



# SMS-530

## Quick Start

Feb. 2015 Version 1.1

### Package checklist

The package includes the following items:

- One SMS-530 hardware module
- One GSM Antenna (ANT-421-02)
- One RS-232 cable (CA-0910)
- One Quick Start
- One software utility CD
- One screw driver



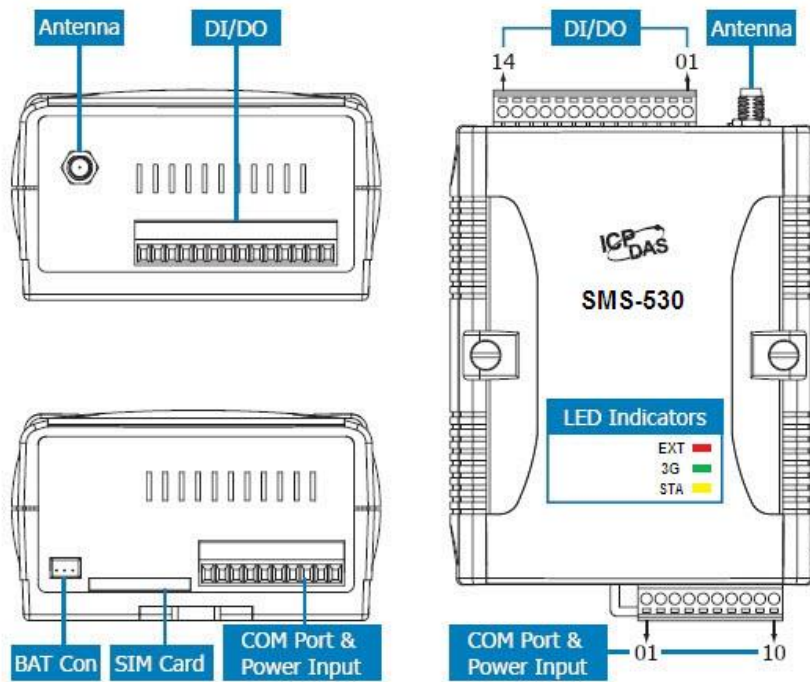
### Note:

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
	07	DI6
	08	DI7
	09	DI8
	10	DI9
DO	11	DO0
	12	DO1
	13	DO.PWR
DI/DO	14	Ext.GND

COM Port & Power Input		
Terminal No.	Pin Assignment	
COM3 RS-232	01	GND
	02	RxD3
	03	TxD3
COM2 RS-232	04	GND
	05	RxD2
	06	TxD2
N/A	07	N/A
Power Input: +10 ~ +30 V <sub>DC</sub>	08	DC.+VS
	09	DC.GND
Frame ground	10	F.G

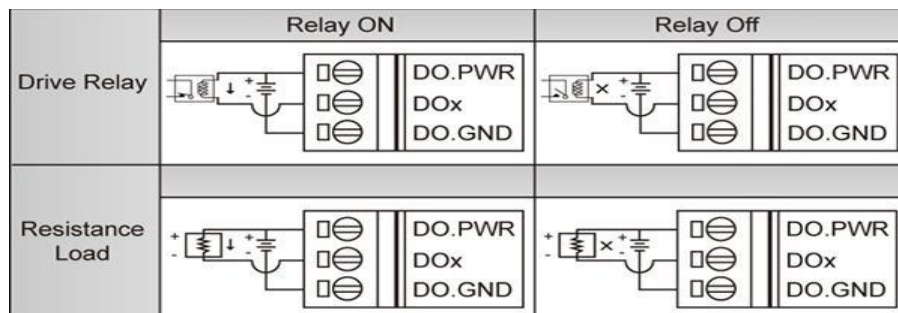


## I/O Connection

### DI hardware connection

NC(Normal Close) mode			NO (Normal Open) mode		
Input Type	Not Trigger ReadBack as 1	Trigger ReadBack as 0	Trigger ReadBack as 1	Not Trigger ReadBack as 0	
Relay Contact	Relay ON 	Relay Off 	Relay ON 	Relay Off 	
TTL/CMOS Logic	Voltage < 1V 	Voltage > 3.5V 	Voltage < 1V 	Voltage > 3.5V 	
Open Collector	Open Collector On 	Open Collector Off 	Open Collector On 	Open Collector Off 	

### DO hardware connection



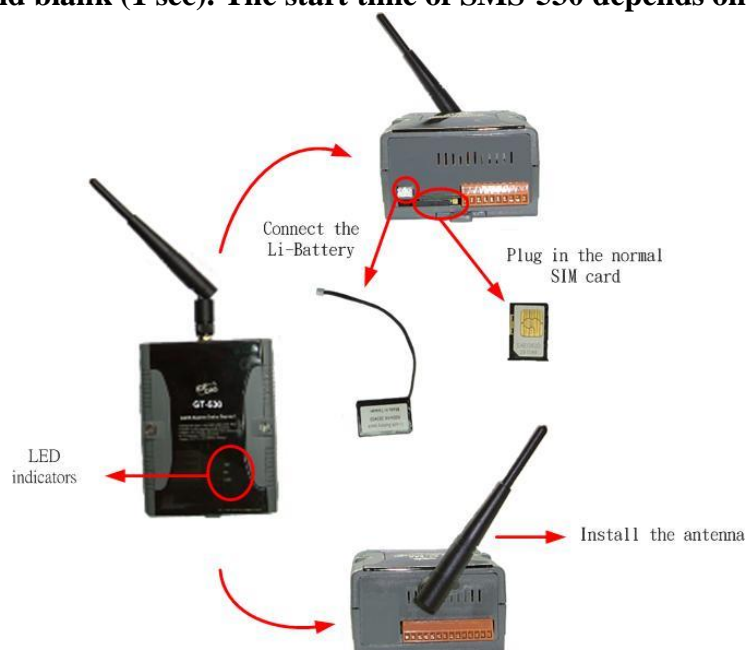
## LED indicators

LED	Description			
EXT (red)	on	The external Power is active		
	off	The external Power is not active		
3G (green)	Blinking*2 (2 sec)	3G module normal (After modem registered) Use 3G SIM card		
	Blinking*1 (2 sec)	3G module normal (After modem registered) Use 2G SIM card		
	off	Modem fail (or Blinking(not 3 sec))		
STA (orange)		Normal	3G Fail	PIN code is wrong
	EXT on	Blanking (1 sec)	Always on or off	Blinking per 50 ms
	EXT off	Off (sleep mode) or Blanking (1 sec)(wake up)	Always on	Blanking per 50 ms

## ● Installation

If users want to start SMS-530 normally, it needs to follow these steps to install the SMS-530 below:

1. Install the antenna
2. Plug in the normal SIM card (Before apply the SIM card, confirm it is OK by mobile phone.)
3. Pin08 and Pin09 connect to the DC.+VS and DC.GND of the power supply.
4. Follow the User's Manual section 2.4 to wire the I/O connection.
5. If you want to use the backup power, please connect the Li-battery(Optional) to SMS-530.
6. It is needed 30 ~ 50 seconds for SMS-530 to search the 3G base and register to the ISP. After finishing the process, SMS-530 would be in normal operation mode and the STA LED would blank (1 sec). The start time of SMS-530 depends on the strength of signal.



## ● How to reset SMS-530

- ◆ The Li-Battery is applied
  - (1) Remove Li-Battery from SMS-530.
  - (2) Turn off the external power and confirm the EXT LED is off.
  - (3) Turn on the external power.
- ◆ Re-install the Li-Battery.
  - (1) The Li-Battery is not applied
  - (2) Turn off the external power and confirm the EXT LED is off.
  - (3) Turn on the power.

## ● Charge and discharge of Li-Battery

If users apply the Li-Battery on SMS-530, the Li-battery would be charged by the external power automatically. When the external power is removed from SMS-530, the power supplying to SMS-530 is from Li-Battery. If the voltage of Li-Battery is lower than the preset limit, SMS-530 can send the SMS message to inform the users.

**Note: A new Li-Battery can supply power to SMS-530 for 36 hours without the external power.**

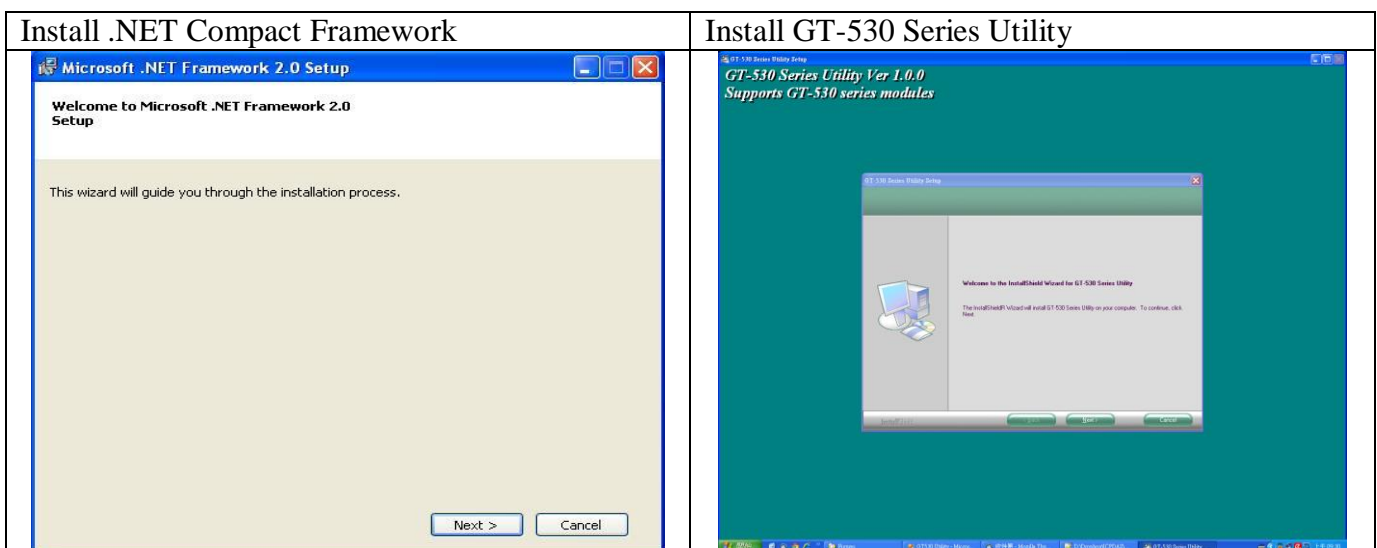
**The power volume of Li-Battery would be decreasing for a long time. It is recommended to change the Li-Battery every 6 months.**

Li-Battery ordering information:

<b>BT1200</b>	3.7V 1200 mAh Battery
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## ● GT-530 Series Utility

It needs the runtime environment with .NET Framework 2.0 or above to execute the GT-530 Series Utility in the PC.



## Operation

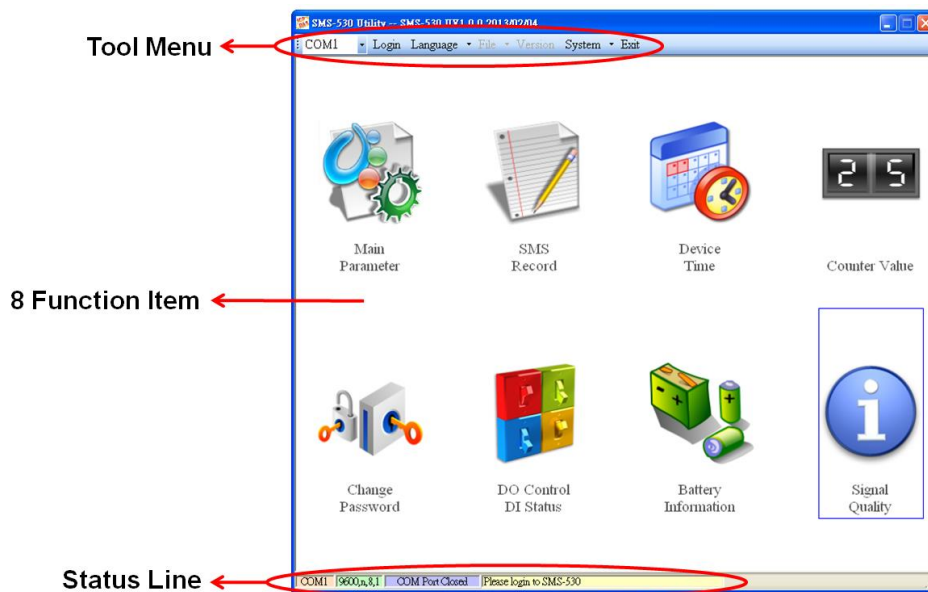
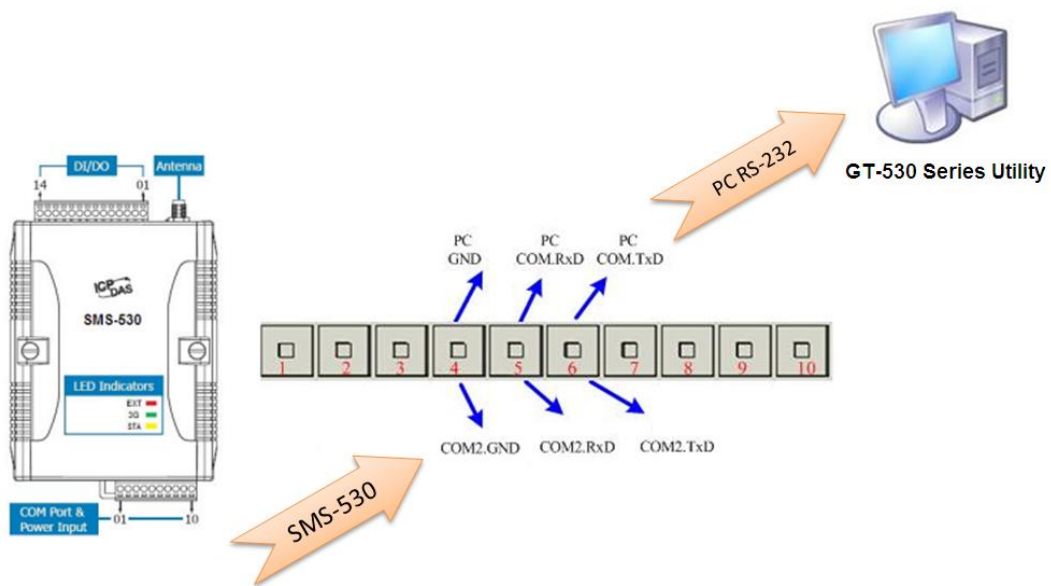
Before GT-530 Series Utility is connected to the PC correctly, please confirm these following steps:

1. The STA LED is blanking. There are 2 kinds of blanking in SMS-530.

STA LED	Description
Blanking per 1 sec	Normal mode
Blanking per 50 ms	The pin code is wrong. The login windows would show the field to input pin or PUK code

2. Confirm the RS232 connection between SMS-530 and PC is correct. Users can refer to the following figure.
3. During the setting procedure, the external power must be turn on.

Note: If the STA LED is always on, please reset SMS-530.



## 1. Tool Menu

- (1) COM port number: Set the COM port number in PC connecting to SMS-530.
- (2) Login/Logout:  
Before operating SMS-530, users need to login to GT-530 Series Utility. After login the system successfully, the menu item “login” would become “logout” and the GT-530 Series 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-530 Series Utility supports English, Tradition and Simplified Chinese interface. Users can select which language they want from the “Language” item. The language setting would be influencing on the encode of SMS.
- (4) File  
There are import and export functions in “File” item. These functions would be enabled when “Main parameters” window is open.
  - ◆ 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: Including the firmware and Utility version information.
- (6) System: Provide users to recovery SMS-530 to factory and reset SMS-530.
- (7) Exit: To exit GT-530 Series Utility.

## 2. 8 Function Item

- (1) Main parameter: The main parameter setting of SMS-530 includes ID, SIM number, 10 phone number authority, counter return report, event, DI mode and SMS message.
- (2) SMS record: Inquire the report recorder of event and counter value. The maximum number of recorder in SMS-530 is 64.
- (3) Device Time: Display and set the RTC time of SMS-530. It is also can get the information of the last and next time of the return report.
- (4) Counter Value: Inquire and set the counter value.
- (5) Change Password: change the login password.
- (6) DO Control/DI 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 3G signal strength in SMS-530.

## 3. Status Line

Show the related information during the operation procedure including:

- (1) The com port number of PC
- (2) The communication setting of COM Port
- (3) The status of COM Port
- (4) The result of Utility operation

## ● 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
@CRPT	Send Counter Report SMS to all phone number

## ● Send/Receive SMS by COM3

SMS-530 provides sending/receiving SMS function from com port. This function can provide PLC or PAC to send or receive SMS through SMS-530. That can extend SMS-530 to various application.

COM port setting :

- ◆ Baud rate : 9600 bps
- ◆ Data bit : 8
- ◆ Parity check : none
- ◆ Stop bit : 1
- ◆ Flow control : none

### Send data to COM3 of SMS-530 by SMS command

It is possible to use SMS to send data to com port of SMS-530. The command header is “+++”. The first setting phone number just has the authority to use this function with the “Allowed” enabling. The command support 7 Bits format.

Command :

+++Message

Message : The message is sent to com3 of SMS-530 (Maximum 130 char)

Example :

SMS content : +++Hello

To com port : Hello

### Send SMS by COM3

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, and the end of the message have to add ASCII code

0x0d.

Example :

Command from com3 : +++Hello

Received SMS content : Hello

## ● Troubleshooting

Item	Trouble state	Solution
1	EXT LED is off without Li-battery	Please check the external power and wire connection.
2	STA is always on	<ol style="list-style-type: none"> <li>1. Check SIM card</li> <li>2. Check Antenna</li> <li>3. Check the 3G signal strength</li> </ol>
3	GT-530 Series Utility can not connect to SMS-530	<ol style="list-style-type: none"> <li>1. Check STA LED blinking every 1 sec</li> <li>2. Check com port connection and baud rate setting</li> </ol>
4	After event triggering, users can not receive SMS.	<ol style="list-style-type: none"> <li>1. Check DI connection</li> <li>2. Check phone number and format</li> <li>3. Check DI event is enabled in GT-530 Series Utility</li> </ol>
5	Counter value is abnormal	<ol style="list-style-type: none"> <li>1. Check wire connection</li> <li>2. Check the counter signal is at 5~40Hz.</li> <li>3. Check the DI mode setting. Must be counter mode.</li> </ol>
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	<ol style="list-style-type: none"> <li>1. The time in SMS-530 is abnormal. Setup the time of SMS-530 by utility.</li> <li>2. The battery of RTC is low. Change the silver battery of RTC. After changing the battery, set the time of SMS-530.</li> </ol>
8	STA led is blanking 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 problems about using the SMS-530, please contact ICP DAS Product Support.

Email: [Service@icpdas.com](mailto:Service@icpdas.com)