

SMARTCELL WIRELESS GSM TERMINAL



PACH AND COMPANY
Home of Telephone Access Control Systems
AEGIS QUANTUM

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GENERAL DESCRIPTION

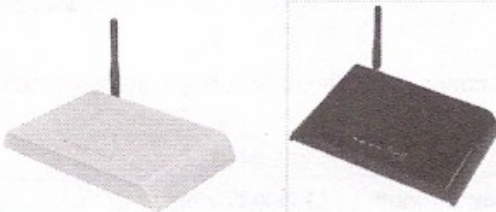
Smartcell is a GSM to Analog Converter(single port,insert 1 sim card only), the device can produce a FXS line to allow a regular phone to be connected and used just like a local landline(PSTN) except your calls will go out the GSM network. This device can both receive and make calls.

The main application is: Connecting the RJ-11 FXS line to connect Ordinary telephone set for voice call, to connect PBX for call extentions, 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.

Appearance and Structure

Item	Smartcell (SCWT)	Remark
Appearance		White/black
Material	ABS (Acrylonitrile Butadiene Styrene)	
Dimension	170mm×118mm×30mm	Excluding antenna
Weight	400g	Weight of Main unit
Power Switch	Rocker switch	
Power Socket	12V DC input	
Phone interface	RJ11	2 RJ-11 ports
Antenna interface	SMA-female	
LED display	No.1: Power, No.2.in use, No.3, in talk, No.4, Battery, if have, No. 5-7, Signal strength	From left to right(front side view)

Front side	LEDs display for Signal strength, Power, Working Status,Talking and Battery indicator;	
Rear side	1pcs SMA antenna connectors, 2 RJ-11 output,Power port and switch;	
Bottom side	1pcs Sim card holder slots, you can insert Sim card into the slot .	

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.

TECHNICAL SPECIFICATIONS

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

Frequency ranges:

A) GSM 850

I) Transmission: 869.2 ~ 893.8MHz

li) Reception: 824.2 ~ 848.2MHz

B) GSM 900:

I) Transmission: 890 ~ 915MHz

li) Reception: 935 ~ 960MHz

GSM 1900:

I) Transmission: 1, 930 ~ 1, 990MHz

li) Reception: 1, 850 ~ 1, 910MHz

GSM 1800:

I) Transmission: 1, 710 ~ 1, 785MHz

li) Reception: 1, 805 ~ 1, 880MHz

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

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

PACKING LIST

Name	Quantity	Remark
Smartcell (SCWT)	1pcs	Dual band or Quadband
Ac- adapter	1pcs	AC-110-240V, DC12V/1A
Antenna	1pcs	Magnetic Antenna with 3m cable
User's Manual	1pcs	English

G.W: 0.75kg per unit. 20pcs/CTN, 16kg /CTN, CTN Size: 55cmX34.5cmX32.5cm

INSTALLATION

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.

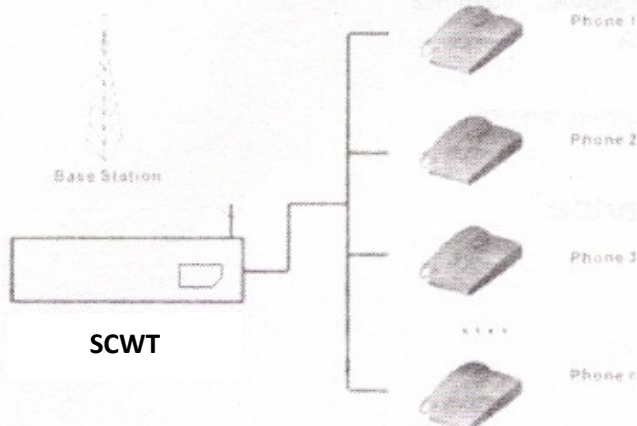
1. Screw off the screws that are on the back of the terminal, Insert SIM card for every Sim card holder, and then tighten the screws.
2. Install antenna. In order to ensure the quality of voice, antenna must be put beyond 1.5 from

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

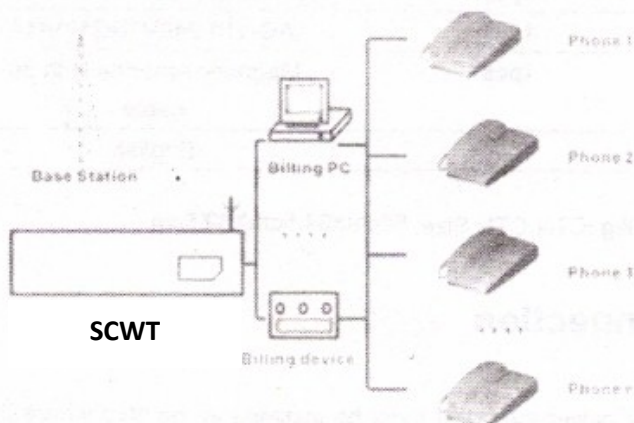


Draw your attention: Because there are many types of ordinary telephone and their electric parameters are different. In order to avoid mutual disturbance between telephone and terminal and affect voice quality. The distance between telephone and terminal is 1.5m at least.

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.

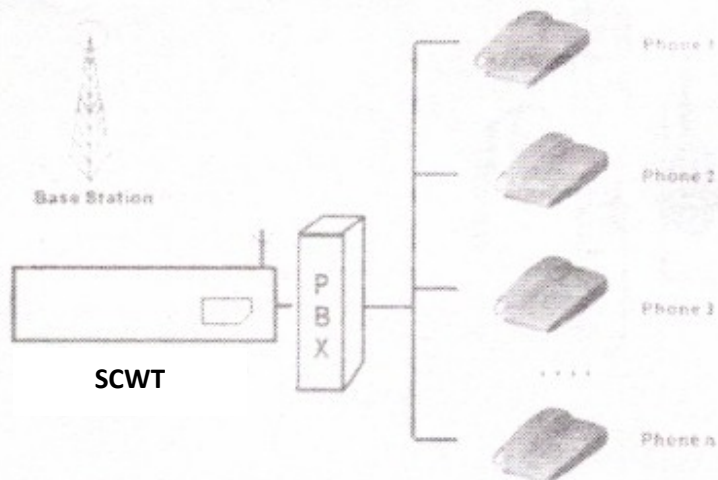
The sketch for connecting to Billing device or Computer charging system



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.

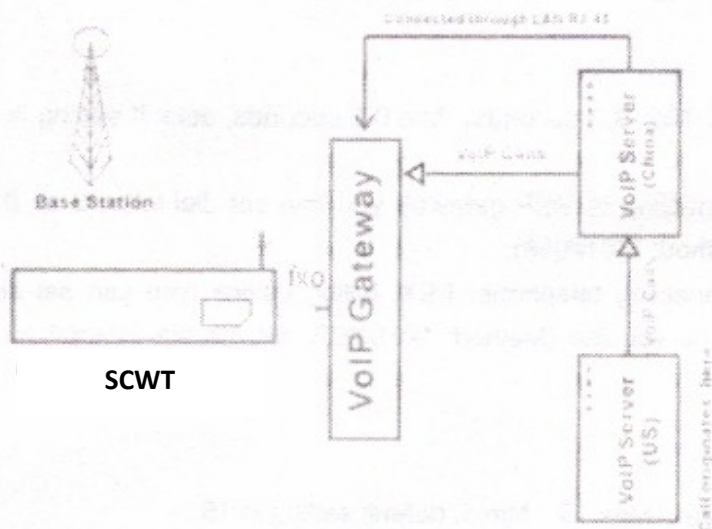
The sketch for connecting to PBX device.



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.

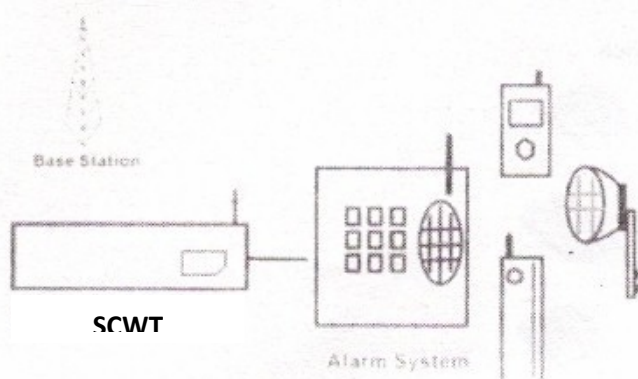
The sketch for connecting to VoIP gateway



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



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 **Smartcell (SCWT)** for connecting to VoIP gateway, you can set dial interval as 0.5 second, it can make PDD<5 sec (Method: *#01#05#);

*If you use **Smartcell (SCWT)** 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 Mio. 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 Module only)

1. Write IMEI to RAM

*#18#IMEI no.#, 18--command, IMEI No. --15-digit IMEI no.

2. Check IMEI, if it is right, and then write it to module.

*#19#IMEI no.#, 19--command, IMEI No. --15-digits IMEI No.

Notice: Step 1 and Step 2, IMEI no. must be same.

12) Pin Lock &Network Lock Setting (optional)(Should confirm before order)

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 sucessfully, 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 auomatic PIN lock function

*#08#*1234# 08-command, 1234- the current SIM card PIN code

If set sucessfully, 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

MAKING CALL AND ANSWERING 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.



Operation Compatibility and function may vary depending on the GSM network. Some of the functions may not be supporting by your cellular provider.

WARRANTY

If your product does not work properly because of a defect in materials or workmanship, Pach and Company (referred to as the warrantor) will, for the length of the period indicated on the chart below, which starts with the date of original purchase (Limited Warranty Period), at its option either (a) repair your product with new or refurbished parts or (b) advance replacement with new or refurbished product. The decision to repair or advance replacement will be made by the warrantor. Advance replacement will be ship UPS ground under the warranty period with no charge. *The defective product must be return to Pach and Company within 15 days after receiving the advanced replacement otherwise you will be billed the full amount.*

Parts: 12 month, does not cover parts needed to re-install the product by the installer, does not cover the antenna and antenna's cable.

Labor: 12 month, does not cover installation labor

LIMITED WARRANTY LIMITS AND EXCLUSIONS

This limited warranty **ONLY COVERS** failures due to defects in materials or workmanship, and **DOES NOT COVER** normal wear and tear or cosmetic damage.

The Limited Warranty **ALSO DOES NOT COVER** damages which occurred in shipment, or failures which result from accidents, misuse, abuse, neglect, bug infestation, mishandling, misapplication, alteration, faulty installation, setup adjustment, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, introduction to sand, humidity or liquids or product has been installed by non-license installer or damage that is attributable to acts of God.

ADVANCE REPLACEMENT can only be issued by Pach and Company Technical Department free of charge and transport by standard transportation (UPS Ground, Standard US mail, whichever is applicable). Our Technical Department has the right to decline advance replacement. It is your responsibility to return the defective part at your cost.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER LIMITED WARRANTY COVERAGE . THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR RISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY. (As examples, this excludes damages for lost time, lost calls or messages, cost of having a unit removed or re-install if applicable, travel to and from the servicer.

ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty lasts, so the exclusions may not apply to you.

This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the Limited Warranty period, you may contact your dealer/installer. If the problem is not handled to your satisfaction, then call Pach and Company at 1-888-678-7224.

PARTS AND SERVICE, WHICH ARE NOT COVERED BY LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.