



GT-534

Quick Start

Jun 2010 Version 1.0

Package checklist

The package includes the following items:

- One GT-534 hardware module
- One Quick Start
- One software utility CD
- One 2G micro SD card
- One GSM Antenna
- One screw driver
- One RS-232 cable (CA-0910)

Note:

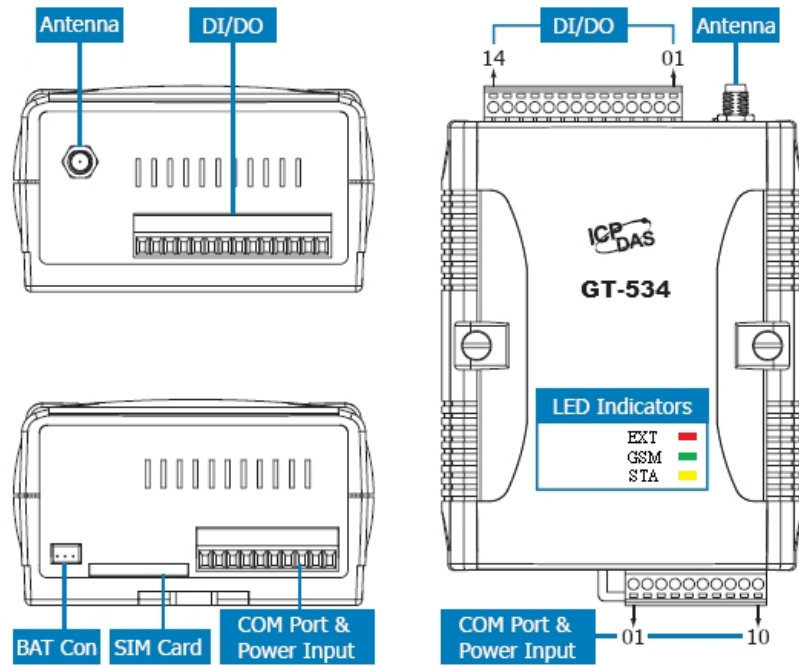
If any of these items are missed or damaged, contact the local distributors for more information. Save the shipping materials and cartons in case you want to ship in the future.



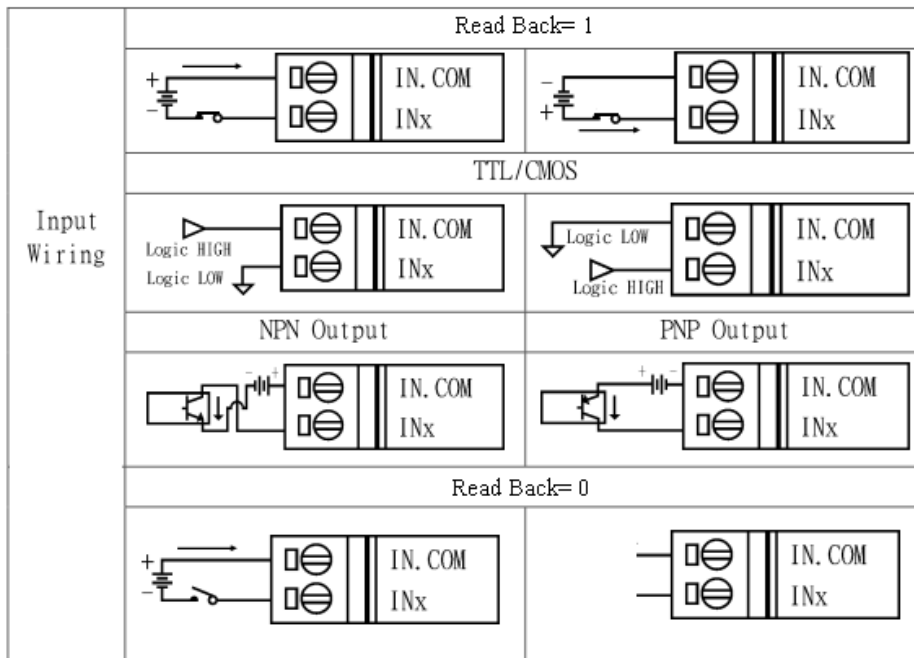
● Appearance and pin assignments

| DI/DO | | |
|--------------|----|----------------|
| Terminal No. | | Pin Assignment |
| DI | 01 | DI0 |
| | 02 | DI1 |
| | 03 | DI2 |
| | 04 | DI3 |
| | 05 | DI4 |
| | 06 | DI5 |
| DI COM | 07 | DI COM |
| DO PWR | 08 | DO PWR |
| DO | 09 | DO0 |
| | 10 | DO1 |
| DO GND | 11 | DO GND |
| - | 12 | - |
| Ain+ | 13 | Ain+ |
| Ain- | 14 | Ain- |

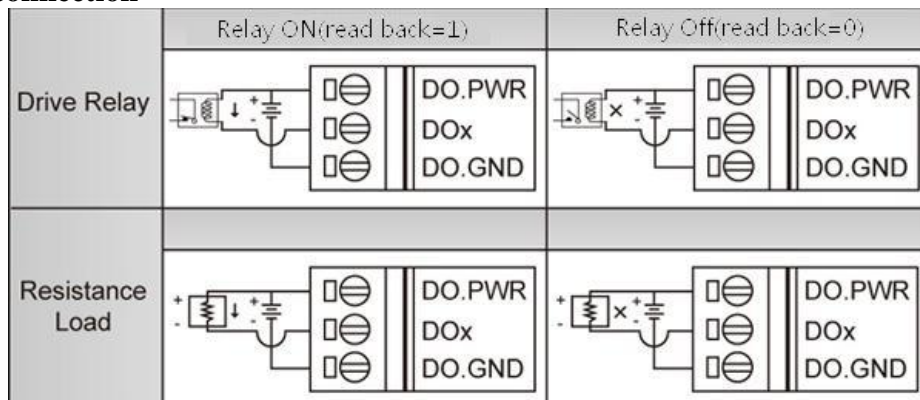
| COM Port & Power Input | | | |
|---|----|--|----------------|
| Terminal No. | | | Pin Assignment |
| Ground for COM | 01 | | GND |
| COM1 RS-232 | 02 | | RxD1 |
| | 03 | | TxD1 |
| COM2 RS-485 | 04 | | D+ |
| | 05 | | D- |
| Reset | 06 | | RST+ |
| | 07 | | RST- |
| Power Input: +10 ~ 30V _{DC} | 08 | | DC.+VS |
| | 09 | | DC.GND |
| Frame Ground | 10 | | F.G |



DI hardware connection



DO hardware connection



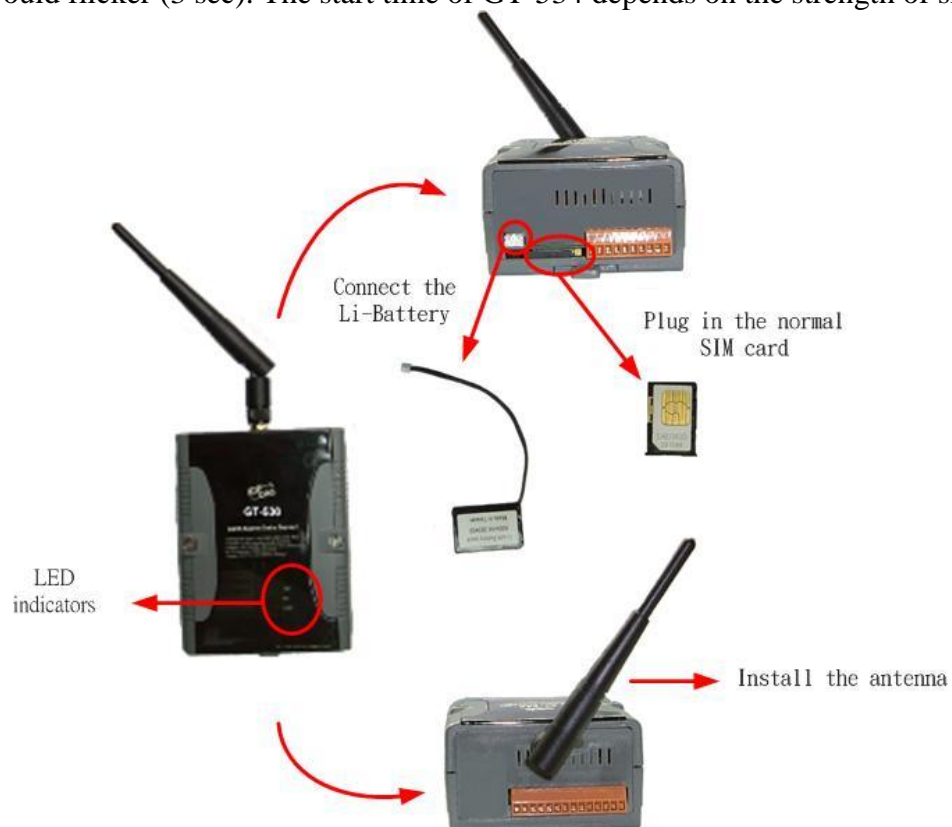
LED indicators

| LED | Description | | | |
|--------------|----------------|-------------------------------------|-----------|----------------------|
| EXT(red) | on | The external Power is active | | |
| | off | The external Power is not active | | |
| STA (orange) | | Normal | GSM Fail | PIN code is wrong |
| | EXT on | Flickering (1 sec) | Always on | Blinking per 50 ms |
| | EXT off | Flickering (1 sec) | Always on | Flickering per 50 ms |
| GSM(green) | Blinking 3 sec | Modem normal | | |
| | off | Modem fail (or Blinking(not 3 sec)) | | |

● Installation

Follow these steps to install the GT-534 below:

1. Install the antenna
2. Plug in the SIM card (Use a mobile phone to test the SIM card is good one first.)
3. Pin08 and Pin09 connect to the DC.+VS and DC.GND of the power supply.
4. Follow the section 2.3 to wire the I/O connection.
5. If you want to use the backup power, please connect the Li-battery to GT-534.
6. It is needed 30 ~ 50 seconds for GT-534 to search the GSM base station and register to the ISP. After finishing the process, GT-534 would be in normal operation mode and the STA LED would flicker (3 sec). The start time of GT-534 depends on the strength of signal.



● How to reset GT-534

- ◆ The Li-Battery is applied :
 - (1) Remove Li-Battery from GT-534.
 - (2) Turn off the external power and confirm the EXT LED is off.
 - (3) Turn on the external power.
 - (4) Re-install the Li-Battery.
- ◆ The Li-Battery is not applied
 - (1) Turn off the external power and confirm the EXT LED is off.
 - (2) Turn on the power.

● Charge and discharge of Li-Battery

If users apply the Li-Battery on GT-534, the Li-battery would be charged by the external power automatically. When the external power is removed from GT-534, the power supplying to GT-534 is from Li-Battery. If the voltage of Li-Battery is lower than the preset limit, GT-534 can send the SMS message to inform the users.

Note: A new Li-Battery can supply power to GT-534 for 6 hours without the external power, but the battery life would be decreased by the applying time. It is recommended to change the Li-Battery every 6 months.

● GT-534 Utility

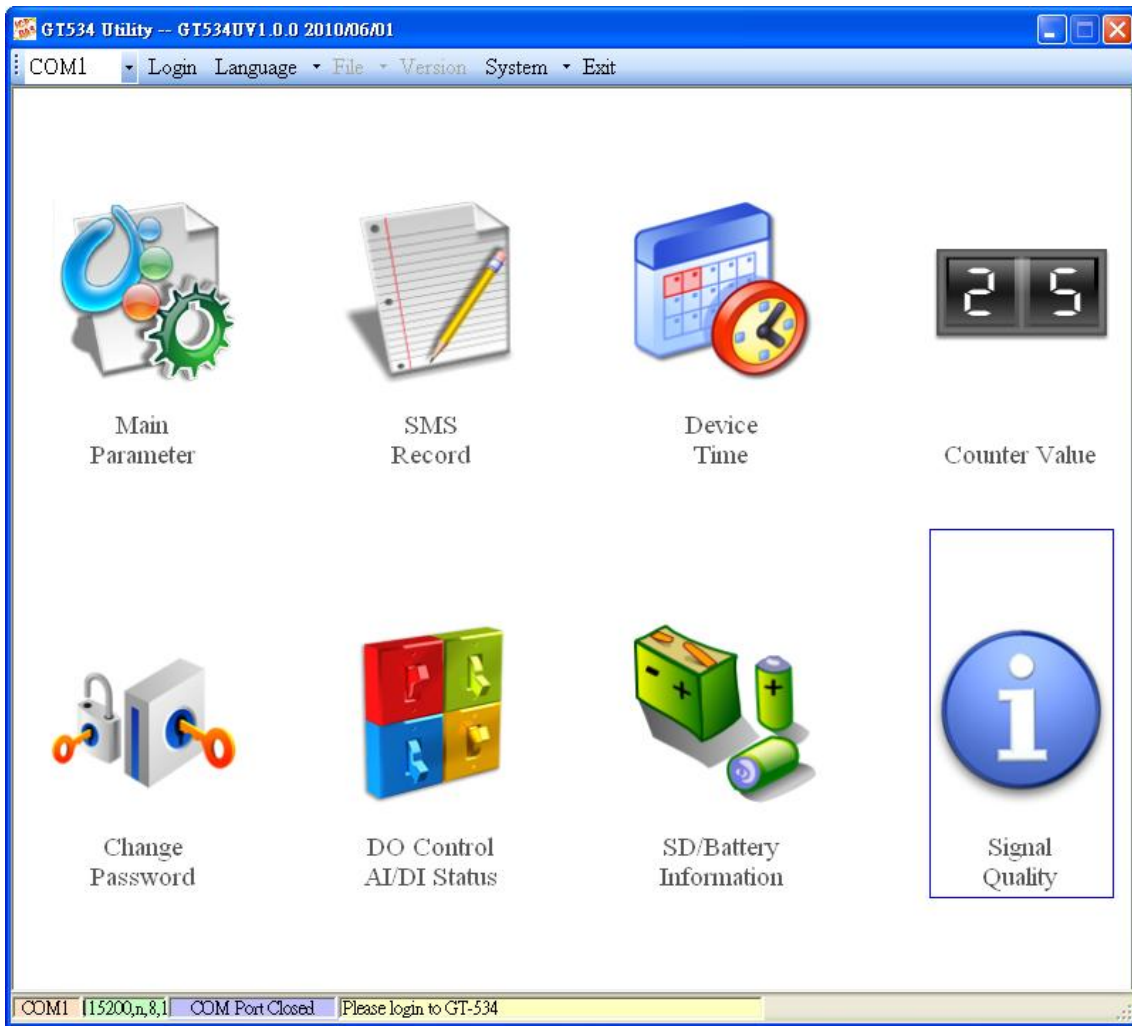
Before GT-534 utility is connected to the PC correctly, please confirm these following steps:

1. The STA LED is flickering. There are 2 kinds of flickering in GT-534.

| STA LED | Description |
|----------------------|---|
| Flickering per 1 sec | Normal mode |
| Flickering per 50 ms | The PIN code is wrong. The login window would show the field to input PIN or PUK code |

2. Confirm the RS232 connection between GT-534 and PC is correct. Users can refer to the following figure.
3. During the setting procedure, the external power must be turned on.

Note: If the STA LED is always on, please reset GT-534.



1. Tool menu

(1) COM port number: Set the COM port number in PC connecting to GT-534.

(2) Login/Logout

Before operating GT-534, users need to login to GT-534 Utility. After login the system successfully, the GT-534 Utility would be operated normally. Once the power is reset, the login procedure needs to do again. The default password is “111111”

(3) Language

GT-534 Utility supports English, Tradition and Simplified Chinese interface. Users can select which language they want from the “Language” menu item. The language setting would be influencing on the encode of SMS.

(4)File

There are import and export functions in the "File" menu item.. These functions would be enabled when “Main parameters” window is opened.

Export Parameters: The function can export the parameters as .par file from the “Main parameters” windows.

Import Parameters: The parameters would be shown in “Main parameters” window from the specific .par file.

- (5) Version: Includes the firmware and Utility version information.
- (6) System: Provides a function to reboot and recovery the GT-534 to factory settings.
- (7) Exit: To exit GT-534 utility

2. 8 function item :

- (1) Main parameter: The main parameter setting of GT-534 includes ID, SIM number, 10 phone number authority, counter return report, event, DI mode and SMS message.
- (2) SMS recorder: inquire the report recorder of event and counter value. The maximum number of recorder in GT-534 is 64.
- (3) Device Time: Display and set the RTC time of GT-534.
- (4) Counter Value: Inquire and set the counter value.
- (5) Change Password: change the login password
- (6) DO Control/DI/AI status: Display the status of I/O and control the DO output.
- (7) Battery information: Show the voltage and volume of Li-Battery
- (8) Signal Quality: Show GSM signal strength in GT-534

● SMS Command

| SMS command | Description |
|-------------|-----------------------|
| @TIME | Time set and inquiry |
| @DOCn | DO control |
| @ACTV | Counter value inquiry |
| @DIV | DI/DO inquiry |
| @BAT | Battery inquiry |
| @PASS | Password inquiry |

● Send/Receive SMS by COM

GT-534 provides sending/receiving SMS function from com port. This function can provide PLC or PAC to send or receive SMS through GT-534. User can send command through RS-232 or RS-485, and both of two will receive data from SMS. That can extend GT-534 to various applications.

COM port setting

- ◆ Baud rate : 115200 bps
- ◆ Data bit : 8
- ◆ Parity check : none
- ◆ Stop bit : 1
- ◆ Flow control : none

Send data to COM of GT-534 by SMS command

It is possible to use SMS to send data to com port of GT-534. The command header is "+++". The first setting phone number just has the authority to use this function with the "Allowed" enabling. The

command supports 7 Bits format

Command:

+++Message

Message: The message is sent to COM of GT-534 (Maximum 130 char)

Example

SMS content: +++Hello

To com port: Hello

Send SMS by COM

This function is used to send SMS to the first setting phone number by this command ”+++”. This command supports ASCII code, not Unicode

Request :

+++Message,

Message: The user-defined SMS content with a 0x0d ending char..

Example :

Command from COM: +++Hello

Received SMS content: Hello

Sending Sound by COM (RS-232/RS-485)

The GT-534 can call out through the command, This mode requires a specified voice file to play, and voice files must be placed in the root directory of SD card

Command format:

@CALL;Phone number;Wav file name(0x0d)

@CALL:command name

● Troubleshooting

| <i>Item</i> | <i>Trouble state</i> | <i>Solution</i> |
|-------------|--|--|
| 1 | EXT LED is off without Li-battery | Please check the external power and wire connection. |
| 2 | STA is always on | 1. Check SIM card 2. Check Antenna 3. Check the GSM signal strength |
| 3 | GT-534 Utility cannot connect to GT-534 | 1. Check STA LED blinking every 1 sec Check com port connection and baud rate setting |
| 4 | After event triggering, users can not receive SMS. | 1. Check DI connection 2. Check phone number and format 3. Check DI event is enabled in GT-534 Utility |
| 5 | Counter value is abnormal | 1. Check wire connection 2. Check the counter signal is at 5~40Hz. 3. Check the DI mode setting. Must be counter mode. |
| 6 | The content of received SMS is abnormal. | Please select the correct language to set the content of SMS in utility. If you want to transfer Unicode char, select the language supporting UCS2. |
| 7 | The time of receiving SMS is abnormal. | 1. The time in GT-534 is abnormal. Setup the time of GT-534 by utility. 2. The battery of RTC is low. Change the silver battery of RTC. After changing the battery, set the time of GT-534. |
| 8 | STA led is flickering per 50 ms | The PIN code is wrong. The login windows would show the field to input PIN or PUK code |
| 9 | Forget Password | Use SMS command to get the password. |

● Technical Support

If you have any question about using the GT-534, please contact ICP DAS Product Support.

Email: Service@icpdas.com