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

Version 1.0





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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 |
|-------------------------|--|---|
| | Dimensions (Height × Width × Depth) | 171.64 mm × 183.51 mm × 58.51 mm |
| Dhusiaal | Weight | About 458.2 g |
| Physical parameters | Frequency bands | FDD LTE: B1/B3/B7/B8/B20/B28 TDD LTE: B38 UMTS: 900/2100 MHz GSM: 850/900/1800/1900 MHz |
| | 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 |
| Technical parameters | Interfaces | RJ45*4, RJ11*2, USB-A*1 |
| parameters | 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 |
|---|---|---|------------------------------|
| Customer PASS Meet basic requirements PASS Confirm failure recurrence PASS | (1) Basic requirements | The accessories are complete. The anti-dismantle tag is not damaged. The waterproof tag has no color changes. The device is not physically damaged. | None |
| Test network NG connection | | The device is still under warranty. | |
| PASS Test WI-FI NG connection PASS NFF Faulty machine | (2) Failure recurrence | (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 | 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 | Perform stepsIf a fault occ faulty.If no fault is determined. | 1 to 4. urs at a step, terminate the test. found until the test is completed | This terminal is , NFF is |

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 vailid (U)SIM card is needed to access the Internet.

3. Software Download

3.1 Preparations

LAN cable



• Service software

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

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.

| ZTE Terminal Software Upda | te Framework - InstallShield Wizard | × |
|----------------------------|---|----|
| ZTE Terminal Software Upda | Welcome to the InstallShield Wizard for ZTE Terminal Software Update Framework The InstallShield Wizard will install ZTE Terminal Software Update Framework on your compute To continue, click Next. | ы. |
| InstallShield | Canc | el |

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

| ZTE Terminal Software Upda | te Framework - InstallShield Wizard | × |
|---|--|----|
| License Agreement Please read the following licens | se agreement carefully. | |
| | License Agreement Please read the following important information carefully before you go on your installation. The current "License Agreement" is an agreement established legally between you and written materials, relevant medias and possibly the on-line or electronic documents. Once you have installed, copied or used the current software product by any other means, it means that you have accepted to be bound by the clauses of the "License Agreement" hereof. Please don't use this software product if you choose not to agree with the clauses of the "License and", "TEE Corporation" owns the copyright of the software product, and is protected by the Copyright Law, the Universal Copyright Convention and the other laws and rules of intellectual property. Therefore you are not allowed to make copies of the software and rules of intellectual property. Therefore you are not allowed to make copies of the software and rules of intellectual property. Therefore product: is only for authorized use and not for sales of copyright. The "software product" is only for authorized use and not for sales of copyright. I go not accept the terms of the license agreement. | • |
| InstallShield | < Back Next > Can | el |

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

| ZTE Terminal Software Update | Framework - InstallShield Wizard | × |
|--|--|----|
| Customer Information Please enter your information. | | |
| | Please enter your name and the name of the company for which you work. | |
| | ∐ser Name: | |
| | zte | |
| | Company Name: | |
| | zte | |
| | | |
| InstallShield | < <u>B</u> ack <u>N</u> ext> Canc | el |

6. Select the installation directory and click Next.

| ZTE Terminal Software Update Framework - InstallShield Wizard 🔤 | | X |
|--|--|----------|
| Choose Destination Location Select folder where setup will install files. | | |
| | Install ZTE Terminal Software Update Framework to: C.\\ZTE Terminal Software Update Framework | nge |
| InstallShield | < Back | Cancel |

7. Click Install.

| ZTE Terminal Software Update | Framework - InstallShield Wizard | × |
|--|---|----------|
| Ready to Install the Program The wizard is ready to begin insta | lation. | |
| | Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to wizard. | exit the |
| InstallShield | < <u>B</u> ack [Install] Ca | ncel |

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

| ZTE Terminal Software Update | Framework - InstallShield Wizard |
|------------------------------|--|
| | |
| | InstallShield Wizard Complete The InstallShield Wizard has successfully installed ZTE Terminal Software Update Framework. Click Finish to exit the wizard. |
| InstallShield | < Back Cancel |

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.

| Install Wizard for the plugin | < |
|---|---|
| Welcome to the Install Wizard for the plugin | |
| The wizard will intall the Plugin on your computer. | |
| Information | |
| Version: V1.00.01 | |
| Platform: QualComm | |
| Device: MF286D | |
| Information: MF286D Update software. | |
| Path: D:\SUF_DL_MF286DV1.00.01.zas | |
| Please install. | |
| Install | |

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



The main interface of the download platform is as follows.

| | 2.00 | | | | | |
|---|---|---|---|---|---------------|----------|
| PORT | IMEI/MEID | VERSION | PROGRESS | RUNNING STATE | CONNECT STATE | USE TIME |
| USB_0 | - | - | | | DISCONNECT | |
| SW PA | н | | | | | |
| SW PA | | | | | | |
| nformation | H bease read the help | document before using | the software. | | | \frown |
| formation 1. Plo 2. Bet | H ease read the help fore upgrade, pleas | document before using se remove the USIM car- | the software. d and backup your p | versonal information. | 6 | |
| formation 1. Plo 2. Bet 3. Bet | H ease read the help fore upgrade, pleas fore upgrade, you m | document before using te remove the USIM care nust install the drive: | the software. d and backup your p r and select the ri | ersonal information. ght Software Version. | (| |

3.4 Download Software

- 1. Unzip the software packages.
- Copy the root_ulmage 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.

| PORT | IMEI/MEID | VERSION | PROGRESS | RUNNING STATE | CONNECT STATE | USE TIME |
|----------|------------------|--------------------|----------|------------------|---------------|----------|
| USB_0 | 0000000000000000 | CR_MF286DV0.0.0B04 | | Device is ready. | CONNECT | |
| soreware | Version | | | | | |
| SW P | on | | | | | |

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

| Option | Export <u>H</u> elp | | | | | |
|---|---|---|--|--|---------------|----------|
| PORT | IMEI/MEID | VERSION | PROGRESS | RUNNING STATE | CONNECT STATE | USE TIME |
| USB_0 | 000000000000000000000000000000000000000 | CR_MF286DV0.0.0B04 | | Device is ready. | CONNECT | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| oftware | Version | | | | | |
| CIA/ D | D INCOMPANY | | | | | |
| 344 67 | ATH D:\MF286DV1. | 0.0B02\3.Download_File | | | | |
| 307 P | ATH D:\MF286DV1. | 0.0B02\3.Download_File | | | | |
| 300 PA | D:(MF286DV1. | 0.0B02\3.Download_File | | | | |
| Informati | D:(MF286DV1. | 0.0802\3.Download_File | | | | |
| Informati | on lease read the help | 0.0802\3.Download_File | e software. | | | |
| informati 1. P 2. B | DINH286DVI. | 0.0802\3.Download_File document before using th se remove the USIM card = | e software. nd backup your p | ersonal information. | | |
| Informati 1. P 2. B 3. B | on lease read the help efore upgrade, plea | 0.0802\3.Download_Fie document before using th use remove the USIM card a must install the driver a | e software. and backup your p and select the ri | ersonal information. | (| |
| Informati 1. P: 2. B: 3. B: 4. D | on efore upgrade, plea efore upgrade, you | 0.0802\3.Download_Fle document before using th se remove the USIM card a must install the driver a | e software. and backup your p and select the ri | ersonal information. .ght Software Version. | | D |
| Informati 1. P. 2. B 3. B 4. D | on lease read the help efore upgrade, plea efore upgrade, you o not insert or rem | 0.0802\3.Download_Fle document before using th use remove the USIM card a must install the driver a ove any USB devices until | e software. and backup your p and select the ri the update is c | ersonal information. ght Software Version. complete. | | D |
| Informati 1. P: 2. B: 3. B: 4. D: | DYNAP2860V1. | 0.0802(3.Download_Fle document before using th se remove the USIM card a must install the driver a nove any USB devices until | e software. and backup your p and select the ri the update is c | ersonal information. ght Software Version. complete. | | D |

7. Click the start button to start the download.

| <u>Option</u> | Export <u>H</u> elp | | | | | |
|---|---|---|---|--|---------------|----------|
| PORT | IMEI/MEID | VERSION | PROGRESS | RUNNING STATE | CONNECT STATE | USE TIME |
| USB_0 | 0000000000000000 | CR_MF286DV0.0.0B04 | | Device is ready. | CONNECT | |
| | | | | | | |
| | | | | | | |
| Software | Version | | | | | |
| SW P | ATH D:\MF286DV1.0 | 0.0B02\3.Download_File | | | | |
| | | | | | | |
| | | | | | | |
| Informati | ion | | | | | |
| Informati 1. P | on lease read the help | document before using th | ne software. | | | |
| Informati 1. P 2. B | on lease read the help efore upgrade, plea: | document before using t se remove the USIM card | ne software. and backup your j | personal information. | | |
| Informati 1. P 2. B 3. B | on lease read the help efore upgrade, pleas efore upgrade, you p | document before using t se remove the USIM card aust install the driver | ne software. and backup your I and select the r: | personal information. ight Software Version. | (| |
| Informati 1. P 2. B 3. B 4. D | on lease read the help efore upgrade, pleas efore upgrade, you J o not insert or remo | document before using t se remove the USIM card must install the driver ove any USB devices unti | ne software. and backup your p and select the r: L the update is o | personal information. Ight Software Version. complete. | | |

8. Wait until the download is completed.

| No. of Concession, Name | Export: <u>H</u> e | p | | | | |
|--|--|---|--|--|--|---------|
| DODT | nucr/nucro | VERSION | DB0CDFCC | | CONVECT OT LTC | |
| PORT. | IMEI/MEID | CR ME286DV0.0.0R04 | PROGRESS | RUNNING STATE | CONNECT STATE | USE TIM |
| 058_0 | 000000000000000000000000000000000000000 | CR_MF280DV0.0.0804 | 95% | Downloading | CONNECT | |
| Software SW P/ Informati 1. P 2. B | Version ATH D:\MF286DV1 ion lease read the hel efore upgrade, ple | .0.0802\3.Download_Ffe p document before using th ase remove the USIM card a | e software. and backup your p | ersonal information. | | |
| 4. D | o not insert or re | move any USB devices until | . the update is c | omplete. | | - |
| low Coun 2TE Term <u>O</u> ption | nts: 0/0 <u>Clear</u> Al ninal Software Update I <u>Export: H</u> el | l Counts: 4/6 Last Clear Framework – MF286D P | Time: 01/20/202 | 0 08:54 | 01/20/2020 | 09:21:2 |
| Iow Coun 2TE Term Option | nts: 0/0 <u>Clear</u> A1 nnal Software Update I Export: <u>H</u> el | l Counts: 4/6 Last Clear Famework – MF286D P | Time: 01/20/202 | 0 08:54 | 01/20/2020 | 09:21:2 |
| Iow Coun 2TE Term Option PORT USB_0 | nts: 0/0 <u>Clear</u> A1 nnal Software Update (Export: <u>H</u> el IMEI/MEID 00000000000000 | 1 Counts: 4/6 Last Clear Framework – MF2860 P VERSION CR_MF286DV0.0.0804 | Time: 01/20/202 PROGRESS 100% | 0 08:54 RUNNING STATE download success | 01/20/2020 CONNECT STATE CONNECT | 09:21:2 |
| Tow Count ZTE Term Option PORT USB_0 Software SW P/ | xt s: 0/0 Clear A11 Innal Software Update Export He Imer/MEID 0000000000000 000000000000000000000000000000000000 | 1 Counts: 4/6 Last Clear Famework – MF286D P VERSION CR_MF286DV0.0.0804 | Time: 01/20/202 PROGRESS 100% | 0 08:54 RUNNING STATE download success | 01/20/2020 | 09:21:2 |
| Iow Coun 2TE Term Option PORT USB_0 Software SW P/ Informati 1. P | tta: 0/0 Clear A1 mmal Software Update Export: He IMEU/NEID 0000000000000000 Version ATH D:\\F286DV1 bon lease read the hell | 1 Counts: 4/6 Last Clear Famework – MF2860 p VERSION CR_MF2860V0.0.0804 .0.0802(3.Download_File | Time: 01/20/202 PROGRESS 100% e software. | 0 08:54 RUNNING STATE download success | 01/20/2020 CONNECT STATE CONNECT | 09:21:2 |
| Iow Count 21E Term Option PORT USB_0 Software Sw P/ 1. P. 2. B: 3. B: | xts: 0/0 Clear A1 mnal Software Update Export He MEYMEID 0000000000000000 Verson ATH D:\WF286DV1 on lease read the hell efore upgrade, plot | 1 Counts: 4/6 Last Clear Framework - MF286D P VERSION CR_MF286DV0.0.0804 .0.0802(3.Download_F/e p document before using th ase remove the USIM card a must install the driver a | Time: 01/20/202 PROGRESS 100% se software. md backup your p md select the ri | 0 08:54 RUNNING STATE downbod success ersonal information. ght Software Version. | 01/20/2020 | 09:21:2 |

13

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 (<u>https://www.ztedevices.com</u>). 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 <u>https://www.ztedevices.com/en/support/hotlines</u>.

| 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 | | | |

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