GSM FWT-8848 (Gateway)

User’s Manual

Brand: Etross

Model: ET-8848

Manufacturer: Shenzhen Etross TelecomCo., Ltd
GSM FWT-8848 Version 1.1 -2010

1. General Description

GSM FWT-8848 is a GSM to Analog Converter (single port, insert 1 sim card only), the device can produce a FXS line to allow a regular phone to be connected and used just like a local landline (PSTN) except your calls will go out the GSM network. This device can both receive and make calls.

The main application is: Connecting the RJ-11 FXS line to connect Ordinary telephone set for voice call, to connect PBX for call extensions, to connect billing systems for public phone use, to connect VoIP gateway to realize VoIP call termination, to connect alarm system for security purpose, etc. It is not a VOIP gateway, nor a GSM+VOIP gateway. It is a GSM Fixed Wireless Terminal that produces a Analog FXS phone line.

Available:

- GSM 900/1800Mhz dual band, employing Wavecom Q2303A, Q2403A, Q2406A, P3203A, Sim300W, SIM500W module to make;
- GSM 900/1800/1900Mhz Tri-band, employing Sim300z module to make;
- GSM850/900/1800/1900Mhz Quadband, employing M10, SIM340Z module to make.
- Detailed sub-models:
  - 1) Dual band: ET-8848 Q2303A, ET-8848 Q2403A, ET-8848 Q2406A, ET-8848 P3203A, ET-8848 Sim300W, ET-8848 SIM500W.
  - 2) Tri- band: ET-8848 Sim300Z.
  - 3) Quad band: ET-8848 M10, ET-8848 SIM340Z

Appearance and Structure

<table>
<thead>
<tr>
<th>Item</th>
<th>GSM FWT-8848</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>[Image of device]</td>
<td>White/black</td>
</tr>
<tr>
<td>Material</td>
<td>ABS (Acrylonitrile Butadiene Styrene)</td>
<td></td>
</tr>
<tr>
<td>Dimension</td>
<td>170mm×118mm×30mm</td>
<td>Excluding antenna</td>
</tr>
<tr>
<td>Weight</td>
<td>400g</td>
<td>Weight of Main unit</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Power Switch</td>
<td>Rocker switch</td>
<td></td>
</tr>
<tr>
<td>Power Socket</td>
<td>12V DC input</td>
<td></td>
</tr>
<tr>
<td>Phone interface</td>
<td>RJ11</td>
<td>2 RJ-11 ports</td>
</tr>
<tr>
<td>Antenna interface</td>
<td>SMA-female</td>
<td></td>
</tr>
<tr>
<td>LED display</td>
<td>No.1: Power, No.2.in use, No.3, in talk, No.4, Battery, if have, No. 5-7, Signal strength</td>
<td>From left to right(front side view)</td>
</tr>
<tr>
<td>Front side</td>
<td>LEDs display for Signal strength, Power, Working Status,Talking and Battery indicator;</td>
<td></td>
</tr>
<tr>
<td>Rear side</td>
<td>1pcs SMA antenna connectors, 2 RJ-11 output,Power port and switch;</td>
<td></td>
</tr>
<tr>
<td>Bottom side</td>
<td>1pcs Sim card holder slots, you can insert Sim card into the slot.</td>
<td></td>
</tr>
</tbody>
</table>

2. **Features:**

1) It is a 1 channel GSM Gateway which has 2 RJ-11 outputs for extensions;
2) It can connect with ordinary telephone set, PBX, VOIP Gateway, Billing meter etc.;
3) Dialing tone frequency: 450hz;
4) Employ Industrial module to make;
5) Can adjust dial interval from 0.5sec to 9 secs by setting up from telephone set;
6) Can adjust voice volume by setting up from telephone set;
7) SIM card supported (1.8V, 3V);
8) Caller ID display;
9) DTMF Dialing;
10) Bell signal;
11) Polarity reversal;
12) The RJ-11 socket which connect the phone or billing system for metering purpose;
13) Antenna socket (SMA);
14) IP Presetting;
15) Working status and Signal Strength by LED indicator;
16) IMEI Change (optional).

17) back up Li-ion battery( Optional) 7.2V 1300mAh standby 24hrs,talking time: 2.5hrs.
3, Technical Specifications

Air interface standard: GSM850/1900Mhz, 900/1,800Mhz phase 2+ full band

Frequency ranges:
A) GSM 850   GSM 1900:
   i) Transmission: 869.2 ~ 893.8MHz   i) Transmission: 1, 930 ~ 1, 990MHz
   ii) Reception: 824.2 ~ 848.2MHz    ii) Reception: 1, 850 ~ 1, 910MHz
B) GSM 900:
   i) Transmission: 890 ~ 915MHz
   ii) Reception: 935 ~ 960MHz

Phone interface: supply RJ-11 Phone Interface

Hanging voltage: 45V
Picking off voltage: 30mA / 41mA
Dialing tone Frequency: 450Hz
Antenna interface: Antenna amplifying>2.5db
Sensitivity:<-104DBM
Transmitting power<3W

Color: White /Black (optional)
AC-Adapter interface: Input: AC 110~240VAC  50~60Hz
            Output: 12DC 1A.

AC-Adapter type: EU, US, AU, British can be optional

4, Operation Circumstance:

Operation temperature: -10c~60C
Storage temperature:-20C~70C
Operation humidity:45%-95%
Atmosphere pressure:86-106Kpa
Environment noise: <60DB
Transmitting Power:2W
Sensitivity: <-104dbm
Antenna Amplifying: >2.5db
Dialing frequency: 450Hz
Hanging voltage: 45V
Picking current: 30mA/41mA

5, Packing List

<table>
<thead>
<tr>
<th>Name</th>
<th>Quantity</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSM FWT-8848</td>
<td>1pcs</td>
<td>Dual band or Quadband</td>
</tr>
<tr>
<td>Ac- adapter</td>
<td>1pcs</td>
<td>AC-110-240V, DC12V/1A</td>
</tr>
<tr>
<td>Antenna</td>
<td>1pcs</td>
<td>Magnetic Antenna with 3m</td>
</tr>
</tbody>
</table>
6, Installation And Connection

The Condition for Installation
The terminal asks for 110-220V AV power supply. It must be installed in the area where the GSM network can cover. The strength of the signal can affect the quality of voice.

1. Screw off the screws that are on the back of the terminal, Insert SIM card for every Sim card holder, and then tighten the screws.
2. Install antenna. In order to ensure the quality of voice, antenna must be put beyond 1.5 from the telephone and terminal.
3. On end of the telephone line connects to the “Phone” port of the terminal, the other end connects to telephone.
4. “Power” port connects to power adapter that is connected to 110-220V AC power supply.

1) The Installation for Connecting to Ordinary Telephone

The Sketch for connecting ordinary Telephone

Draw your attention: Because there are many types of ordinary telephone and their electric parameters are different. In order to avoid mutual disturbance between telephone and terminal and affect voice quality. The distance between telephone and terminal is 1.5m at least.

2) The installation for connecting to billing device for metering
If the users demand to register cost during calls, billing device can be connected between terminal and ordinary telephone. Billing device register cost according to the anti-polarity signal that is provided by terminal.

The sketch for connecting to Billing device or Computer charging system
3) The installation for connecting to PBX for call extensions
If users want to connect small PBX to this terminal, connect terminal’s “Phone port” to the PBX.

The sketch for connecting to PBX device.

4) The installation for connecting VoIP gateway for Call Termination
Suppose a VoIP call originates from US, which was transferred from US Server to China Server on VoIP, finally the call will be terminated from internet to GSM network and to be sent out to the destination answer side.

The sketch for connecting to VoIP gateway
5) The installation for connecting to alarm system for Security
The GSM FWT can substitute the PSTN for connecting to alarm system for security purpose when PSTN failure or not available.

The sketch for connecting to alarm system

7, Function Setting
Before you do the following function settings, Lift handset or press hands free key of telephone set, then you can press the buttons according to the following instructions to finish setting, you will hear 2 beeps when you finish, this testify setting successfully.

1) Restore to factory default setting
*#99#99# restore to factory default setting.

2) Adjust dial interval
*#01#30#, 01--command, 30--time. Max 9.9 seconds, Min 0.5 seconds, default setting is 3 seconds.
*If you use GSM FWT-8848 for connecting to VoIP gateway, you can set dial interval as 0.5 second, it can make PDD<5 sec (Method: *#01#05#);
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If you use GSM FWT-8848 for connecting telephone, PBX, billing device, you can set dial interval as 3 seconds or 5 seconds as you like (Method: *#01#30#, set the dial interval as 3 seconds).

3) Adjust Earphone Volume
*#02#15# 02--command. 15--volume. Max 16. Min 1, default setting is 15.

4) Adjust Mic. Volume (sensitivity)
*#03#10# 03--command, 10--amount, Max 16. Min 1, default setting is 10.

5) Setting local area code
*#04#*0755# 10--command. *0755—area code. Max 5 numbers, use "" instead if area code is less than 5 digits.

6) Setting IP numbers
*#05#17911# 05--command, 17911—IP numbers. Max 5 numbers, use "" instead if IP number is less than 5 digit.

7) Hide Caller ID (been sent out) Setting
*#13#01# 13--command. 01--value. Max-02, Min-00 Default setting is 00
00-- presentation indicator is used according to the subscription of the CLIR service
01 -- CLIR allowed
02 -- CLIR prohibited
Notice: This Setting need GSM carrier support.

8) Bar incoming call Setting
*#14#00# 14--command. 00--value. 00--no barring, 01--set barring default setting --00

9) FSK setting (optional) (should confirm before order)
*#17#00# setting caller ID
17-order, 00-value, 00-DTMF, 01-FSK, default setting is 00
This setting need terminal has FSK Chip set support

10) Billing Mode setting
*#15#00#
15--command, 00-value, 01-reversal polarity, 02-12 KHz, 03-16 KHz, default setting-- 01

11) IMEI change Setting (for Quad Band M10 and SI540W modules only)
1. Write IMEI to RAM
*#18#IMEI no.#, 18--command, IMEI No. ~/15-digits/numbers IMEI no.
2. Check IMEI, if it is right, and then write it to module.
*#19#IMEI no.#, 19--command, IMEI No. ~/15-digits/numbers IMEI No.
Notice: Step 1 and Step 2, IMEI no. must be same.
2) PIN Lock

1. Set to open PIN code check and automatic PIN lock function
   *#07#1234# 07-command, 1234- the current SIM card PIN code
   If set successfully, the device will open PIN code check, and automatically change the current SIM Card into "PIN on" from "PIN off"

2. Set to close PIN code check and automatic PIN lock function
   *#08#1234# 08-command, 1234- the current SIM card PIN code
   If set successfully, the device will close PIN code check and automatic PIN lock function.

3. Set to change PIN code, open automatic PIN lock function
   *#09#1234*56785678# 09-command, 1234- the current sim card PIN code, 5678-new PIN code.
   (5678 can be any other 4 digits number, suppose you can use 2009).
   If set successfully, the device will change the current sim card PIN code as you want.5678, or the any other 4 digit PIN codes, and open automatic PIN lock function.

2) Network Lock

1. Set to open Network lock function
   *#10#01234# 10-command, 01234-password

2. Set to close Network lock function
   *#11#01234# 11-command,01234-password

3. Set the Network codes
   *#12#1*46003*46003# 12-command,1--No. Of IMSI, 46003--the IMSI code for China Telecom
   *#12#2*46000*46000# 12-command, 2--No. Of IMSI, 46000--the IMSI code for China Mobile

8. Making Calls and Answer Incoming Calls

Making Calls
1. Lift the handset or press “hand-free” key, you will hear dialing tone, then you can dial the telephone numbers you want to call.
2. Dialing: dialing the telephone numbers you want to call
3. On completion of dialed digits, you can press “#” to transmit the called telephone numbers. If you don’t dial any key for continual 3 seconds during the dialing, terminal transmits called telephone numbers automatically.
4. During calls, if the telephone numbers is not free ones, the terminal sends out anti-polarity signal.
5. If the calling party or called party hangs up, the terminal stops sending out anti-polarity signal.

Answering incoming Calls
When some calls are coming in, if the connected telephone has the function of displaying incoming calls, the telephone rings and displays the incoming telephone numbers. Now users can lift the handset or press “hand-free” to answer it.
**Warranty Card**

Please fill in the blanks carefully, and keep it properly as the voucher for warranty.

<table>
<thead>
<tr>
<th>Type of Equipment</th>
<th>ET-8848</th>
</tr>
</thead>
<tbody>
<tr>
<td>User’s name</td>
<td>Contact with:</td>
</tr>
<tr>
<td>Contact Tel.no.</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Date of Ex-works</td>
<td></td>
</tr>
<tr>
<td>Date of Maintenance</td>
<td>Damage</td>
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<tr>
<td></td>
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</tr>
<tr>
<td>Sales Agent</td>
<td>Purchasing Date</td>
</tr>
<tr>
<td>(Stamp)</td>
<td></td>
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</table>