4G/SMS/Ethernet Contact ID Communicator

PSTN/4G Contact ID Protocol to SMS Alert & SIA IP Converter

User Manual

Ver 1.4

Model: WGSMSC

Date Issued: 2019-01-09

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This handbook has been designed as a guide to the installation and operation of GSM Communicator.

Statements contained in the handbook are general guidelines only and in no way are designed to supersede the instructions contained with other products. We recommend that the advice of a registered electrician be sought before any Installation work commences.

Cornick Pty Ltd, its employees and distributors, accept no liability for any loss or damage including consequential damage due to reliance on any material contained in this handbook.

Cornick Pty Ltd, its employees and distributors, accept no liability for GSM Network upgrading or SIM Card upgrading due to the technology specifications contained in this handbook.

Safe Startup
Do not use GSM unit when using GSM equipment is prohibited or might bring disturbance or danger.

Interference
All wireless equipment might interfere network signals of GSM unit and influence its performance.

1. Introduction

The *GSM/3G/4G Communicator WGSMSC* is specially designed for existing Watchguard alarm systems.

The *GSM/3G/4G Communicator WGSMSC* can transfer the Alert Message from your PSTN Contact ID (SIA DC-05) Control panel into SIA DC-09 protocol over Ethernet/GPRS network and SMS notification. It can change alert notifications from traditional PSTN alert to Ethernet/wireless alert (SIA standard DC-09 requirements).

*(**Note:** '**WGSMSC**' will be written in the following contents below instead of '**GSM/3G/4G LTE Communicator WGSMSC**')*

2. Specifications

Signal Frequency	4G 3G GSM850 / 900 / 1800 / 1900 MHz
Communication Ways	Ethernet & TCP/IP via GPRS
Message Transmission Protocols	SIA DC-09-2007 or SIA DC-09-2012 (WGSMSC) SIA DC-05 (PSTN Control Panel)
Output	OUT1, OUT2 ,OC type, commutates voltage of up to 30 V and direct current of up to 1 A
Configuration	via USB port or SMS commands
Power Supply	DC 9V ---24 V
Used Current	10 ---30 mA (on standby), up to 70 mA (while sending data)
Operating Temperature	Temperature from -10C to +50C, Relative humidity up to 80 % when +20 C
Backup battery	900mAH
Exterior dimension	105 mm * 88 mm * 30 mm (W*D*H)

3. Features

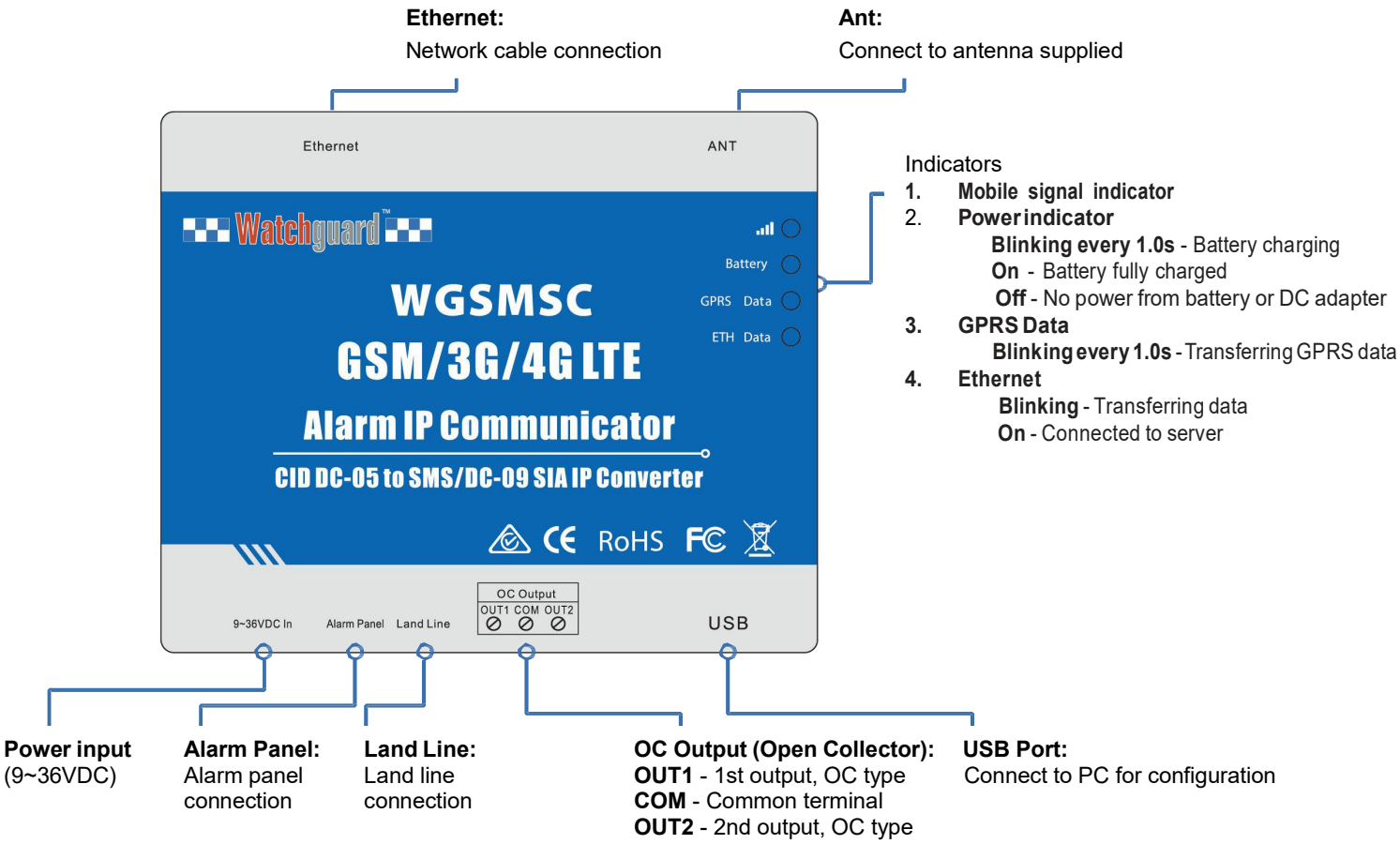
- Easy programmed by PC configuration, compatible with most alarm panels.
- Supports transferring data by PSTN Ethernet or GPRS, SMS (*no phone call*),
- Supports 2 different CMS centers (IP addresses or DNS server).
- SMS notification when the connection with the CMS center is failed (*3 trial times*).

- When PSTN network failed, it will send the alert message to the center by Ethernet/GPRS network,
- When the PSTN network good, then it will not use GPRS network etc. for transferring alert message,
- 5 users to receive SMS notification on Alarm, Supervision, Trouble, By pass, Test, GPRS fail, DC loss,
- SMS commands to check the device version, IMEI code, GSM signal,
- 2 OC outputs which could be controlled by SMS commands, output pulse time can be set.
- Support firmware upgrading via USB.
- Supports PIN code verification in PC programming software.
- Remote configuration by SMS commands.
- Backup rechargeable battery, with DC power failure SMS alert.

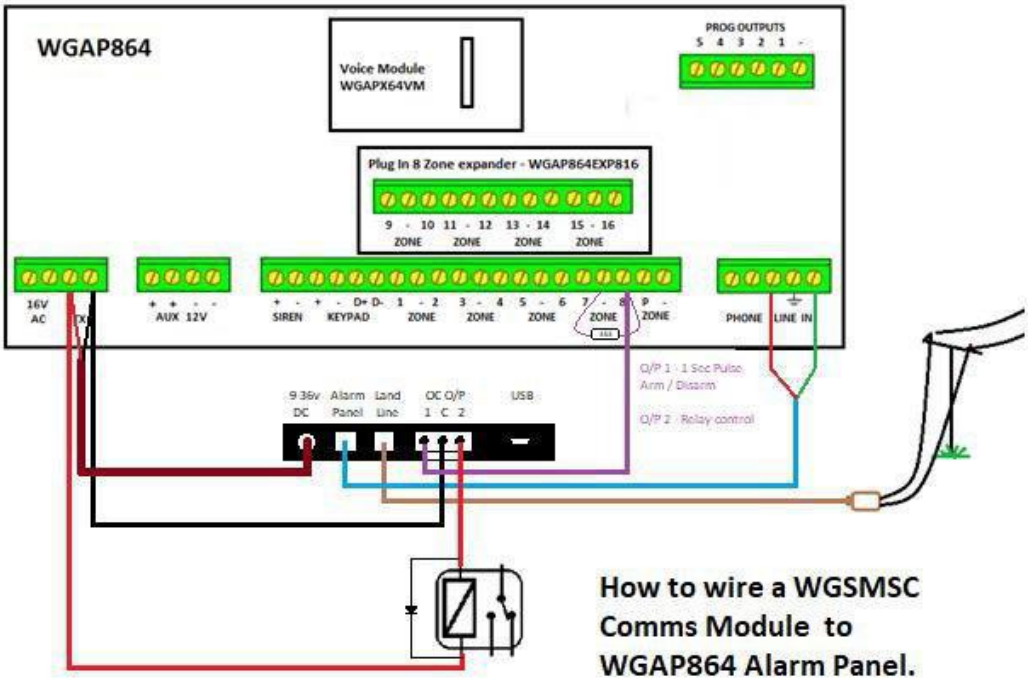
4. Standard Package

Main Panel x 1 piece,
CD (User Manual & PC programming software) x 1 piece

5. Overview of Main Panel



6. Alarm panel connection



Important

WGAP864 alarm panel configuration: (Must set up these parameters otherwise the device won't send SMS)

- Location 46, Data 1 = ON (Y)
- Location 51 = Report Centre Telephone number (If no reporting centre, must input some numbers to 'cheat' the alarm panel to dial)
- Location 61 = 4-digit report centre account code. (If no account code, enter any 4-digit **NON-ZERO** numbers.)

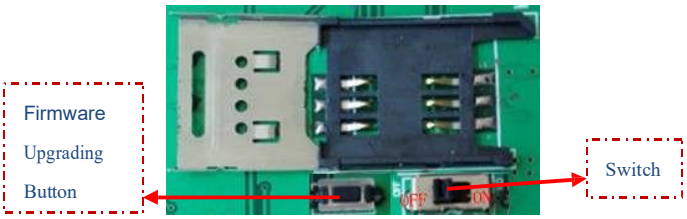
*** If 0000 is used, SMS function is disabled.

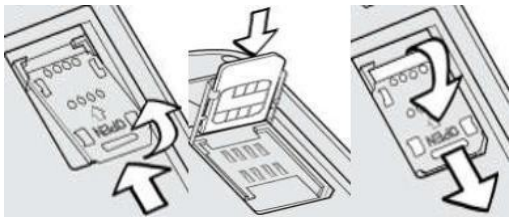
7. Installations

Note: There are 2 methods for changing settings: PC configuration & SMS commands. Install the USB Driver before using the PC programming software.

7.1 Install the USB Driver on PC.

1) Screw on the GSM antenna.
2) Open the cover on the back the ***WGSMSC*** to find the SIM card holder, and insert the SIM card as below:

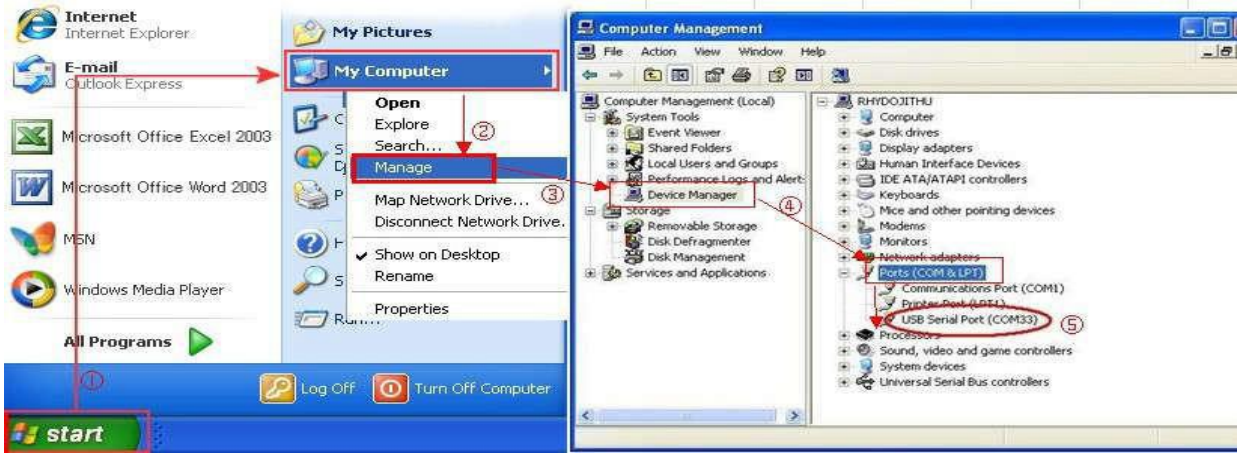




3) Turn on the power supply and switch WGSMSC on, and check the GSM Signal Indicator to confirm the SIM card in WGSMSC is working . Please read section 5 for details.

7.2. Install the USB Driver on PC.

1) Download and install the latest ***USB Driver*** according to your PC operation system.
2) Connect the ***WGSMSC*** to the Computer via USB cable,
3) Find the ***USB Serial Port*** as picture below. (*This COM port number will be used in PC programming software*).

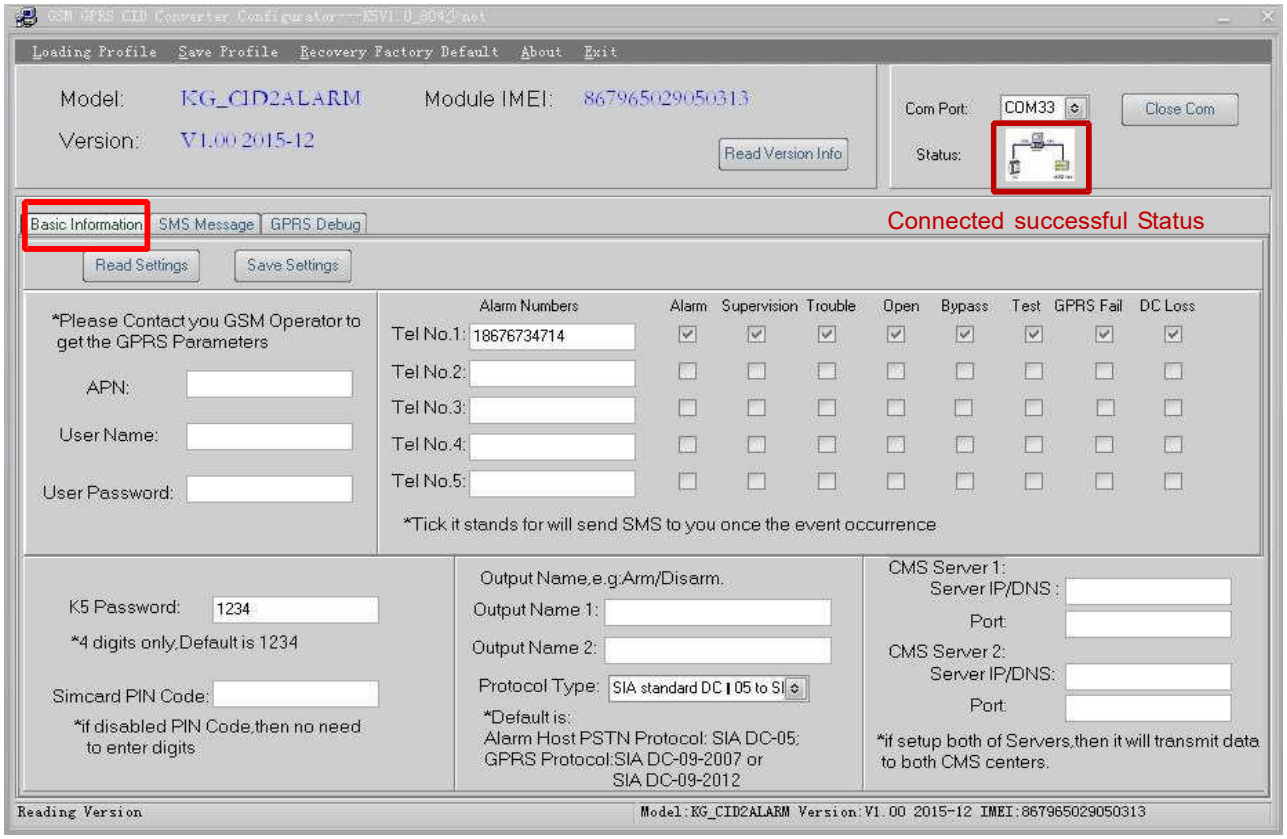


7.3. Settings in PC programming software.

Choose the ***USB Serial Port*** according to 【*7.2.Install the USB Driver on PC.*】, and click open Com.

It will come to the Basic Information window as below:

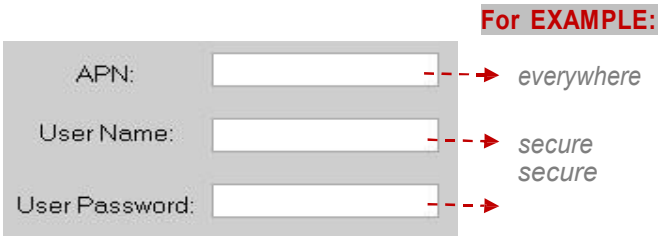
Note: *when the settings in current window is done, please click Save Settings to complete the configuration.*



7.3.1 The Menu Bar of the PC programming software.

Loading Profile	[Alt + L]: Load the setting profile that you have saved before
Save the Profile	[Alt + S]: Save the settings to the local
Recovery Factory Default	[Alt + R]: Reset the WGSMSC device back to the factory
About	[Alt + A]: The information about the WGSMSC
Exit	[Alt + E]: Exit the PC programming software.

7.3.2 GPRS data Parameter Setting.



Note: *The example above is only for reference, please contact your local GSM operator for the settings accordingly. If the local GSM Operator does not use APN anymore, please ignore the settings in this section.*

7.3.3 The Phone Numbers for Events Notification.

Alarm Numbers		Alarm	Supervision	Trouble	Open	Bypass	Test	GPRS Fail	DC Loss
Tel No.1:	18676734714	☑	☑	☑	☑	☑	☑	☑	☑
Tel No.2:		☐	☐	☐	☐	☐	☐	☐	☐
Tel No.3:		☐	☐	☐	☐	☐	☐	☐	☐
Tel No.4:		☐	☐	☐	☐	☐	☐	☐	☐
Tel No.5:		☐	☐	☐	☐	☐	☐	☐	☐

Tel No. 1 – No. 5	The phone numbers for the SMS notification.
Alarm	Ademco® Contact ID Protocol Events Codes.
Supervision	
Trouble	
Open	
ByPass	
Test	
GPRS Fail	The GPRS message transmission failure notification from WGSMSC .
DC Loss	The external DC Power Loss notification from WGSMSC

Note:

1) *Tick the phone numbers in the list that will receive the SMS notification when the event occur.*
2) *Only for SMS notification, no voice communication.*
3) ***18676734714*** *is the phone number only for example. If the WGSMSC can't work, please add your country code in front of the phone number.*

7.3.4 Set the Password and PIN Code Verification.

K5 Password: 1234

*4 digits only,Default is 1234

Account Number:

*Must be set to 4 bits,if set to replace the alarm host Account Number, if not set,continue to use the alarm host Account Number

Simcard PIN Code:

*if disabled PIN Code,then no need to enter digits

Note:

The "WGSMSC Password" is the password in the setting of 【***8.The SMS Commands.***】. *The "Account number."can set to replace the PSTN panel account when upload via GPRS.*

7.3.5 Set the OC Outputs Names

Output Name 1: → The name of the 1st Output, default: DO1

Output Name 2: → The name of the 2nd Output, default: DO2

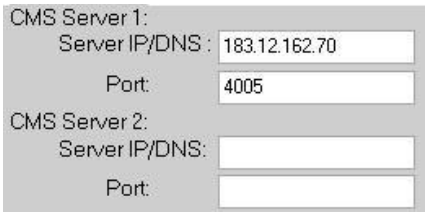
Protocol Type: SIA standard DC | 05 to S → Alarm Host PSTN Protocol: SIA DC-05. GPRS Protocol: SIA DC-09-2007/2012.

Note:

The max characters for the Output Name is 40, these names will be displayed in the SMS notifications.

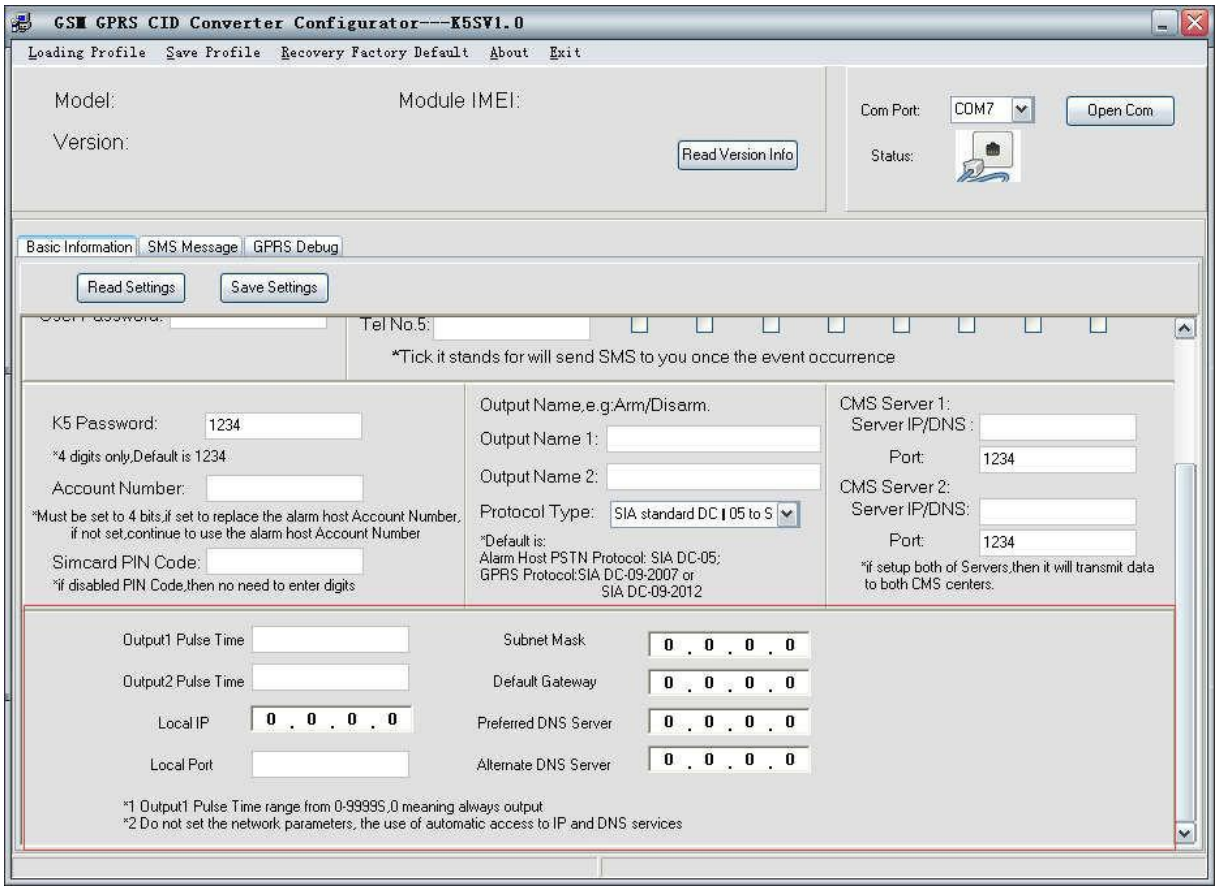
7.3.6 Set the CMS Server IP address and Server Port.

(For report centre IP address settings)



> ***Note:***
>
> *If Server 2 is set up, the alert messages will be transmitted to Server 2 (backup) if Server 1 failed.*

7.3.7 Set the Output pulse time and Ethernet parameter. (If IP report centre is used)



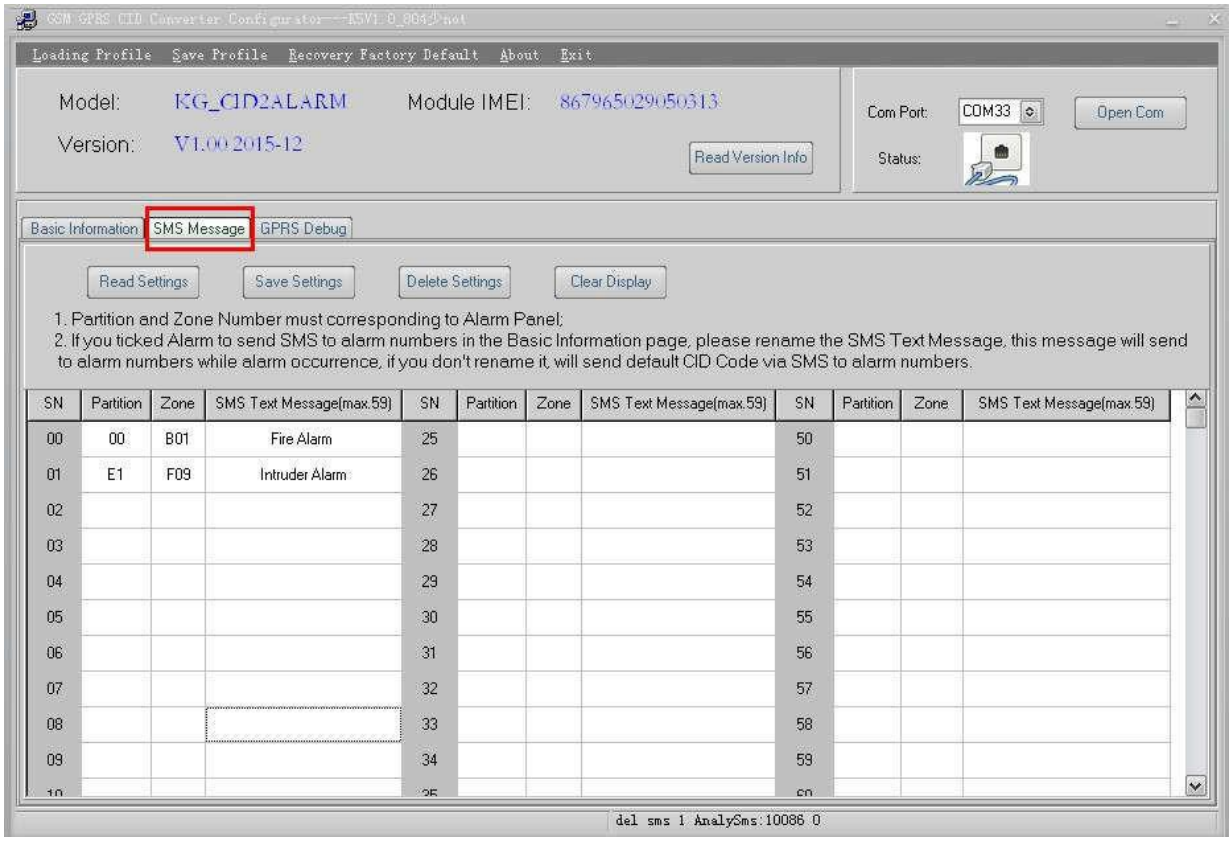
Output Pulse Time	0~9999S
Ethernet Parameter	Default "0",means getting IP and DNS automatically
GPRS Module (optional)	**a**. 1) If the Ethernet is not connected, device will send the following SMS message: "**Ethernet connection failed, please check the wired network!**" 2) If the Ethernet is connected but the server fails to response, it will send the following SMS message: "**ETH Connect Failure**" At this time, the alert will transfer the data via GPRS; But if Ethernet is connected successfully and the server is responding, then GPRS will not transfer data. **b**. If there is no GPRS signal, it will transfer data via Ethernet.

7.3.8 The other buttons in PC

open Com	Open the USB serial Com Port.
Close Com	When displayed, it means successful connection.
Read Version Info	Read the device model, IMEI Code, Version.
Read settings	Read the existed setting data in the WGSMSC.
Save Settings	Click this button to complete the current settings.
Delete Settings	Delete all the setting data in WGSMSC.
Clear Display	Clear the words displayed in the current windows (The existed settings will not be cleared).
Clear Received Data	Clear the data WGSMSC have received in the current window.
Clear Sent Data	Clear the data WGSMSC have send in the current window.
Stop Debug	Stop the debug.

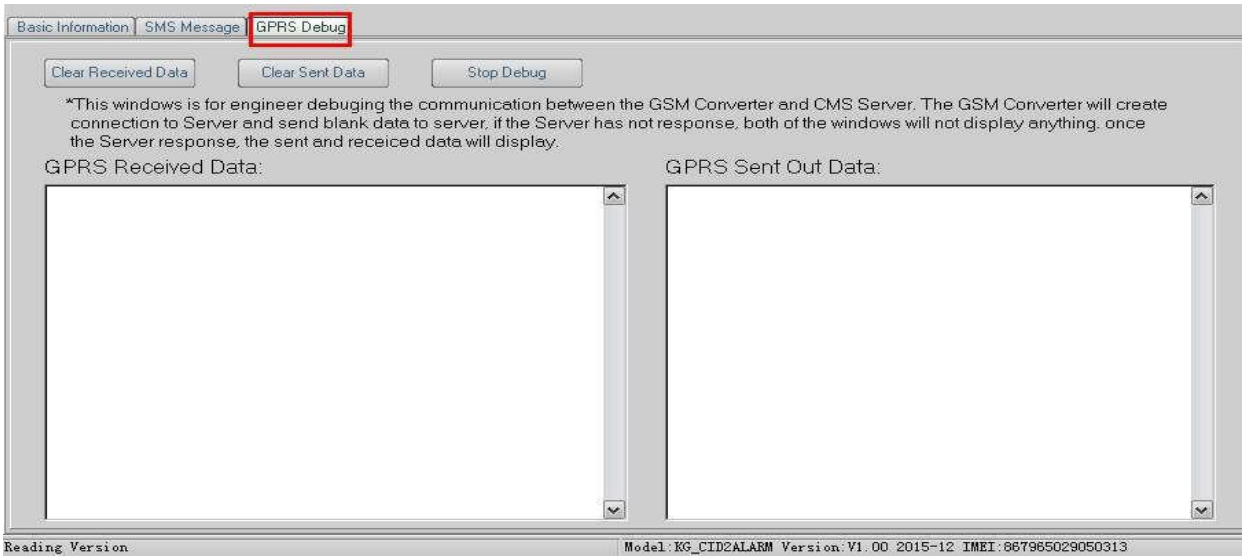
Note: *There are three different windows in PC programming software:* Basic Information , SMS Message , GPRS Debug. *Please click the* Save Settings *when the setting data in the current windows is completed.*

7.3.9 Set the SMS Notification Contents.



Partition	Please set it according to your PSTN control panel. (2 digits, from 0 - 9, B – F)
Zone *(64 zones)*	Please set it according to your PSTN control panel. (3 digits, from 0 - 9, B – F)
SMS Text Message *(Max 59 characters)*	The SMS alert content when the zone in the PSTN control panel is triggered. Note: if this part is not set, the SMS Alert Message will be in SIA DC-05 code, not understandable.

7.4.0 Engineer Debug for GPRS Data Transmission.



8. SMS Commands

The SMS commands below are sent to the SIM card of WGSMSC for remote configuration. It is used to program the WGSMSC module without using a PC.

Note:

1) *All letters in SMS commands must be CAPITAL letters.*
2) *The Examples below are only for reference, send the SMS commands according to your actual situations.*
3) *The Password below is the default password (1234), please use the new password in the SMS commands when the default password was changed.*

1) when wrong a SMS command was sent:

SMS Commands	Return SMS Message
	SMS Format Error, Please check Caps Lock in Command!

Note: *If any SMS command with the wrong format was send, you will receive a SMS notification as above.*

2） When external DC Power loss/Recovery

	Return SMS Message
DC Loss	External DC Power Goes OFF
DC Recovery	External DC Power Goes ON

3） Change the password (The default password is 1234, with 4 digits):

SMS Commands	Return SMS Message
Old Password＋P＋New Password	【*New Password*】,This is the New Password, please remember it carefully.
For Examples: 1234P4321	【*4321*】*,This is the New Password, please remember it carefully.*

Note: *When the password was forgot, please reset the device from the PC programming software.*

4） Inquiry the device information remotely

SMS Commands	Return SMS Message
Password+**EE**	Model: Version: IMEI: GSM Signal Value:
Example: **1234EE**	Model: *WGSMSC* Version: *V1.002015-12* IMEI: *867965029050313* GSM Signal Value: *30*

Note:

1) *Every WGSMSC has a unique IMEI code for firmware upgrading.*
2) *The GSM Signal Value range: 1~31.99, Signal weak value: <16.*

5) Program the 5 mobile phone numbers (the max is 23 digits) for SMS notification.

Actions	SMS Commands	Return SMS Message
Set Mobile Phone Numbers	Password+**A**+Serial Number +**T**+ Phone Number **Example:** **1234A3T13570810254**	Tel1: --- Tel2: --- Tel3: 13570810254 Tel4: --- Tel5: ---
Inquiry the whole numbers list	Password +**A** **Example:** **1234A**	*The list of the exiting numbers*
Delete the phone number in the existing numbers list	Password＋**A**＋Serial Number **Example:** **1234A3**	*The list of the exiting numbers*

Note:

1) *Serial Number: **1 ~ 5**.*
2) *These mobile phone numbers are ONLY used for SMS notification, no voice notification.*
3) *Adding country codes in front of the mobile phone numbers is unnecessary.*

6) Program the OC Outputs

Actions	SMS Comands	Return SMS Message
Set the name of the OC outputs	Password+**DO**+Serial Number+**T**+the name **Example:** **1234DO1TOutput 1 for Arm.**	DO1: rename: xxxx **Example**: DO1: rename: Output 1for Arm.
Inquiry the name of the OC outputs	Password+**DO**+Serial Number **Example:** **1234DO1**	DO1: Output 1 for Arm
Delete the name of the OC outputs	Password+**DO**+Serial Number+**DEL** **Example:** **1234DO1DEL**	DO1: Output 1 for Arm
Switch the relay on	Password+**DOC**+Serial Number **Example:** **1234DOC12** It means switch on both the 1st output and 2nd output *(The serial number is 1 or 2 or both)*	DO1: ON DO2:ON
Switch the relay off	Password+**DOO**+Serial Number **Example:** **1234DOO12** Switch off both the 1st output and 2nd output.	DO1: OFF DO2:OFF

	Or both.(The serial number is 1 or 2 or both)	
Inquiry all the current status	Password+**DOE** **Example:** **1234DOE**	DO1: ON/OFF DO2:ON/OFF ---
Pulse output time	Password+**DOP**+Serial Number (1 or 2) +**T**+ Time(Max 4 digits, 9999s) Default:0s, always keep close	DO(1 or 2) Pulse Output Time：xxxS
Inquiry output time	Password+**DOT**+Serial Number (1 or 2)	DO(1 or 2) Pulse Output Time：xxxS
Pulse output control	Password+**DOP**+Serial Number (The serial number is 1 or 2 or both)	

Note:

1. *The Serial Number: **1** means the 1st output, **2** means the 2nd output, **12** means both the 1st output and the 2nd output.*
2. *The name of the outputs is 40 characters (Max.)*

7）Program the GPRS IP Sever and the Port:

Actions	SMS Commands	Return SMS Message
Settings	Password+**IP**+ IP address +**P**+Port Number **Example:** **1234IP183.12.162.70P4005**	Server: Port:
Inquiry the settings	Password +**IP** **Example:** **1234IP**	
Delete the exiting setting	Password+**IP**+**DEL** **Example:** **1234IPDEL**	

Note:

*Only the 1st server IP can be programmed via SMS commands. Program the 2nd server IP via PC programming software. More details:【**8.3.6 Set the CMS Server IP address and Server Port.**】*

8）GPRS data Parameter Setting（APN/USER NAME/PASSWORD）

Actions	SMS Commands	Return SMS Message
Settings	Password+**AP**+APN;UserName;Password#	APN: User Name: Password:
Inquiry the settings	Password+**AP** **Example:** **1234AP**	
Delete the exiting setting	Password+**APDEL** **Example:** **1234APDEL**	

10. Warranty

1) This system is warranted to be free of defects in material and workmanship for one year.
2) This warranty does not extend to any defect, malfunction or failure caused by abuse or misuse by the Operating Instructions. In no event shall the manufacturer be liable for any alarm system altered by purchasers.

You deserve to feel safe, secure and protected.™

www.watchguardsystems.com