

ZTE MF605

Wireless Modem

User Manual

Introduction

Thank you for choosing the ZTE MF605 Wireless Modem. To get the most from your modem and to keep it in the best condition please read this manual carefully.

The pictures, symbols and contents in this manual are for reference only. They might not be completely identical with your modem. ZTE operates a policy of continuous development. We reserve the right to update the technical specifications in this document at any time without prior notice.

Please Note

Before you can use your wireless modem you will need to enter the PIN number supplied by Telstra. See Section 2.5. If you do not enter your PIN number correctly you will hear a series of tones. Follow the installation section then log on to the modem through your PC to enter the PIN. If you do not have a PC you will need to disable the PIN number on the (U)SIM card using a mobile phone.

Only use the power supply that comes with this unit. Do not use third party or generic power supplies as this will invalidate the warranty and may reduce the protection of the device.

Glossary

- AC: Alternating Current
- APN: Access Point Name
- BATT: Rechargeable battery
- CID: Caller Identification
- DC: Direct Current
- DNS: Domain Name System (or Service or Server)
- EDGE: Enhanced Data GSM Evolution
- Ethernet: A frame-based computer networking technology for local area networks (LANs)
- GSM: Global System for Mobile Communications
- GPRS: General Packet Radio Service
- HSDPA: High Speed Downlink Packet Access
- IP: Internet Protocol
- LAN: Local Area Network
- LED: Light Emitting Diode
- MHz: Megahertz
- PDP: Packet Data Protocol
- PIN: Personal Identification Number
- PSTN: Public Switched Telephony Network
- PUK:PIN Unlocking Key
- RSSI: Radio Signal Strength Indicator
- RF: Radio Frequency.
- (U)SIM: Subscriber Identification Module
- WCDMA: Wideband CDMA (Code-Division Multiple Access).

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1 General Information

1.1 Safety Precautions

- Some electronic devices may be susceptible to electromagnetic interference. Locate the modem away from TV sets, radio and other electronic equipment to avoid electromagnetic interference.
- The modem may interfere with medical devices like hearing aides and pacemakers. Consult a physician or the manufacturer of the medical device before using the WAT.
- Do not use your modem in dangerous environments such as oil terminals or chemical factories where there are explosive gases or explosive products being processed.
- Please use original accessories or accessories that are authorized by ZTE. Unauthorized accessories may affect the modem performance, damage the modem or cause danger to yourself.
- Do not attempt to dismantle the modem. There are no user serviceable parts.
- Do not allow the modem, battery or accessories to come into contact with liquids or moisture at any time. Do not immerse the modem in any liquid.
- Do not disassemble or modify the battery.
- There is a risk of explosion if incorrect batteries are used. Only use original or ZTE authorized batteries.
- Please dispose of used batteries at your local council depot or recycling centre. Do not throw used batteries into household rubbish.
- Do not place objects on top of the modem. This may lead to overheating of the device.
- Do not expose the modem to direct sunlight or store it in hot areas. High temperature can shorten the life of electronic devices.
- Do not touch the antenna while calling.
- Do not allow children to play with the modem, charger or battery.
- It is highly recommended to charge the battery before initial use. The battery might have been discharged during storage and delivery.
- Keep the length of the cable between the modem and the phone less than 10 meters.

- The modem is for indoor use only. Do not use the modem outside. Do not connect telephone extensions which run outside of the building and do not connect external antennas. These can result in lightning damage to your unit.

1.2 Cleaning and Maintaining

- Use an anti-static cloth to clean the modem. Do not use chemical or abrasive cleaners as these could damage the plastic case. Turn off your modem before you clean it.
- Use the modem within the temperature range of 0°C ~50°C and the humidity range of 25%~85%.
- Do not use your modem during a thunderstorm. Remove the mains power pack from the wall socket.
- Do not take out your (U)SIM card unnecessarily. The (U)SIM card may be easily lost or it can be damaged by static electricity.
- Please do not touch the antenna with your hand during conversation. Covering the antenna may affect call quality, may cause the modem to operate at higher power level than needed, and may shorten talk and standby time.

1.3 Limited Warranty

- This warranty does not apply to defects or errors in the Product caused by:
 - (a) Reasonable Modem Appearance Disfiguration.
 - (b) End User's failure to follow ZTE's installation, operation or maintenance instructions or procedures.
 - (c) End User's mishandling, misuse, negligence, or improper installation, disassemble, storage, servicing or operation of the Product.
 - (d) Modifications or repairs not made by ZTE or a ZTE-certified individual.
 - (e) Power failures, surges, fire, flood, accident, actions of third parties or other events outside ZTE's reasonable control.
 - (f) Usage of products of third Parties, or usage in conjunction with third party products provided that such defects is due to the combined usage.
 - (g) Any other cause beyond the range of normal usage for Products. End User shall have no right to reject, return, or receive a refund for any Product from ZTE under the above mentioned situations.

- This warranty is end user's sole remedy and ZTE's sole liability for defective or nonconforming items, and is in lieu of all other warranties, expressed, implied or statutory, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, unless otherwise required under the mandatory provisions of the law.
- This warranty is not transferable. This warranty is only valid for the original purchaser and does not apply to any subsequent purchaser / end user.

1.4 Limitation of Liability

ZTE shall not be liable for any loss of profits or indirect, special, incidental or consequential damages resulting from or arising out of or in connection with using of this product, whether or not ZTE had been advised, knew or should have known of the possibility of such damages, including, but not limited to lost profits, interruption of business, cost of capital, cost of substitute facilities or product, or any downtime cost.

1.5 Emergency Dialing

Do not rely on the wireless modem to provide emergency dialing in all situations.

Your wireless modem only supports emergency dialing when there is power and connection to the mobile network. If the power fails the unit will run on battery for a limited period of time. If you have no network coverage you will not be able to make emergency calls. The wireless modem does not include a lifeline facility (wired access to the PSTN).

Emergency calls can still be made when your (U)SIM card is faulty, missing or when it is PIN or PUK locked.

2 Installation

2.1 Parts Supplied

Parts	Quantity
Wireless Modem	1
Rechargeable battery (Ni-MH)	1
External power adapter	1
Antenna	1
User manual	1
Certificate of quality	1
Ethernet cable (Crossover style)	1

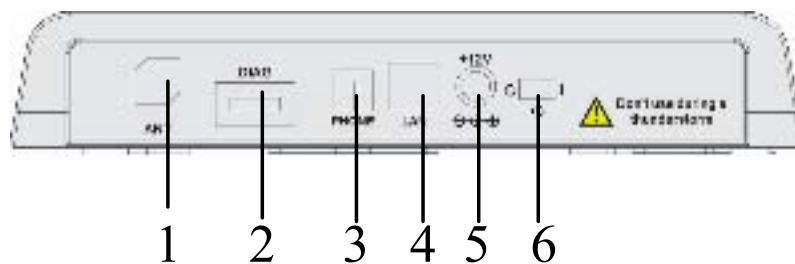
2.2 Modem Appearance



Top View

Left View

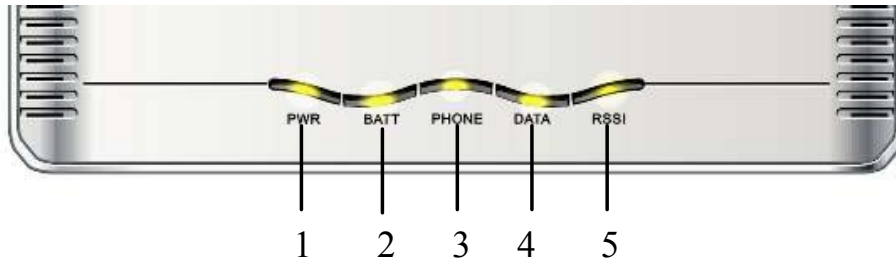
Bottom View



Rear View of Modem

1. **ANT**: Antenna connector.
2. **DIAG**: Test and diagnostic interface for factory use only.
3. **PHONE**: Standard RJ11 connector for Telephone.
4. **LAN**: Ethernet connection to your computer.
5. **Power Socket**: Connection to the external power supply.
6. **Power Switch**: Turn the modem **On** or **Off**.

2.3 LED Indicator Function

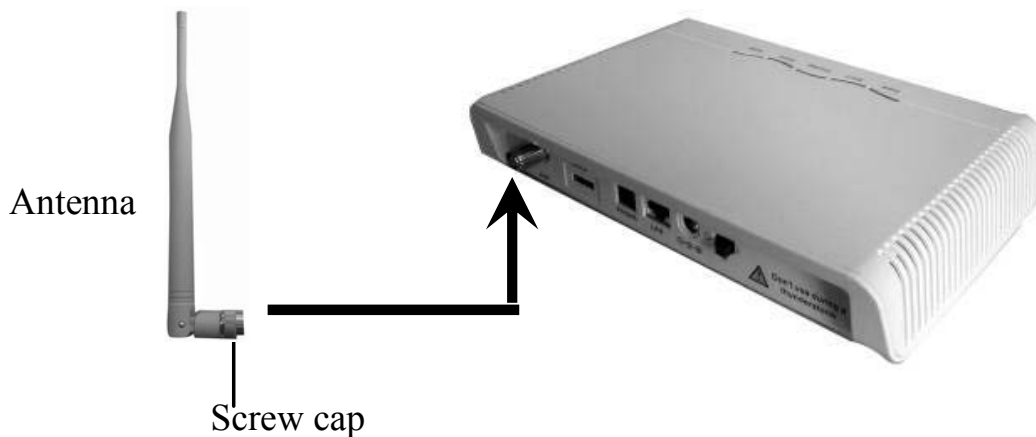


Indicator	State	Description
1. PWR (power)	ON	External power supply is connected.
	OFF	External power supply is disconnected.
2. BATT(battery)	ON	Unit is on and running on battery.
	Blinking	Low voltage alert.
	OFF	Unit is running on external power supply.
3. PHONE	ON	The phone is off hook.
	OFF	The phone is on hook.
4. DATA	Blinking	The modem is transmitting or receiving data to the computer.
	OFF	DATA interface is not being used.
5. RSSI (Radio Signal strength indicator)	ON	RF signal is normal.
	Blinking	RF signal is poor.
	OFF	RF signal is not available.

2.4 Installation

a) Connect the Antenna

Hold the antenna and rotate the screw cap gently in a clockwise direction. **Do not rotate the antenna directly.**



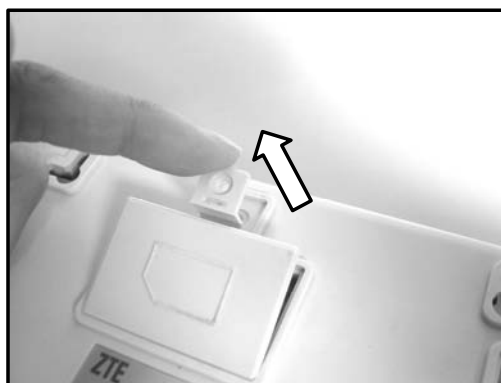
Antenna Installation

Note: Do not put anything on the top of modem or antenna.

b) Insert the (U)SIM Card

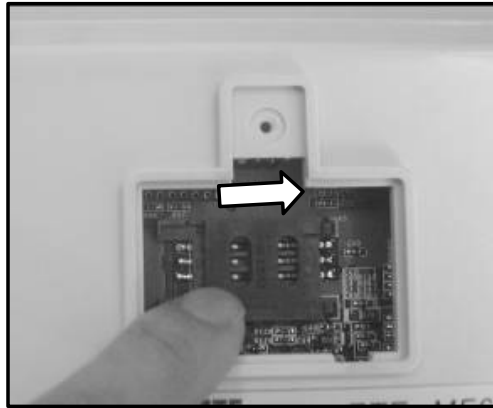
Please make sure the power is off before inserting your (U)SIM card. Handle the (U)SIM card by the edges only to avoid damage to the card.

i) Lift the cover up and remove it.



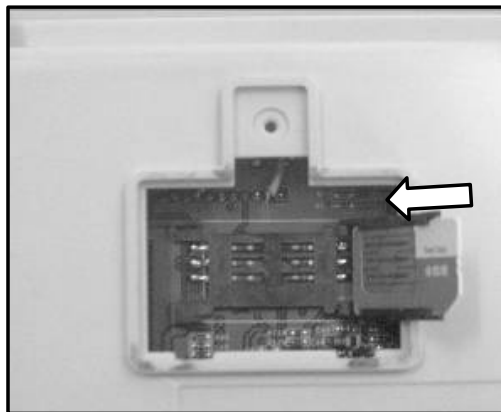
Open the Cover

ii) Push the (U)SIM card holder towards the right (as shown) to unlock, and then lift the (U)SIM card holder upwards.



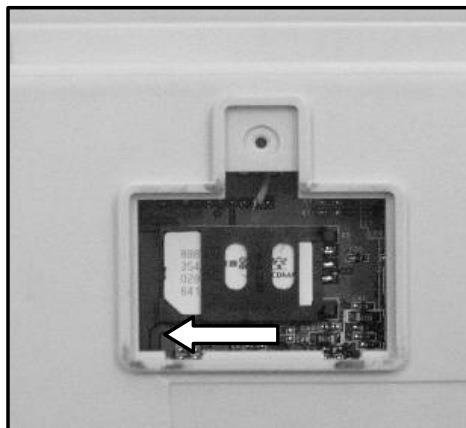
Open the Holder

iii) Slide the (U)SIM card into the (U)SIM card slot. Make sure that the gold contacts of the card are facing downwards and that the beveled corner matches with the (U)SIM card slot.



Slide the (U)SIM Card in

iv) Close the (U)SIM card holder and lock into place



Close the Holder

v) Close and secure the back cover.

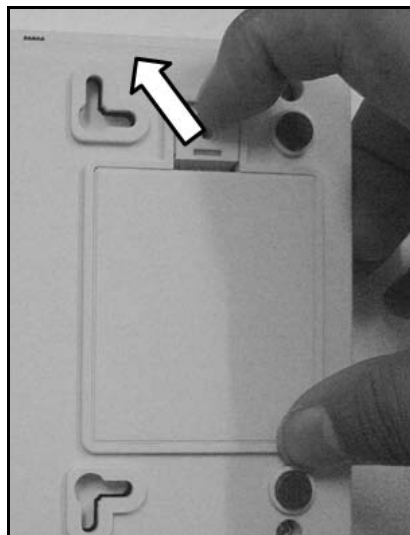


Close the Cover

Note: The (U)SIM card provided can only be used specifically for this modem and not in other mobile devices.

c) Install the battery

i) Open the battery cover and remove it.



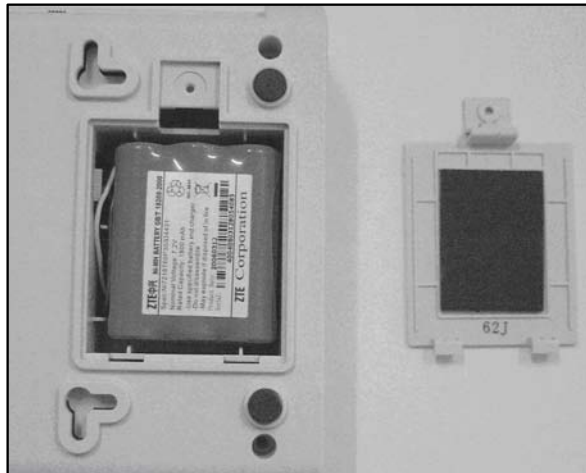
Open the Cover

ii) Insert the battery plug into the socket inside the battery compartment



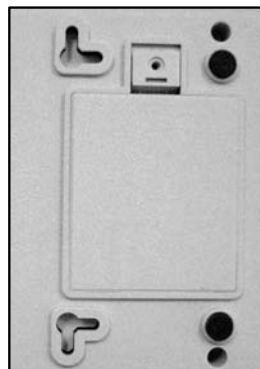
Connect the battery plug

iii) Insert the battery



Insert the Battery

iv) Close and secure the back cover.



Close the Cover

- d) Plug your telephone into the PHONE interface
- e) Connect your PC to the LAN interface using the Ethernet cable (RJ45) supplied.
- f) Plug the power adaptor into a standard power outlet and insert the plug into the modem power socket.
- g) Turn on your modem and power up your PC

2.5 Enter your PIN number to activate the (U)SIM Card

Switch on your PC and launch Internet Explorer. Navigate to the homepage of the modem by typing '<http://192.168.0.1>' into the address bar.

Enter your PIN number in the PIN request screen.

PIN Tones

If you have not entered your PIN number you will hear a high beep tone when you pick up the telephone. You will not be able to make calls or surf the internet until you enter you PIN number.

The **PIN Code Required Tone** is 3 quick beeps in 1 second followed by a 3 second pause. Repeats indefinitely.

The **PUK Code Required Tone** is 5 quick beeps in 1.8 seconds followed by a 1.2 second pause. Repeats indefinitely.

Please contact Telstra for assistance with your PIN and PUK codes.

2.6 Power Supply and Battery back-up

For normal operation connect the modem to the external power adapter. In case of power failure or when there is no available external power supply the modem will run on the rechargeable battery.

The battery is automatically charged when external power supply is connected.

When the rechargeable battery is drained the BATT indicator will begin to blink. Please connect the external power adapter.

Normal charge time is about 9 hours. It usually takes at least three charge and discharge cycles for the battery to reach full capacity. Please charge the battery fully and then allow it to discharge by disconnecting the external power supply. Repeat this a few times to condition to the battery and maximize its capacity.

2.7 Notes on Service and Coverage

If you cannot get service make sure:

- You are in an area which has sufficient network coverage
- You are using the correct (U)SIM card
- You have entered your PIN or PUK code using the web interface
- If the RSSI (Radio Signal Strength Indicator) LED is blinking constantly then try moving the modem to another location.
- Please wait 1-2 minutes for the modem to initialize, attach to the network and obtain an IP address.

3 Voice Calls

3.1 Making a Call

Before making a call, make sure:

- a) The PWR or BATT light is on.
- b) The RSSI light is on.
- c) The telephone cable (RJ11) is connected properly.
- d) The PHONE light comes on when you pick up the handset
- e) The (U)SIM card is installed and the PIN number has been entered.

Note: The modem still supports Emergency Dialing when the (U)SIM card is PIN or PUK locked and when no (U)SIM card is inserted.

1. Pick up the handset.
2. Key in the telephone number.
3. You can either press **# key** on the telephone to send the call, or wait 4 - 8 seconds for the call to be connected automatically.
4. Call will be connected.

Note: When there is no RSSI indication it indicates weak RF signal or the antenna screw is loose. Change the location of the modem and make sure nothing is blocking it or check the antenna installation.

3.2 Making a Trunk Call

If you are making a trunk call, add the area code as normal.

Eg. 03 9612 3456

3.3 Making an International Call

If you are making an international call, key in the international access code followed by the country code, area code and number.

Eg. 00 11 64 12 345678

3.4 Receive an Incoming Call

When the phone rings, pick up the handset to answer it as normal. Put the handset back on hook to end the call

4 Internet Access

The modem does not require any drivers, and it supports all operating systems with Ethernet LAN capability, such as Microsoft Vista, Windows 98, 2000, ME, XP, and MAC OS X.

4.1 Connecting to the Internet

Before using the data service, make sure:

- (1) The PWR or BATT light is on.
- (2) The RSSI light is on.
- (3) The crossover Ethernet cable is connected properly.
- (4) The DATA light is blinking.
- (5) (U)SIM card is inserted and the PIN (or PUK) has been entered in the web interface.

Web browser requirement:

It is suggested that you use one of these web browsers to connect to the internet.

- IE 6.0 or above
- Firefox 1.5.0.0
- Netscape version 8.1

4.2 Changing Settings

Do not change any settings unless instructed by your service provider. To make changes to your settings you need to disconnect the modem from the network.

After making changes reboot your modem by switching off and on again.

4.3 System Information Pages

Open a web browser and enter “ <http://192.168.0.1>” in the address bar. You can add this address to your favorites and save it as the Modem Home Page.

The screenshot displays the System Information page of a Telstra ZTE modem. The page is titled with the Telstra logo on the left and the ZTE中兴 logo on the right. A navigation menu on the left side includes buttons for Home Page, Network Connect, Network Select, Band Settings, APN Settings, Reset, and Help. The main content area is organized into three sections:

- Wireless Network Information:**

Network Provider	Telstra
Network Type	UMTS
RSCP	-81 dBm
Cell ID	7192
LAC Code	505 1 0x151
- Modem Information:**

IMEI	123232352345670
Control and route module software version	MF605_CR_T02
Wireless access module software version	MF605_WA_T02
Hardware version	P670M4-1.0.0
- Data Statistics:**

Connection Status	Connected
Total Data Recv	60.65MB
Total Data Sent	8.43 MB

A Refresh button is located at the bottom right of the page.

System Info Page

Press the **Refresh** to update the system information.

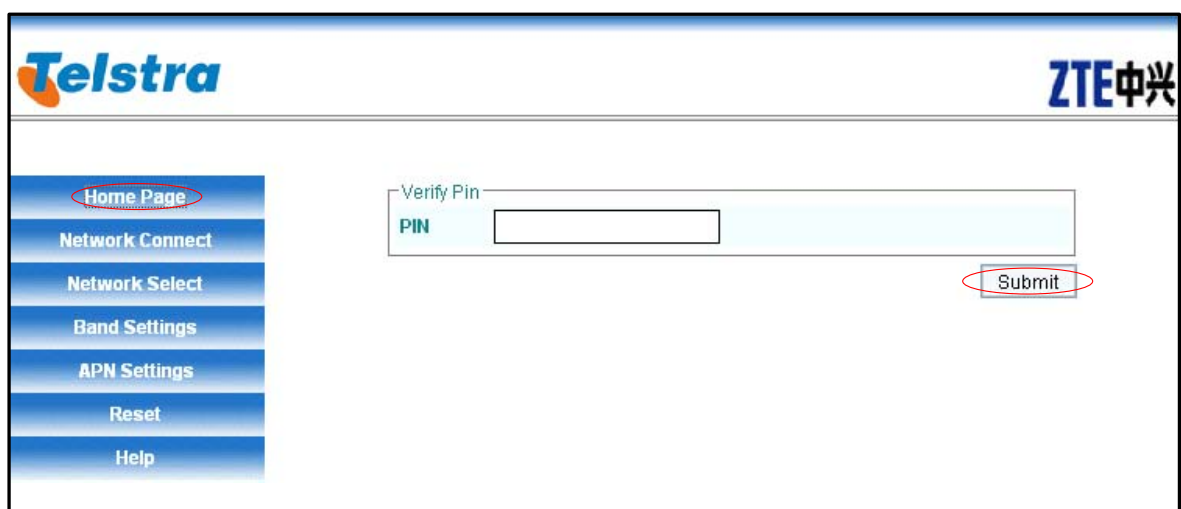
Depending on the state of your (U)SIM card, there are three option pages as shown:

1. No (U)SIM card inserted



Please check and re-insert the (U)SIM card supplied by Telstra.

2. Please enter your PIN number



Enter the PIN number supplied by Telstra and Press **Submit** to confirm.

3. If you have entered you PIN number incorrectly three times you will need to get the PUK code from Telstra



The screenshot shows the Telstra ZTE中兴 mobile phone settings interface. On the left is a vertical menu with options: Home Page, Network Connect, Network Select, Band Settings, APN Settings, Reset, and Help. The 'Home Page' option is circled in red. The main area is titled 'Verify Puk' and contains three input fields: 'PUK', 'New PIN', and 'Re-type New PIN'. A 'Submit' button is located at the bottom right of the form area and is also circled in red.

- **PUK:** Enter the PUK code.
- **New PIN:** Enter a new PIN code of your choice
- **Re-type New PIN:** Enter the new PIN code again.

Press **Submit** button to confirm your choice.

4.4 The Network Connect Page

Network Connection Mode

Auto Connecting

Manual Connecting Connect Internet

Submit

- **Auto Connecting:** Default, unit will auto connect to the Internet.
- **Manual Connecting:** Connecting/Disconnect Internet by yourself. Press **Submit** button to confirm your choice.

4.5 The Network Select Page

Band Selection Mode

WCDMA preferred

GSM preferred

Only WCDMA

Only GSM

Submit

- **WCDMA Preferred:** Default and recommended Unit will search valid network according to the priority: WCDMA->GSM.
- **GSM preferred:** Unit will search valid network according to the priority: GSM->WCDMA.
- **Only WCDMA:** Unit will only search WCDMA network.
- **Only GSM:** Unit will only search GSM network.

Press the **Submit** button to confirm your choice.

4.6 The Band Settings Page

Telstra **ZTE中兴**

Home Page
Network Connect
Network Select
Band Settings
APN Settings
Reset
Help

Band Settings

Auto
 3G 850 Only and 2G 900/1800
 3G 2100 Only and 2G 900/1800
 3G Only (850 and 2100)

Submit

Band Settings

- **Auto:** Default, unit will select the Frequency band automatically.
- **3G 850 Only and 2G 900/1800:** The unit is limited to 3G 850MHz or 2G 900/1800MHz only.
- **3G 2100 Only and 2G 900/1800:** The unit is limited to 3G 2100MHz or 2G 900/1800MHz only.
- **3G Only (850 and 2100):** The unit is limited to 3G 850/2100MHz only.

Press the **Submit** button to confirm your choice.

4.7 The APN Settings Page

The screenshot shows the 'APN Settings' page. On the left is a navigation menu with the following items: Home Page, Network Connect, Network Select, Band Settings, **APN Settings** (highlighted), Reset, and Help. The main content area is titled 'Network Authentication' and contains several sections:

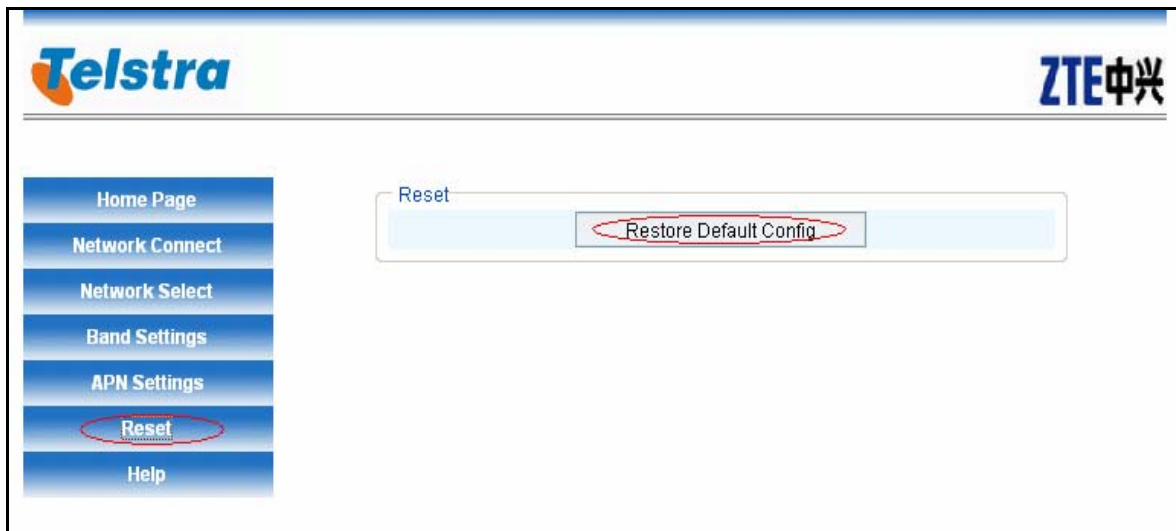
- Network Authentication:** Radio buttons for CHAP (selected) and PAP. Below are input fields for User Name (Telstra), Password (masked with dots), and Re-type Password (masked with dots).
- APN:** Radio buttons for Auto APN and Manual APN (selected). Below are input fields for Dial No. (*99#) and APN (Telstra.internet).
- PDP Type:** Radio buttons for IP (selected) and PPP.
- DNS:** Radio buttons for Auto DNS (selected) and Manual DNS. Below are input fields for Preferred DNS and Standby DNS, each with four empty boxes for digits.
- PDP:** Radio buttons for Auto PDP (selected) and Manual PDP. Below is an input field for PDP Address with four empty boxes for digits.

A 'Submit' button is located at the bottom right of the form area.

APN Settings

- **Network Authentication:** CHAP (default), or PAP. Leave the username and password blank or consult Telstra for more details.
 - **APN:** There is no need to change the **Manual APN** (Default). This is set by Telstra and should not be changed. The **Dial No** is “*99#”. The **APN** is “Telstra.internet”.
 - **PDP Type:** Default is IP.
 - **DNS:** Select **Auto DNS** (Default) or **Manual DNS**. If you select **Manual DNS**, please enter DNS address.
 - **PDP:** Select **Auto PDP** (Default) or **Manual PDP**. If you select **Manual PDP**, please enter PDP address.
- Press **Submit** button to confirm.

4.8 The Reset Page



Press **Restore Default Config** to restore the factory settings.

4.9 Help

Click **“Help”** to display the modem user guide.

4.10 Disconnecting from the Internet

If you want to end your Internet session, you should:

- Select **“Disconnect Internet”** on **Network Connect** page and click **“Submit”** button to confirm it.
- Or switch off the modem.
- Or unplug the Ethernet cable
- Or disconnect the active connection using your PC options.

5 Troubleshooting

- 1) Make sure the modem is set up and all the cables are connected correctly.
- 2) Check the RSSI, DATA/PHONE and PWR/BATT LED's are lit and NOT in a blinking state or off.

5.1 Voice Related Problems

Symptoms	Possible Problems/ Solutions
No Dial Tone.	Please wait for 1~2 minutes after the modem is switched ON. If RSSI is blinking then you have no network reception. Relocate the modem or antenna position.
There is a series of 3 or 5 beeps when I lift the phone off the hook.	Make sure your (U)SIM card is inserted correctly and the PIN number has been entered. If the PIN number has been entered incorrectly then you will need to enter the PUK code when prompted..

Symptoms	Possible Problems/ Solutions
The line is noisy/ distorted when I lift the phone off the hook.	Remove any electrical appliance which is too close to the phone or modem. The cable or phone set might be faulty.
I hear a rapid engaged tone as soon as I lift the phone off the hook.	Put the phone on hook and try again. If you are connected to the internet using the 2G (GSM) network, please disconnect this first.
After dialing the last digit I hear nothing / silence.	When you have finished dialing you can press the # key or wait 4-8 seconds to connect the call.
I can't make or receive a call when I am surfing on the net.	If you are connected to the 2G (GSM) network then you cannot surf the net and make a phone call simultaneously. Please disconnect the internet and wait 30 seconds to 1 minute before making a call.

5.2 Internet Related Problems

Symptoms	Possible Problems/ Solutions
I cannot access the internet at all.	Please check your configuration settings. Please wait 1~ 2 minutes for the modem to initialize. Check your service indicator LED's.
The download or upload speeds are very slow.	The speed is dependent on signal strength. Check your signal strength and network type.

5.3 Other

Symptoms	Possible Problems/ Solutions
The RSSI signal indicator is always blinking or does not light.	This indicates poor reception. Try moving the modem to another location near the window or in a raised position and make sure the antenna is tightened and in an upright position.

6 Appendix

Technical Parameters

- **Network & Frequency Band:**
GSM/GPRS/EDGE 900/1800/1900MHz
HSDPA/UMTS 850/2100MHz
- **LED Display:**
 - a. Power Indicator
 - b. Rechargeable Battery Indicator
 - c. Phone Indicator
 - d. DATA Indicator
 - e. RSSI Signal Strength Indicator
- **External Interface:**
 - a. External Power Socket
 - b. Antenna Connector (ANT)
 - c. Phone Interface (PHONE)
 - d. Data Interface (LAN)
 - e. Test Interface (DIAG)
- **Power Adapter:**
Input: 90~270V (AC), 50/60Hz
Output: +12V (DC)
- **Data Service:**
GPRS CLASS 10
HSDPA DL3.6 Mbps / UL384 Kbps
UMTS DL384 Kbps / UL384 Kbps
EDGE Class 12
- **Dimensions (W×H×D):** 220 × 140 × 38mm (Excluding antenna)
- **Rechargeable Battery:**
Continuous Standby Time: Approx. 4 hours (Depending on the network conditions).
Continuous Talk Time: Approx. 2 hours (Depending on the network conditions).
Please refer to the real objects for the related parameters about the rechargeable battery and charger.

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