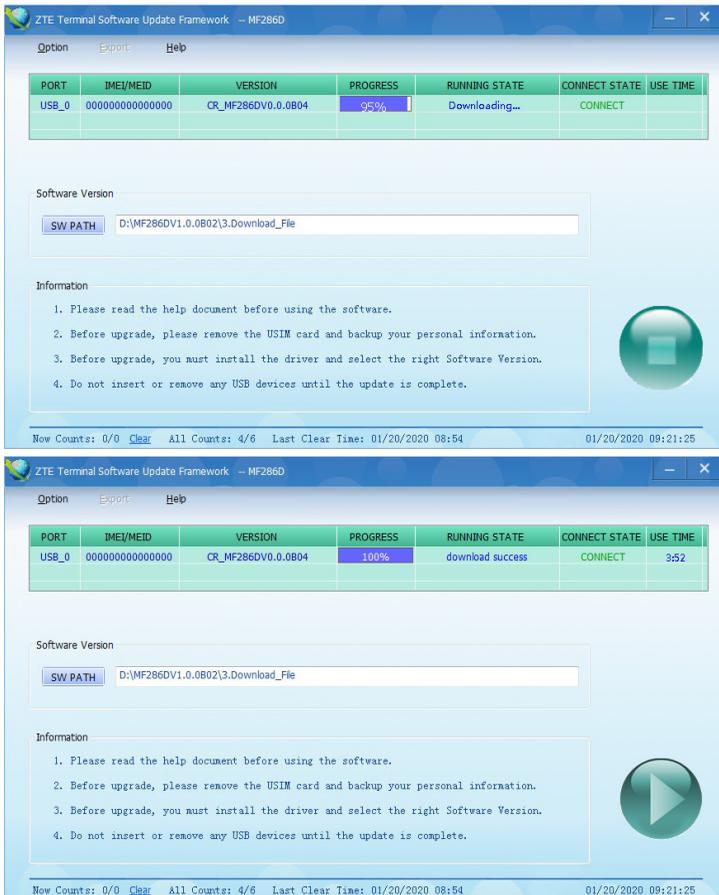
6. Click **SW PATH** to select the software path of the **3.Download_File** folder.



7. Click the start button to start the download.

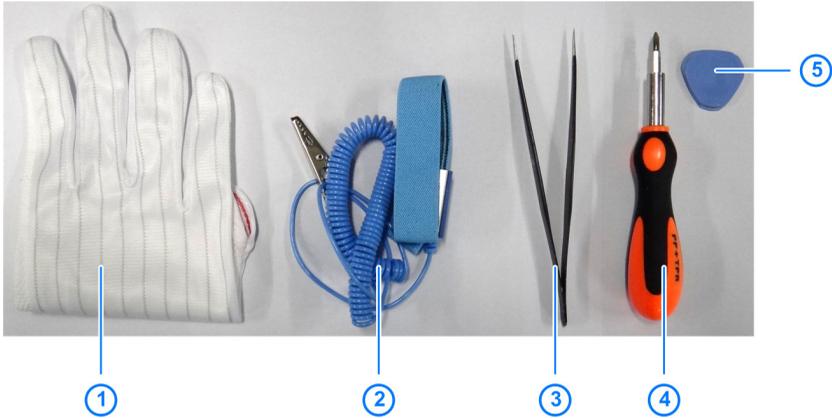


8. Wait until the download is completed.



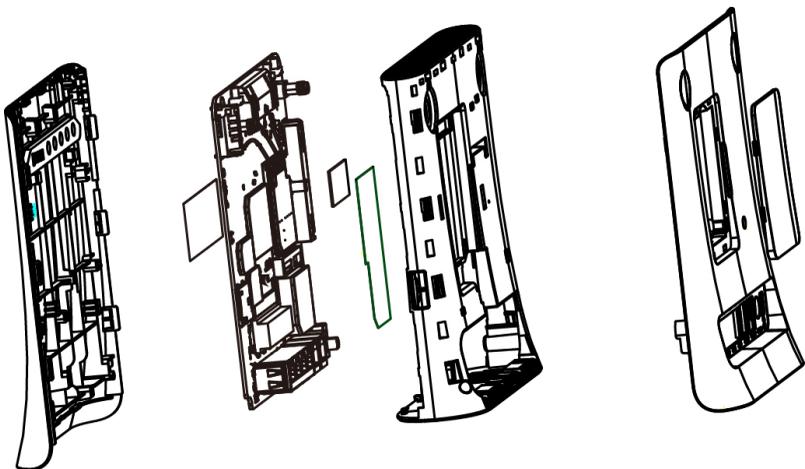
4. Disassembly

4.1 Disassembly Tools



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

4.2 Exploded View



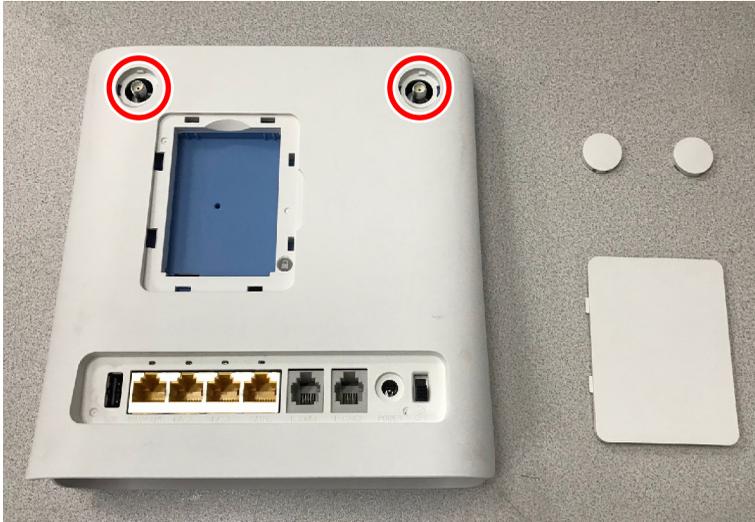
4.3 Disassembly Steps

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

1. Remove the plugs and battery cover.

NOTE:

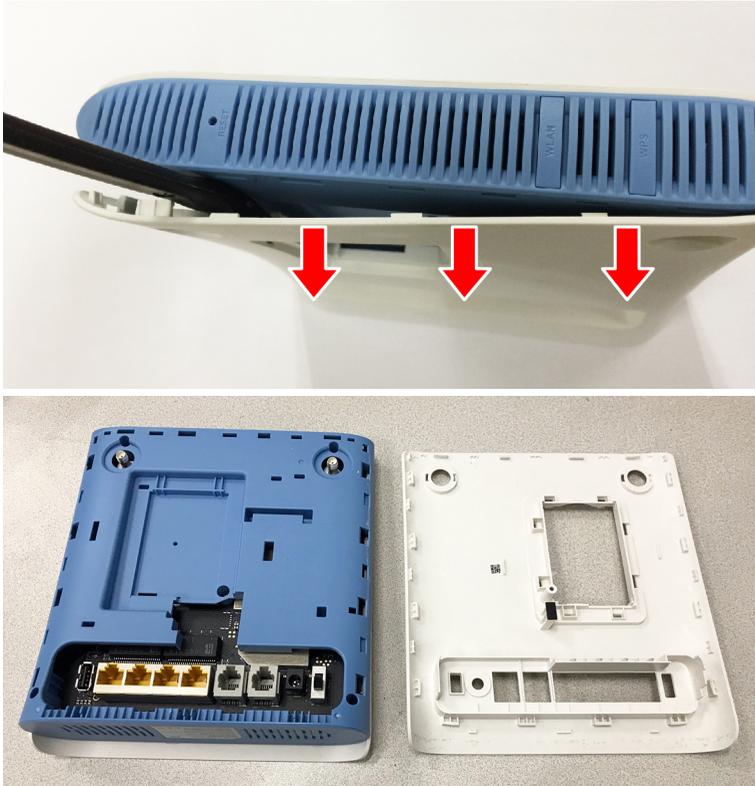
The left and right plugs are not interchangeable. Install them accordingly when reassembling the device.



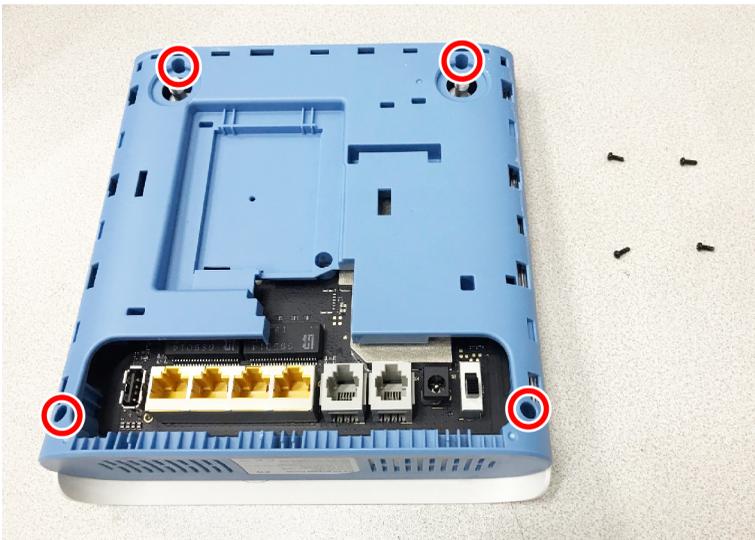
2. Remove the screw.



3. Separate the back cover.



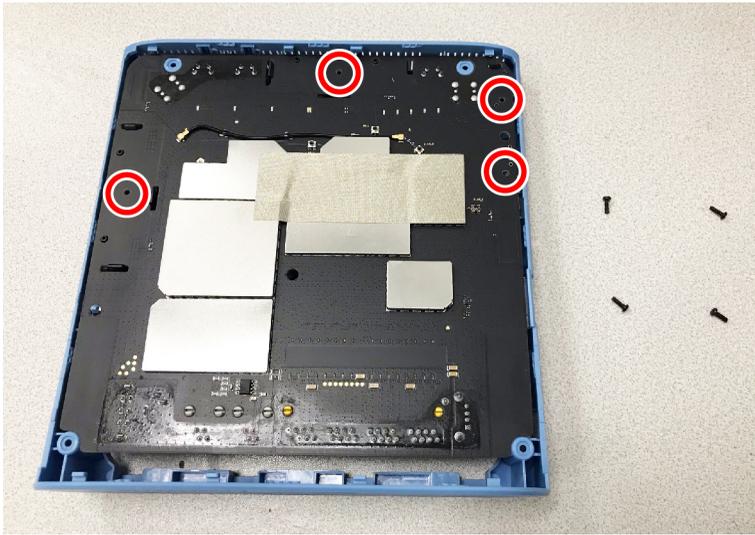
4. Remove the 4 screws from the middle cover.



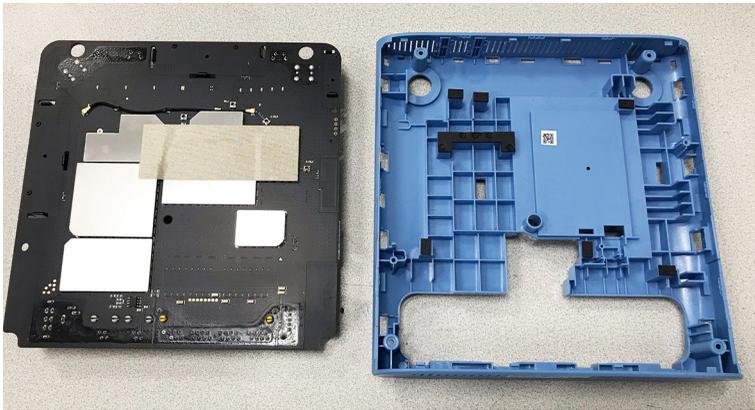
5. Separate the front cover and the middle cover.



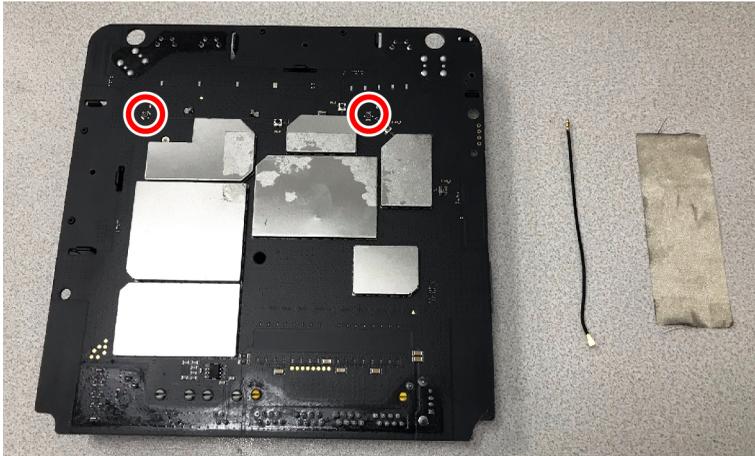
6. Remove the 4 screws from the mainboard.



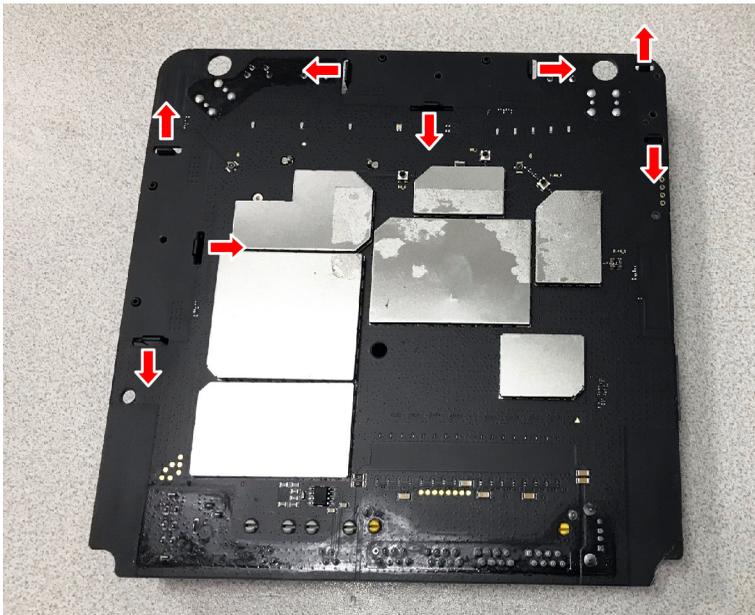
7. Remove the mainboard from the middle cover.

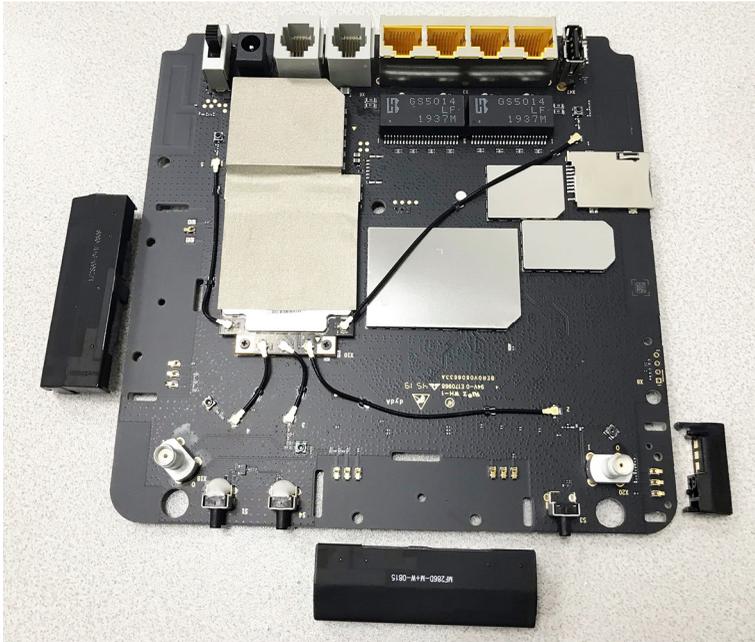


8. Remove the conductive cloth and the RF cable.

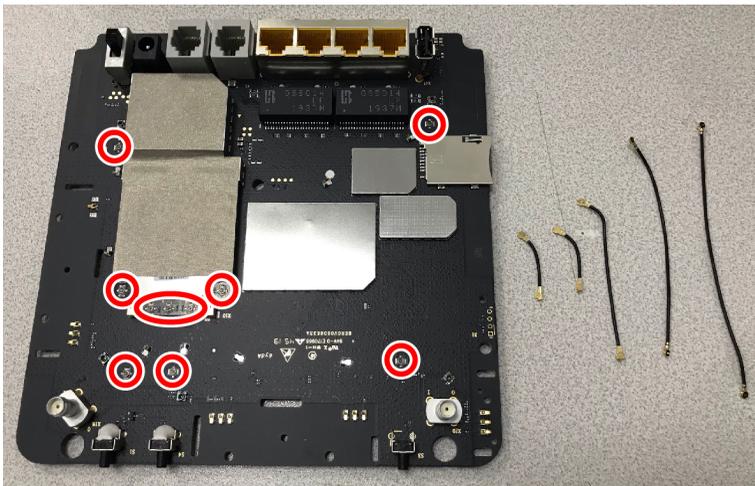


9. Unlock and remove the antennas.

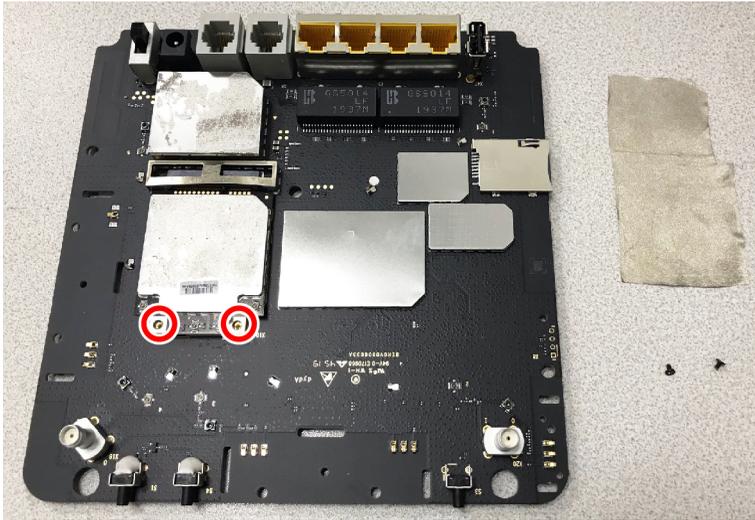




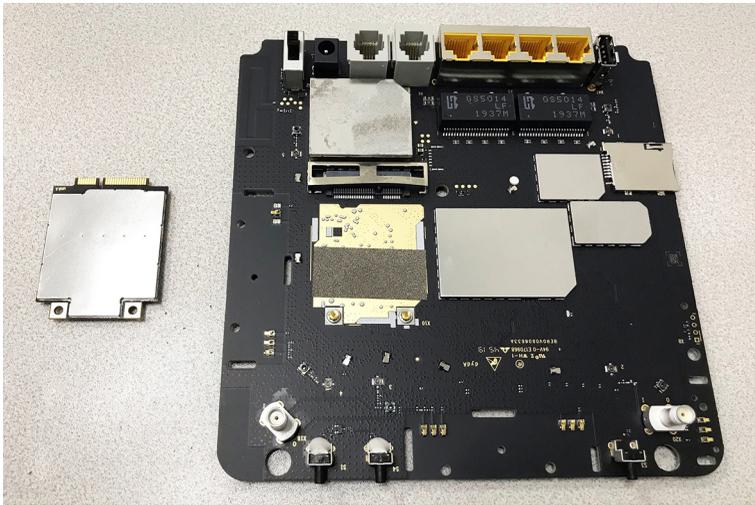
10. Remove the RF cables.



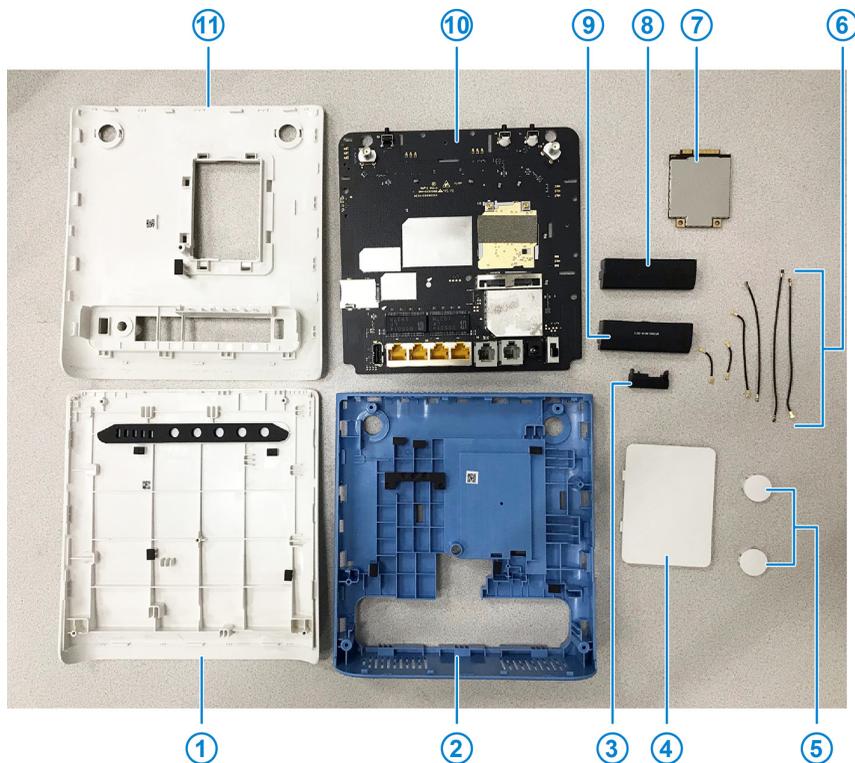
11. Remove the conductive cloth and then 2 screws from the module board.



12. Remove the module board.



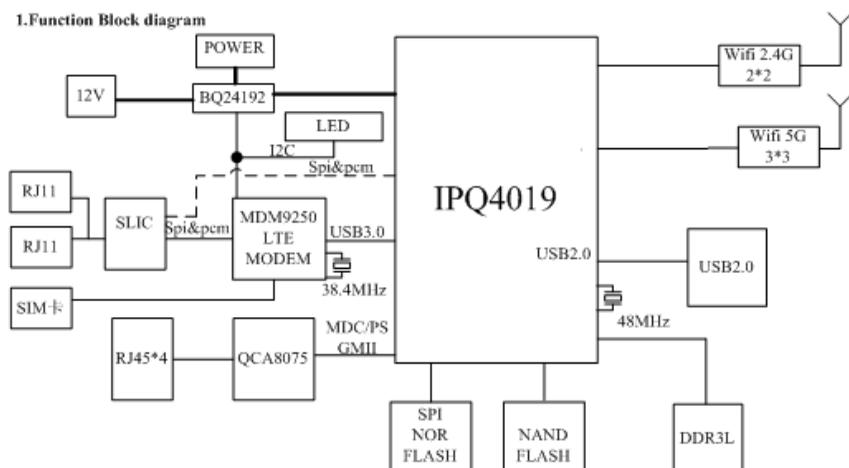
4.4 Composing



No.	Name	No.	Name
1	Front cover assembly	7	Module board
2	Middle cover assembly	8	Mid and low frequency antenna + Wi-Fi 5G-1 antenna
3	High frequency antenna	9	Diversity antenna + Wi-Fi 5G-2 antenna
4	Battery cover	10	Mainboard
5	Plugs	11	Back cover assembly
6	RF cables	-	-

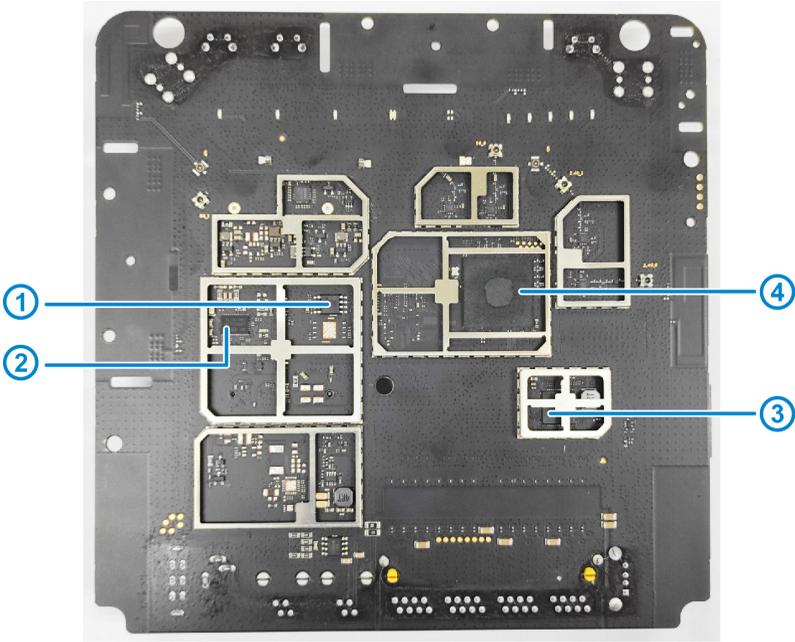
5. Principle and Logic Boards

5.1 Principle Block Diagram



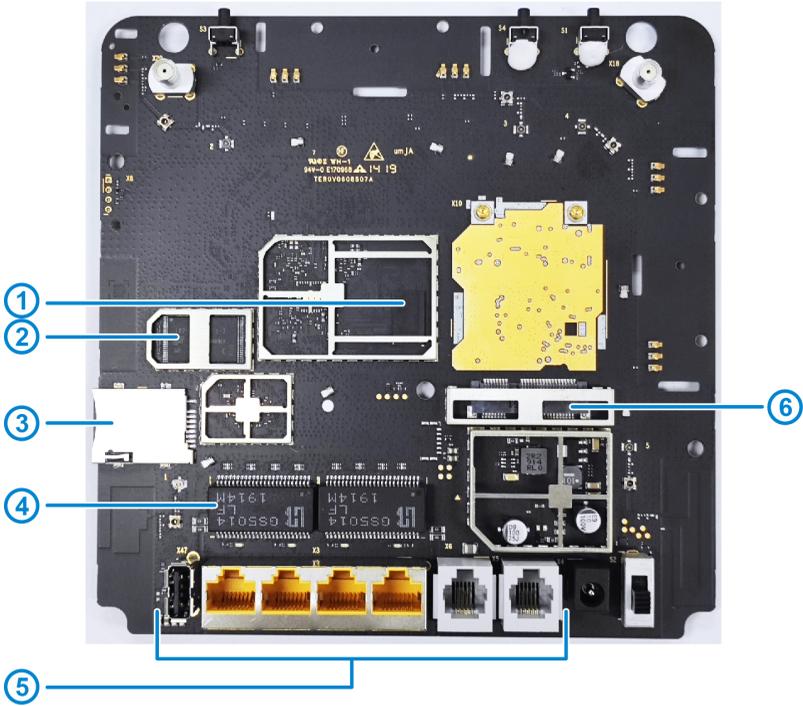
5.2 Basic Component Distribution

- Mainboard top view



No.	Name	No.	Name
1	16Mb SPI NOR flash	3	Ethernet transceiver
2	Single-channel battery-tracking SLIC	4	QUALCOMM SoC IPQ4019-0

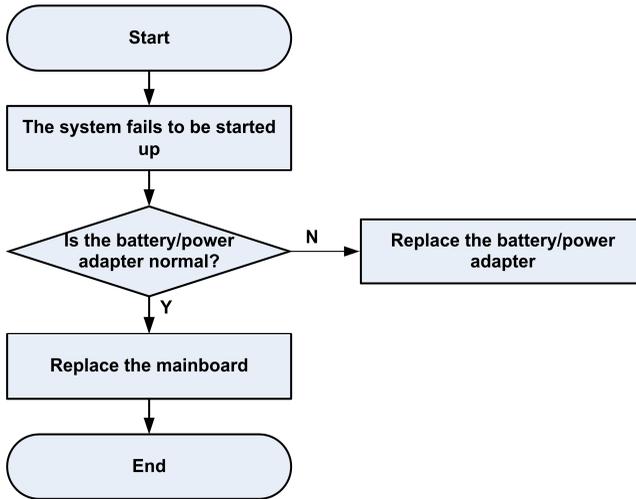
- Mainboard bottom view



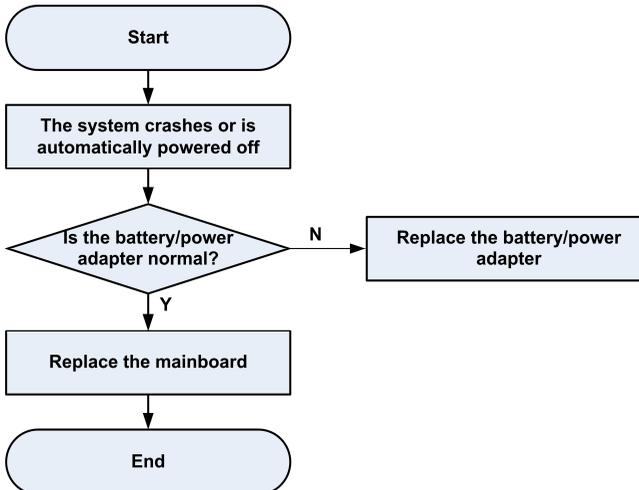
No.	Name	No.	Name
1	2Gb DDR3	4	1000M Base-T 2-Port Ethernet Transformer
2	1Gb NAND Flash	5	Interfaces
3	(U)SIM card slot	6	PCI EXPRESS mini card connector

6. Troubleshooting

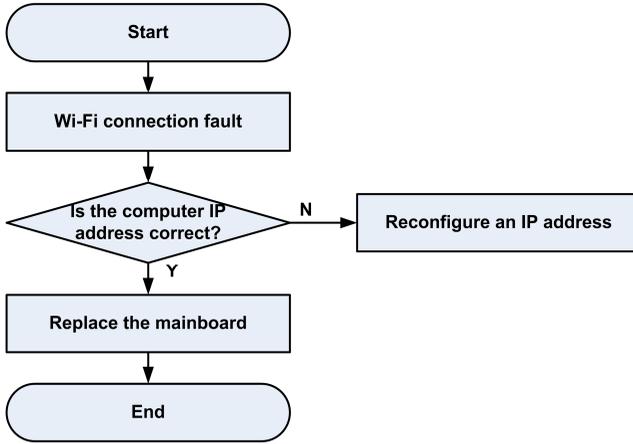
6.1 Startup Fault



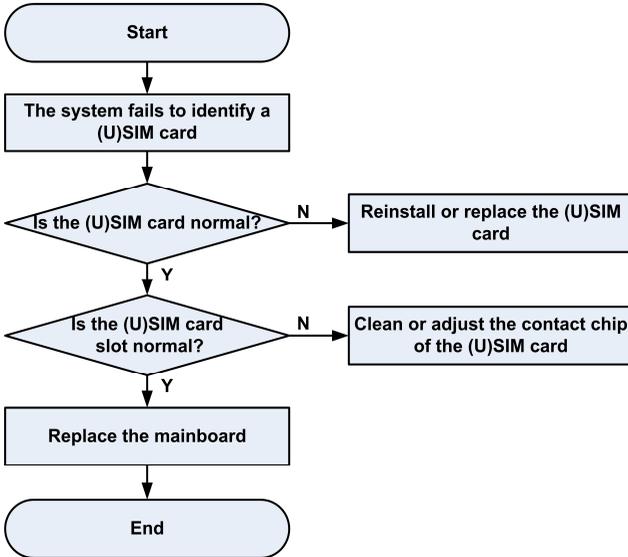
6.2 System Crashes / Automatically Powered Off



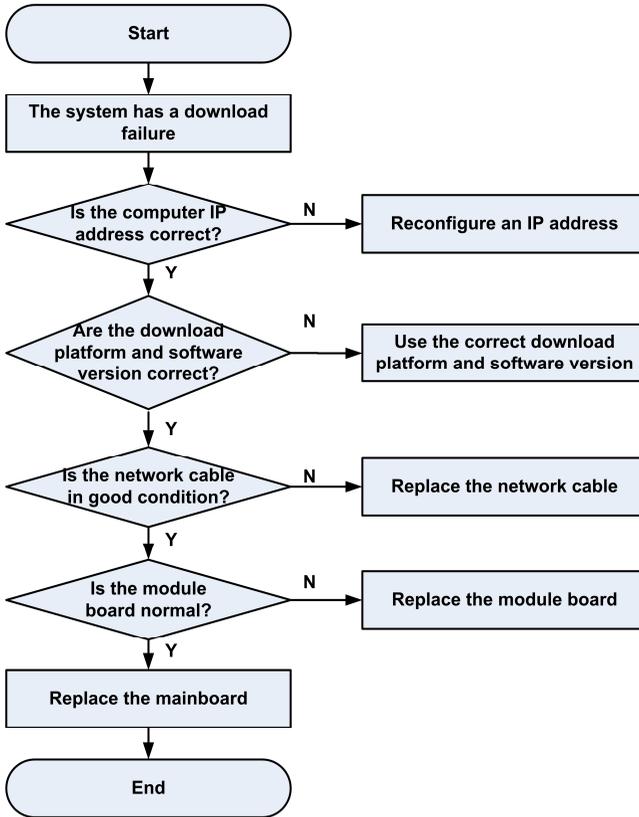
6.3 Wi-Fi Connection Fault



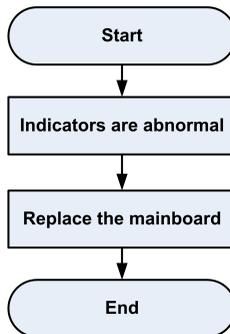
6.4 (U)SIM Card Unidentified



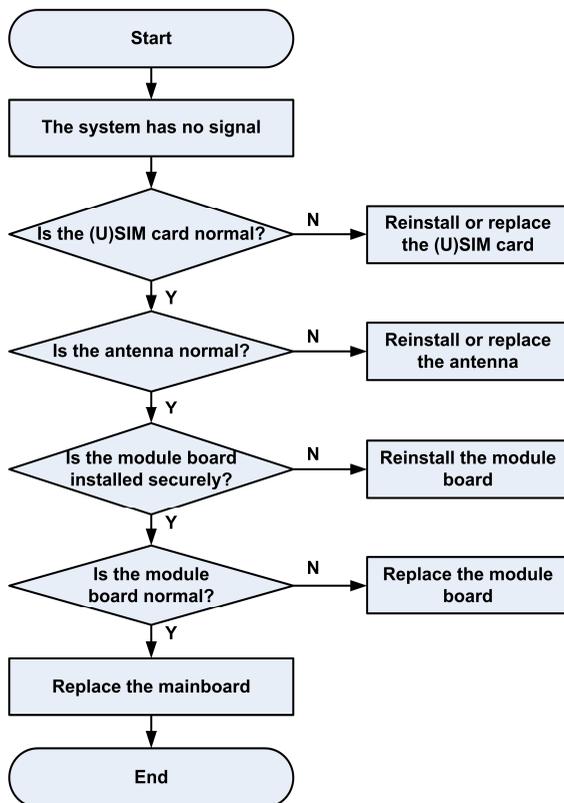
6.5 Download Fault



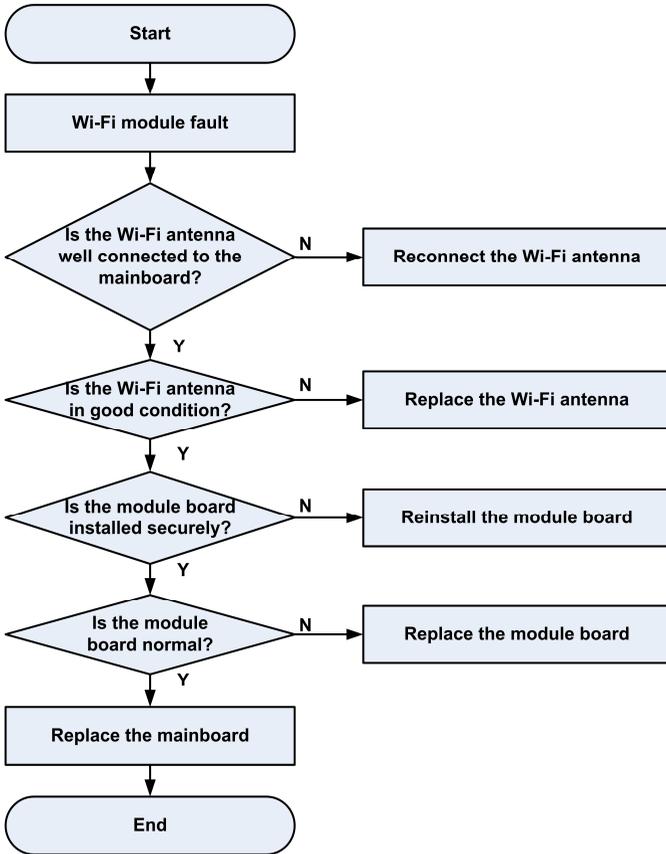
6.6 Abnormal Indicators



6.7 No Signal



6.8 Wi-Fi Module Fault



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 - 21:30) to learn more about our technical support for ZTE terminals.

