

Gardsmen

CTC-1908M

PSTN - IP/GSM+GPRS Converter

.....
Installation

.....
Programming

.....
Operating

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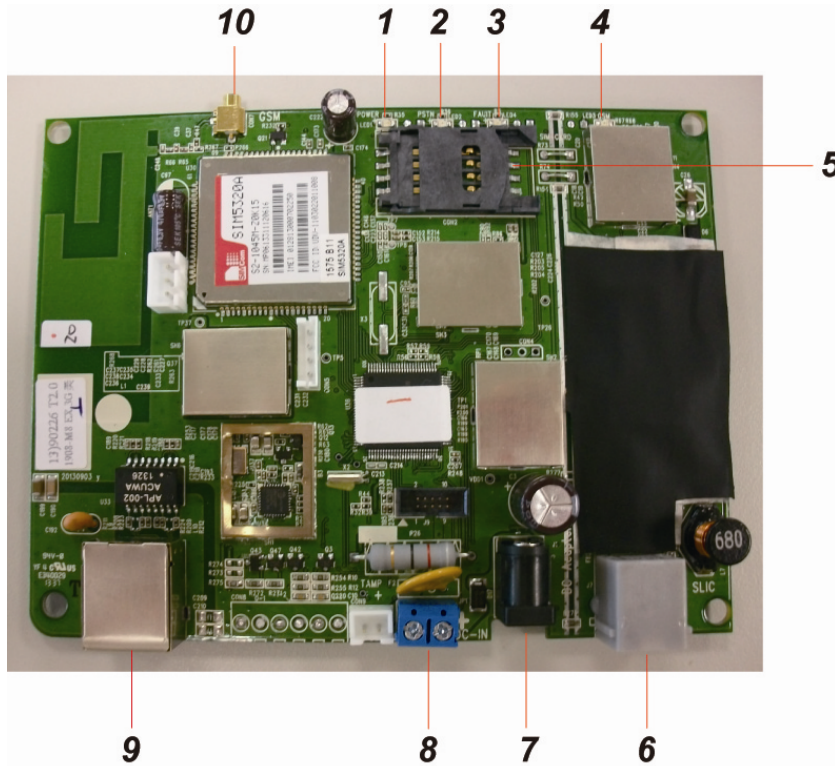
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1. Introduction

CTC-1908M Series are PSTN converters, which upgrades your existing Control Panel to send reporting via the internet or GSM/GPRS instead of PSTN.

2. Application Overview

2.1. Identifying the Parts



1. GSM LED (Red)

- ON: GSM Fault
- Slow Flash : GSM Normal
- Quick Flash: GPRS reporting

2. Fault LED (Amber)

- OFF: Normal
- ON: CTC-1908M has fault:
GSM fault
PSTN line fault
Ethernet line fault (only when IP reporting is programmed)

3. PSTN Panel LED (Blue)

- ON: PSTN Panel is off hook
- OFF: PSTN Pane is on hook

4. Power LED (Green)

- ON: AC Power connected
- OFF: AC Power failure

5. SIM Card Base

6. Phone Jack (RJ-11)

Connects to the Phone Jack marked "Line" on the PSTN Control Panel

7. DC Jack

DC 12V 1A switching power connection (Cannot be used with DC Input Terminal at the same time)

8. DC Input Connection Terminal

DC 12V 1A Power input (Cannot be used with DC Jack at the same time)

9. Internet Connection (RJ-45)

10. External Antenna Connection Port. (CTC-1908M-3/8 EX only)

2.2. The Power Supply

AC switching power is required to connect to a wall outlet. Be sure only to use an adapter with the appropriate AC voltage rating to prevent component damage. A DC 12V 1A switching power is generally used to power the converter.

2.3. System Requirements

The system requires a TCP/IP network environment for CTC-1908M to connect to your Local Area Network (LAN).

To install the CD Wizard, your computer must have:

- Microsoft Windows 98, ME, NT4.0, 2000, XP, Vista, 7, or 8 operating system.
- Microsoft Internet Explorer 5.x, or later and Mozilla Firefox 1.0 compatible.
- CD-ROM drive
- CPU: Intel Pentium II 266MHz or above
- Memory: 32MB (64MB recommended)
- VGA resolution: 800x600 or above

3. Getting Started

In order to use CTC-1908M with the existing PSTN Control Panel, it must be programmed via LAN first. Please follow the steps below to setup and program your CTC-1908

- Step 1.** Connect the telephone line from the PSTN Control Panel's phone jack to CTC-1908M's phone jack.
- Step 2.** Plug-in the LAN/Internet connection cable into the Internet Port (RJ-45) on CTC-1908M.
- Step 3.** Insert the SIM Card into the SIM Card base.

<NOTE>

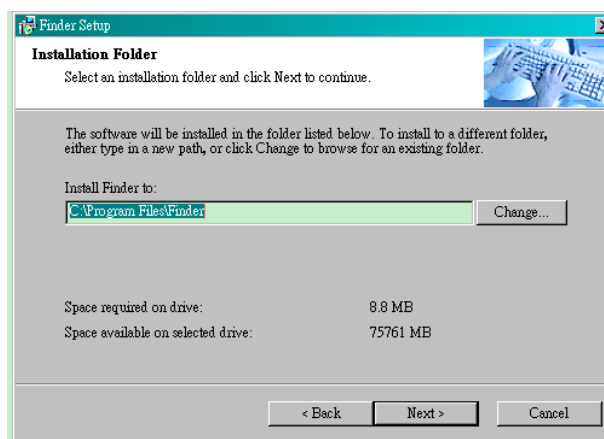
☞ Before inserting the SIM card, please make sure the SIM Card PIN code is disabled.

- Step 4.** For CTC-1908M-3/8 EX, you can also connect an external antenna to the converter to improve GSM signal strength.
- Step 5.** Connect the DC 12V 1A switching power to a Wall Outlet and the other end to CTC-1908M.

3.1 Running the Finder software

To install the **Finder** software

- Step 1.** Insert the supplied CD-ROM into your CD-ROM drive
- Step 2.** Find the **FinderV1.x** software icon in the CD-ROM.
- Step 3.** Double click on the **FinderV1.x** to initiate the installation.
- Step 5.** Click **Next** to re-name the shortcut folder, if no renaming is required; please click **Next** to get ready for the installation process.

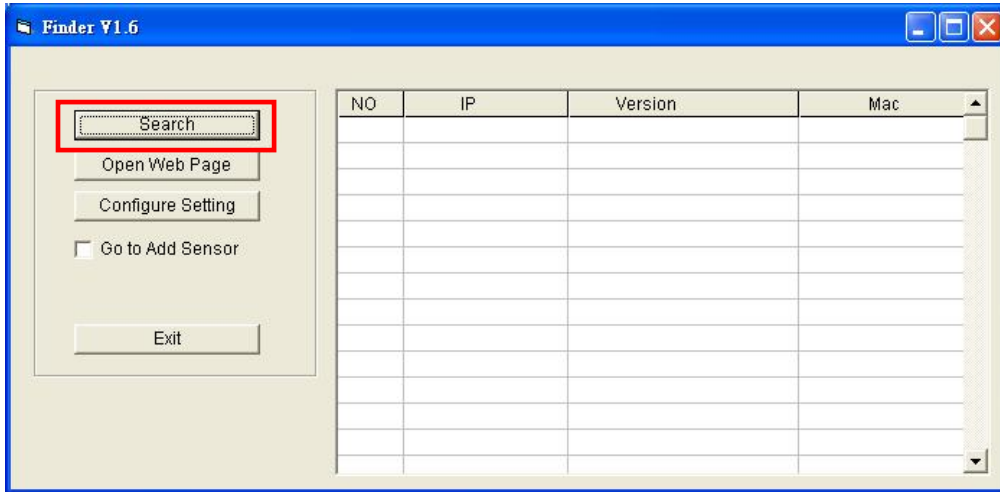


- Step 6.** Another click on **Next** to begin the Installation; once the installation is complete, click **Finish** to confirm.

- Step 7.** A new icon will be displayed on your desktop.

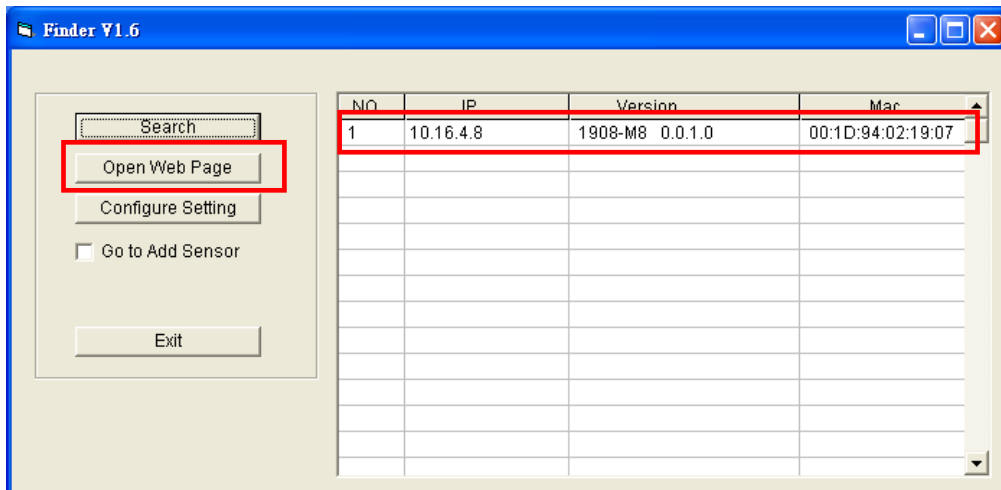


- Step 8.** Double click on the **Finder.exe** to start the installation. The following screen will be displayed:



Step 9. Click on **Search**, It will start searching for recognized IP address within the Local Network Service.

Step 10. You will be able to locate the current CTC-1908 IP address among the list, displayed with MAC Address and Firmware version.

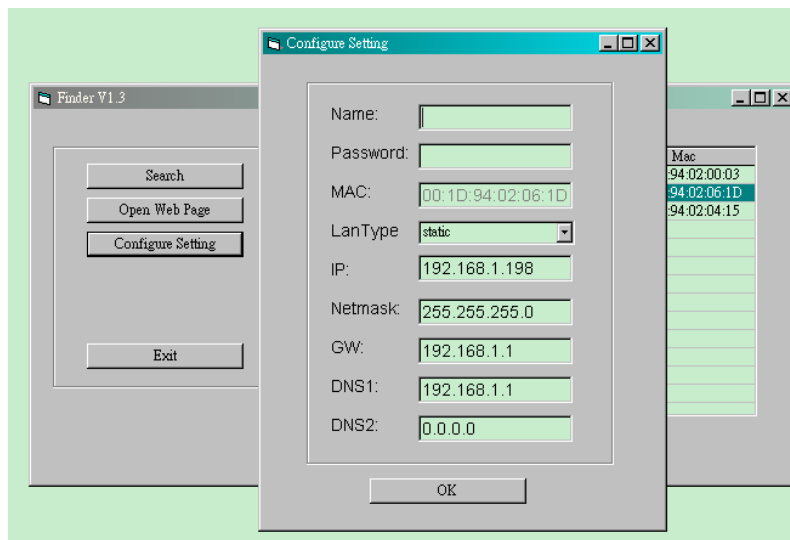


Step 11. Once CTC-1908M information is identified, click on **Open Web Page**, or double click on the CTC-1908M info to open the IP Security System Web page.

3.2 Configure Setting

The Configure setting is for you to enter the Internet data manually.

Step 1. Click on **Configure Setting**, the following window will display:



Step 2. Enter the internet data and CTC-1908M's web user name and password.

(Default) User Name: **admin**

(Default) Password: **admin1234**

Step 3. Click on **OK** to confirm. When the username and password are correct, a window will display: **Status: Configure success!!**

4. Connecting to Webpage

The webpage can be opened by Finder (please refer to section 3.1) or by manually opening with an internet browser. Enter CTC-1908M's IP address in your browser's address field and click on **GO**. You will enter the Control Panel webpage. The Converter's firmware version and MAC address will be displayed.

[Welcome] [Panel] [GSM/GPRS] [Network] [Report] [Administrator] [Firmware]
<hr/>
<h1>Welcome to Panel 1908-M8</h1>
Firmware revision: 1908-M8 0.0.1.0 MAC Address: 00:1D:94:02:19:07
<hr/>
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5. System Configuration

5.1. Panel

The Panel page allows you to program panel setting for reporting

Step 1. Click on **Panel** to enter the Panel Setting page.

- **Auto Check-in**

This is for you to set the interval time the Control Panel waits before making a regular check-in report

☞ **Interval:** Set the interval waiting time.

☞ **Offset Period:** This is to set the time delay before the first “**Auto Check-in Report**” report to be made. For example, if “**Offset**” time period is set to 2 Hours, then the Control Panel will make the first “**Auto Check-in Report**” report after 2 hours.

- **CID Code**

☞ **CID Group:** Enter a group code which will be included in the panel’s CID Auto Check-in report to identify the converter’s group.

☞ **CID Zone:** Enter a zone code which will be included in the panel’s CID Auto Check-in report to identify the converter’s zone.

- **Ringing Sound and Answering Mode**

- ☞ **Ringing Sound:** When **Enabled**, CTC-1908M will forward all incoming calls to the PSTN control panel for the panel to answer the call for two-way communication or remote access. When **Disabled**, the CTC-1908M will not forward incoming calls to the PSTN control panel.

- ☞ **Answering Mode:** This function will only be used when Ringing Sound is Enabled. CTC-1908M will optimize the communication channel according to Answering Mode setting.

DTMF Programming: The communication channel will be optimized for the caller to enter DTMF commands.

Two-way speech: The communication channel will be optimized for Two-way communication.

<NOTE>

- ☞ Answering Mode setting only affects optimization of the communication channel, it does not affect communication methods. Both DTMF commands and Two-way communication will still function normally regardless of Answering Mode setting.

- **Time Setting**

This is for you to set Control Panel time.

- ☞ **Time Zone:** Set your time zone.

- ☞ **Date and Time:** Set your current date and time from year to minute.

Step 3. After changing the Time setting, click "**Adjust Time**" to confirm the change, or click "**Reset**" to undo the change.

- **Factory Reset**

Clicking "Factory Reset" will return all CTC-1908M setting to factory default value. You can tick the "Keep Network Setting" box before Factory reset to keep your network setting unchanged.

5.2. GSM/GPRS

The GSM/GPRS page display your current GSM module status allows you to program GPRS setting configuration for reporting.

[\[Welcome\]](#) [\[Panel\]](#) [\[GSM/GPRS\]](#) [\[Network\]](#) [\[Report\]](#) [\[Administrator\]](#) [\[Firmware\]](#)

GSM Setting

GSM Status: No Signal
IMEI: 012813000702250
IMSI:

GPRS APN: User: Password:

SMS Control Setting

Keyword: Access Code

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Step 1. Click on **GSM/GPRS** to enter the GSM/GPRS setting page.

- **GSM Status**

Your GSM module status will be displayed here.

- **IMEI**

The IMEI code of your GSM module will be displayed here.

- **GPRS**

In order use GPRS for reporting, this section need to be programmed for GPRS reporting to function. Please check with your SIM Card provider for setting detail.

- ☞ **APN (Access Point) Name**

- The name of an access point for GPRS. Please inquire your service provider for an APN. When APN is set, the system becomes valid for internet connection.

- ☞ **User Name**

- Your GPRS user name.

- ☞ **Password**

- Your GPRS user password.

- **SMS Keyword and Access Code**

The SMS Keyword and Access Code are used to receive SMS remote commands. (Please refer to **5.7. SMS Remote Command** for detail.)

Step 2. After finishing all setting, click on **“Submit”** to confirm the change, or click **“Reset”** to undo the change.

- **Reset GSM**

Use this function to reset your GSM module if required.

5.3. Network

The Network page allows you to program network configuration for reporting. (CTC-1908M(EX) only)

[Welcome] [Panel] [GSM/GPRS] [Network] [Report] [Administer] [Firmware]

Network Setting

DHCP:

IP Address:

Subnet Mask:

Default Gateway:

Default DNS:

SNTP: Interval:

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Step 1. Click on **Network** to enter the Network Setting page.

- **DHCP**

☞ **On:** If DHCP is set to On, the Network will obtain the IP address automatically with a valid Network DHCP Server and no manual setting is required. You can only set DHCP to On if your Network environment supports DHCP. It will automatically generate all information.

☞ **Off:** If DHCP is set to Off, you need to enter the Network information manually for IP Address, Subnet mask, Default gateway, Default DNS. Please make sure that you have obtained all required values according to your Network environment. Please contact your local service provider for more information.

- **SNTP**

SNTP setting is for you to enter an internet time server to synchronize and update Control Panel time automatically according to set interval times. The factory default is set to pool.ntp.org.

Step 2. After changing the Network setting, click **“Submit”** to confirm the change, or click **“Reset”** to undo the change.

5.4. Report

The Report page allows you to set your report destinations.

[\[Welcome\]](#) [\[Panel\]](#) [\[GSM/GPRS\]](#) [\[Network\]](#) [\[Report\]](#) [\[Administrator\]](#) [\[Firmware\]](#)

ARC Connection Setting

Direct Handshake Authentication with ARC
 Store and Forward
 PSTN to GSM Virtual Channel

Report Setting

Index	To	Group
1	<input type="text"/>	1 <input type="button" value="v"/>
2	<input type="text"/>	1 <input type="button" value="v"/>
3	<input type="text"/>	1 <input type="button" value="v"/>
4	<input type="text"/>	1 <input type="button" value="v"/>
5	<input type="text"/>	1 <input type="button" value="v"/>
6	<input type="text"/>	1 <input type="button" value="v"/>

Note :
report via IP in CSV format as `medium://account@address:port/format[cid|sia|csv]`
report via GPRS in SIA format as `GPRS://1234@192.168.0.102:5011/sia`
report via SMS in CID format as `SMS://1234@0911907098/cid`
report via GSM voice channel as `GSM://1234@0911907098 [Virtual Channel only]`

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Step 1. Click on **Report** to enter the Report Setting page.

Step 2. Select ARC Connection Setting.

5.4.1. ARC Connection Setting

The **ARC Connection Setting** determines how CTC-1908M processes the data received from your PSTN panel and send the report.

- **Direct Handshake Authentication with ARC (IP/GPRS/SMS Reporting)** : When this option is selected, upon receiving report from the PSTN panel, CTC-1908M will report the event received according to Report Setting below. After receiving handshake authentication from Alarm Receiving Center (ARC), CTC-1908M will confirm the handshake with the PSTN panel to notify the panel that reporting is successful. If reporting is unsuccessful, CTC-1908M will notify the PSTN panel accordingly

Compatible Report Setting: IP/GPRS/SMS reporting set to Group 1 only
Non Compatible Report Setting: GSM and/or non-Group 1 Report Setting.

- **Store and Forward (IP/GPRS/SMS Reporting):** When this option is selected, upon receiving report from the PSTN panel, CTC-1908M will first confirm with the PSTN panel that the reporting is successful, then report the event received according to Report Setting below. If the reporting is unsuccessful, CTC-1908M will not notify the PSTN panel.

Compatible Report Setting: Non-CSV IP/GPRS/SMS reporting set to any group.
Non Compatible Report Setting: GSM report.

<NOTE>

- ☞ CSV IP/GPRS reporting is only compatible with **Direct Handshake Authentication with ARC**.
- **PSTN to GSM Virtual Channel (GSM Reporting):** This option is for GSM digital or voice reporting only. Upon receiving the report from PSTN panel, CTC-1908M will dial to the ARC. Upon successful connection, CTC-1908M will forward the digital event code, or voice message received from PSTN panel. If the ARC personnel choose to open a Two-way communication channel, CTC-1908M will serve as the bridge between ARC and PSTN panel for the Two-way communication. **(Factory Default)**

Compatible Report Setting: GSM report set to Group 1.
Non Compatible Report Setting: IP/GPRS/SMS report.

<NOTE>

- ☞ When **PSTN to GSM Virtual Channel** is selected and no report setting is entered, CTC-1908M will automatically forward the report received from PSTN Control Panel using the same telephone number and account number used by PSTN Control Panel.

5.4.2. Report Setting

The Report Setting is for you to program the report destinations. When programming Report Setting, please refer to ARC Connection Setting above to determine the report format you should use.

- **Report Format:**

- ☞ **IP reporting in CID format: (CTC-1908M-8 (EX))**

Reporting destination format: ip://Account@Server IP:Port/CID

For Example: ip://6543@59.124.123.22:8765/CID

- ☞ **GPRS reporting in CID format:**

Reporting destination format: gprs://Account@Server IP:Port/CID

For Example: gprs://6543@59.124.123.22:8765/CID

- ☞ **IP reporting in SIA format: (CTC-1908M-8 (EX))**

Reporting destination format: ip://Account@Server IP:Port/SIA

For Example: ip://6543@59.124.123.22:8765/SIA

- ☞ **GPRS reporting in SIA format:**

Reporting destination format: gprs://Account@Server IP:Port/SIA

For Example: gprs://6543@59.124.123.22:8765/SIA

☞ **IP reporting in CSV format: (CTC-1908M-8 (EX))**

Reporting destination format: ip://Account@Server IP:Port/CSV

For Example: ip://6543@59.124.123.22:8765/CSV

☞ **GPRS reporting in CSV format:**

Reporting destination format: gprs://Account@Server IP:Port/CSV

For Example: gprs://6543@59.124.123.22:8765/CSV

☞ **SMS reporting in CID format:**

Reporting destination format: sms://Account@mobile number/CID

For Example: sms://1234@0926064587/CID

☞ **SMS reporting in SIA format:**

Reporting destination format: sms://Account@mobile number/SIA

For Example: sms://1234@0926064587/SIA

☞ **GSM Digital or Voice report:**

Reporting destination format: gsm://Account@telephone number

For Example: gsm://1234@0926064587

<NOTE>

- ☞ The account number entered in the report setting is only for sending Auto Check-in report for CTC-1908M. For any events received from the PSTN panel, the report will be sent with PSTN panel account number

For example: If the report setting is set to gprs://0001@59.124.123.66:50123/CID. When CTC-1908M sends an Auto Check-in report, the event will be reported with account number of 0001. However if the PSTN panel sends a report, the report will be sent with the account number programmed in the PSTN panel instead.

- **Group:** Select a group number for the report destination.

Multiple Group setting is only applicable when ARC Connection Setting is set to **Store and Forward**.

For **Direct Handshake Authentication with ARC**, use only Group 1.

For **PSTN to GSM Virtual Channel**, use only Group 1 for forwarding report from PSTN panel or Two-way communication use Group 2~5 for CTC-1908M's own status reporting.

Reporting sequence goes from Group 1 → Group 2 → Group 3 → Group 4 → Group 5. Destinations assigned to Group 1 will be reported to first, those assigned to Group 2 will be reported to next, and the like.

<NOTE>

- ☞ Each group can have more than one reporting destination. If one group has multiple destinations, and reporting to one of them is successful, CTC-1908M will consider reporting to this group successful and move on to the next group without trying rest of the reporting destinations. For example, if Group 1 has 3 reporting destinations, when reporting to the first destination is successful, CTC-1908M will move on to Group 2 without trying rest of the 2 reporting destinations in Group 1.

- ☞ The reporting will go through a group's reporting destinations according to the numerical sequence to which the phone numbers are assigned. For example, when phone numbers 4 and 8 are assigned to Group 2, the reporting will dial phone number 4 first and then 8.
- ☞ If reporting to all destination in a group fails, CTC-1908M will retry reporting to the group for a maximum of 3 times before moving on to the next group.
- ☞ One complete round of report means going from Group 1 → Group 2 → Group 3 → Group 4 → and going through all the reporting groups. If one complete round of report has been completed and no reporting destination could be reached successfully, CTC-1908M will retry the report until one destination has been reached successfully, then stop reporting.

5.4.3. Report Setting Procedure and Comparison

1. Determine if you want to use IP/GPRS/SMS reporting, or GSM CID/Voice reporting:
 - I. For IP/GPRS/SMS reporting, select **Direct Handshake Authentication with ARC** or **Store and Forward**.
 - **Direct Handshake Authentication with ARC:** Only Group 1 is available for setting, the PSTN panel will receive handshake authentication until CTC-1908M has finished reporting and will know whether CTC-1908M has forwarded the report successfully.
 - **Store and Forward:** Multiple group setting is available. The PSTN panel will receive handshake authentication before CTC-1908M makes report and will not know whether CTC-1908M has forwarded the report successfully
 - II. For GSM digital or voice reporting, select **PSTN to GSM Virtual Channel**.
 - You can keep all report setting fields blank, CTC-1908M will automatically forward the PSTN report according to the telephone number and account number used by PSTN Control Panel.
 - Alternatively, enter telephone number(s) in Group 1 for GSM reporting. If you want to program IP/GPRS/SMS report for CTC-1908M status only, enter the report setting in Group 2~5.

5.5. Administrator

The Administrator page is for you to set the user name and password you used to access CTC-1908M webpage.



[Welcome] [Panel] [GSM/GPRS] [Network] [Report] [Administer] [Firmware]

Administer Setting

User name:

Password:

Repeat Password:

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- Step 1.** To change your User Name/ Password, enter the new User Name and Password in the blank field.
- Step 2.** Enter the password again in Repeat Password field.
- Step 3.** Click Submit to confirm the change.

5.6. Firmware

The Firmware page is for you to update the firmware of CTC-1908M.

[Welcome] [Panel] [GSM/GPRS] [Network] [Report] [Administrator] [Firmware]
<h1>Firmware Upgrade</h1>
File: <input type="button" value="Choose File"/> No file chosen <input type="button" value="Submit"/>
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- Step 1.** Click on **Firmware** to enter the Firmware upgrade page.
- Step 2.** Click on **Browse**, then select the firmware file in your computer.
- Step 3.** Click **Submit** to upload the new firmware to CTC-1908M. Do not power off CTC-1908M when firmware update is in progress.

5.7. SMS Remote Command

CTC-1908M can be programmed remotely by SMS message.

- **SMS Message Format:**

(SMS Keyword)(Space)(Access Code)(SMS Command):(value1),(value2),....

SMS Command Table (Default SMS Keyword set as **PROG**, Access Code as **1111**)

Function	Command	Value	Example:
Set New SMS Keyword	PINK	New SMS Keyword	PROG 111 PINK:JOHN
Set New Access Code	PINC	New Access Code	PROG 1111 PINC:1234 (1234 will be set as new Access Code)
Set Report Destination	RPTN	1: Reporting No.(1~6) 2: Report destination according to report setting format 3. Enter A 4. Group No, (1~5)	PROG 1111 RPTN:1, ip://6543@59.124.123.22:8765/CID,a,1
Set ARC Connection Setting	ARCS	0: Store and Forward 1. Direct Handshake Authentication with ARC 2: PSTN to GSM Virtual Channel	PROG 1111 ARCS:1
Set Auto check-in	RPDS	1. Auto-checkin time in hours: (0,4,6,8,12,24,48,72,96.120.144.168 0 = disable) 2. Offset time in hours (1,2,4,6,8) 3. CID Zone code 4. CID Group Code	PROG 1111 RPDS: 12,1,01,01
Set GPRS APN	GAPN	1. APN Name 2. User Name 3. Password	PROG 1111 GAPN:internet,,
Reset GSM module	GRST		PROG 1111 GRST
System Reset	FRST	1. (0 = system reset, 1 = Factory Reset, 2 = Factory Reset but keep Network Setting)	PROG 1111 FRST:1
Firmware Upgrade	FMUG	Firmware path	PROG 1111 FMUG:59.124.123.22:8080/firmware/upgrade. bin

Inquire Report Setting	RPT?	1: Reporting No.(1~6)	PROG 1111 RPT?:
Inquire ARC Setting	ARC?		PROG 1111 ARC?:
Inquire GPRS APN Setting	GAP?		PROG 1111 GAP?:
Inquire GSM RSSI	GSM?		PROG 1111 GSM?:

- **SMS Confirmation Message:**

If CTC-1908M successfully receives the SMS command, it will reply in the following format:

(SMS Command):OK

For SMS command which inquires CTC-1908M setting, CTC-1908M will send back an SMS message containing the inquired information in identical format as the programming message.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15, 22, 24 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- . Reorient or relocate the receiving antenna.
- . Increase the separation between the equipment and receiver.
- . Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- . Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Part 15, 22, 24 of the FCC Rules and Industry Canada licence-exempt RSS-132, 133 standard. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.