GSM 8 PORT Analog Terminal
User guide
1. General Description:

It is a GSM to Analog line Converter, the device can produce a FXS line to allow connecting regular phone instead of local landline (PSTN) through GSM network.

Available for the following Frequencies:

2G GSM 850/900/1800/1900Mhz Quad band

1), Front side has 8pcs RJ-11 ports, and LEDs display for Signal strength, Power, Working Status and Talking indicator;
2), Rear side has 8pcs SMA antenna connectors, Power switch for every terminal, General Power port and switch;
3), Front side with 8pcs antennas, this only for display picture, in installation, antenna must be put beyond 1.5 from terminal. Can’t be put on the terminal, otherwise it will make noise;
4), Bottom side has 8pcs SIM card holder slots, you can insert SIM card for each slot when installation.

2. Features:

1) Dialing tone frequency: 450hz;
2) Dialing interval from 0.5sec to 9 seconds by setting up from telephone set;
3) Voice volume by setting up from telephone set;
4) SIM card supported (1.8V, 3V);
8) Caller ID display;
9) DTMF Dialing;
10) 11) Polarity reversal;
12) IP Presetting;
13) Working status and Signal Strength by LED indicator;
14) IMEI auto Changer embedded.

3. Technical Specifications

Air interface standard: GSM850/1900Mhz, 900/1,800Mhz phase 2+ full band
Frequency ranges: (examples: GSM Quad band)

A) GSM 850
   1) Transmission: 869.2 ~ 893.8MHz
   2) Reception: 824.2 ~ 848.2MHz

B) GSM 900:
   1) Transmission: 890 ~ 915MHz
   2) Reception: 935 ~ 960MHz

B) GSM 1900:
   1) Transmission: 1, 930 ~ 1, 990MHz
   2) Reception: 1, 850 ~ 1, 910MHz

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
AC-Adapter interface: INPUT: AC 110~240V
OUTPUT: 5V 7A
4. Operation Circumstance:
Operation temperature: -10°C~60°C
Storage temperature: -20°C~70°C
Operation humidity: 45%~95%
Atmosphere pressure: 86-106Kpa
Environment noise: <60DB
Transmitting Power: 2W
Sensitivity: < -104dbm
Antenna Amplifying: > 1.5db
Dialing frequency: 450Hz
Hanging voltage: 45V
Picking current: 30mA/41mA

5. Checking Package:
GSM 8 PORTS FWT: 1pcs;
Power Supply Cable: 1pcs,
GSM Antenna with 3m cable: 8pcs,
User’s Manual 1pcs.

Product dimension: \textbf{L455x W280 x H45mm}
Gift box dimension: \textbf{L510x W285x H64mm}
G.W: \textbf{4.5kg}

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

\begin{figure}
\centering
\includegraphics[width=\textwidth]{image}
\caption{Sketch for connecting ordinary Telephone}
\end{figure}

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:

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 after you finish, this testify setting successfully.

1) Adjust dial interval
*#01#30#, 01--command, 30--time. Max 9.9 seconds. Min 0.5 seconds, factory default setting is 3 seconds.
*If you use it 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).

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

3) Adjust Mic. Volume (sensitivity)
*#03#10# 03--command, 10--amount. Max 16. Min 1, factory default setting is 10.
4) Setting local area code
*#04#*0755# 10—command. *0755—area code. Max 5 numbers, use “*” instead if area code is less than 5 digits.

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

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

7) Caller ID Setting
*#13#01# 13—order, 01—value, Max-02, Min-00 Default is 00
0 -- presentation indicator is used according to the subscription of the CLIR service
1 -- CLIR allowed
2 -- CLIR prohibited

8) FSK setting (optional, this need device support FSK at first)
*#17#00# setting caller ID
17-order, 00-value, 00-DTMF, 01-FSK, the default is 00
This setting need terminal has FSK support

9) Metering setting
*#15#00#
15-order, 00-value, 01-reversal polarity, 02-12 KHz, 03-16 KHz, the default is 01

10) IMEI change (for Quad Band)
1. Write IMEI to FWT RAM
*#18#012345678901234#, 18-order, 012345678901234-15 digits IMEI No.
2. Check IMEI, when IMEI is same with IMEI in RAM, and then write it to FWT module.
*#19#012345678901234#, 19-order, 012345678901234-15 digits IMEI No.
Noted: this can change IMEI no limit times

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 user can lift the handset or press “hand-free” to answer it.