RTU-531PM

Quick Start

Congratulations! ···

Thanks for purchasing the RTU-531PM - the intelligent 3G Remote Terminal Unit with GPS.

What's In the Box! ···

In addition to this guide, the package includes the following items:

RTU-531PM

I/O Cable (CA-030)

Micro SD(4G)

Screw Driver

RS-232 Cable (CA-0910)

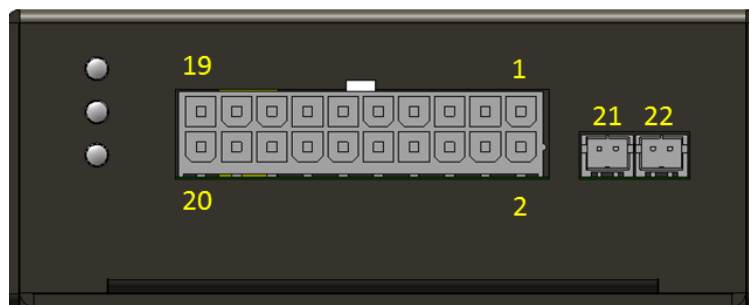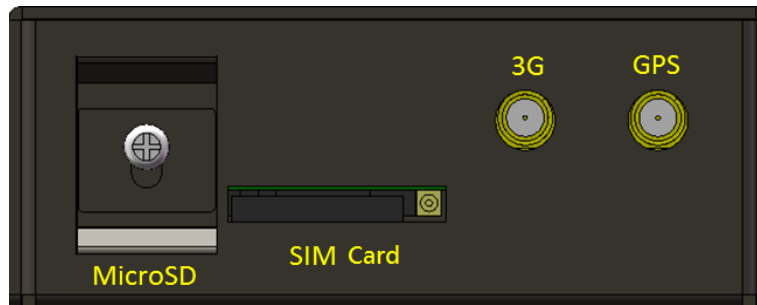**Thermistor x2 (CA-TM-P100-L020P)**

Technical Support ···

- **RTU-531PM User Manual**

  ftp://ftp.icpdas.com.tw/pub/cd/usbcd/napdos/rtu-531pm/manual/

- **RTU-531PM Website**

  http://m2m.icpdas.com/RTU-531PM.html

E-mail: service@icpdas.com   **1**

Appearance and Pin Assignments

Pin	Description	Pin	Description	Pin	Description
1	AI2	9	DI2	17	N/A
2	AI3	10	DI3	18	N/A
3	AI0	11	DI0	19	PWR
4	AI1	12	DI1	20	P.GND
5	AGND	13	GND	21	THM1
6	DO.GND	14	DI.GND	22	THM0
7	DO0	15	TxD	-	-
8	DO1	16	RxD	-	-

DI/DO/AI Internal Structure and Wire Connection

Digital Input		
Input Type	ON State Read back as 1 (DINx > 7V)	OFF State Read back as 0 (DINx < 3V)
Wet Contact	EXT.DINx DI.GND	EXT.DINx DI.GND

Digital Output		
Output Type	ON State Read back as 1	OFF State Read back as 0
Open Collector Output (Resistance Load)	EXT.DOx DO.GND	EXT.DOx DO.GND

Analog Input
EXT.AIx EXT.AGND

E-mail: service@icpdas.com
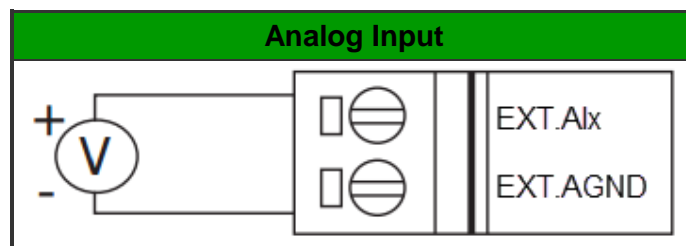
LED Indicator

There are four LED indicators to help users to judge the various conditions in the RTU-531PM. The description is as the following:
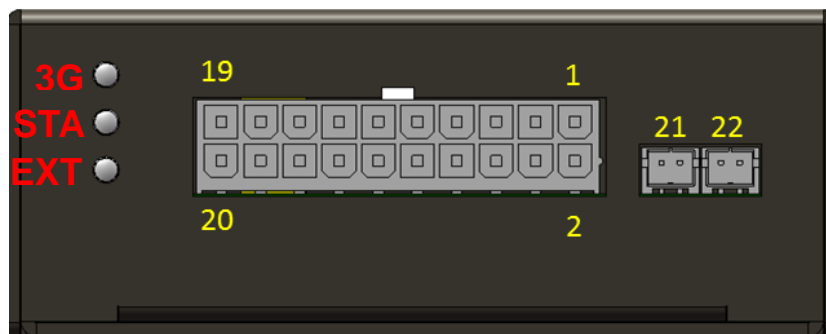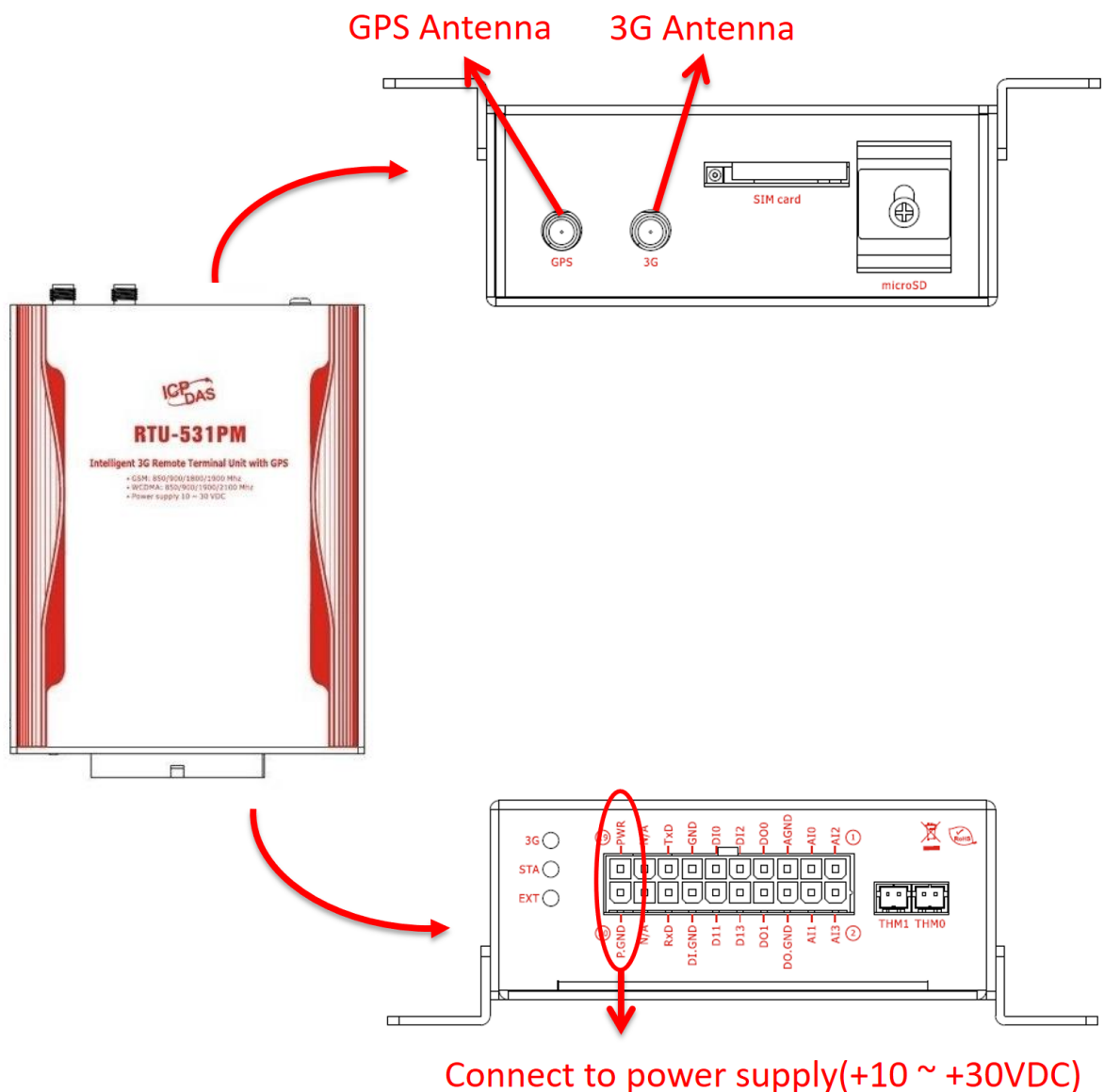

LED Name	LED Status	LED Description
EXT (Red)	ON	The power of the module is ON
	OFF	The power of the module is OFF
3G (Green)	Blanking pre 3 sec	3G modem normal(2G network)
	Twinkling twice per 3 sec	3G modem normal(3G network)
	OFF	3G modem fail
STA (Yellow)	Blinking (250 ms)	Network registered. GPS searching for satellite.
	Blinking (1 s)	Network registered. GPS is positioned.
	Blinking (50 ms)	Wrong PIN/PUN code.
	Always ON	Not registered.

◤ Installation

Please follow the steps to install the RTU-531PM.

(1) Install GSM/GPRS antenna and GPS antenna.

(2) Plug in the normal SIM card (Before apply the SIM card, confirm it is OK by mobile phone.)

(3) Connect Pin.19 and Pin.20 to power supply (+10 ~ +30VDC).

(4) Open the power supply and wait 30~50 seconds, RTU-531PM will registered and work.

(5) If RTU-531PM in an open environment, wait about 1 minute after start then LED indicator will flash once a second. That means GPS has been located to complete.
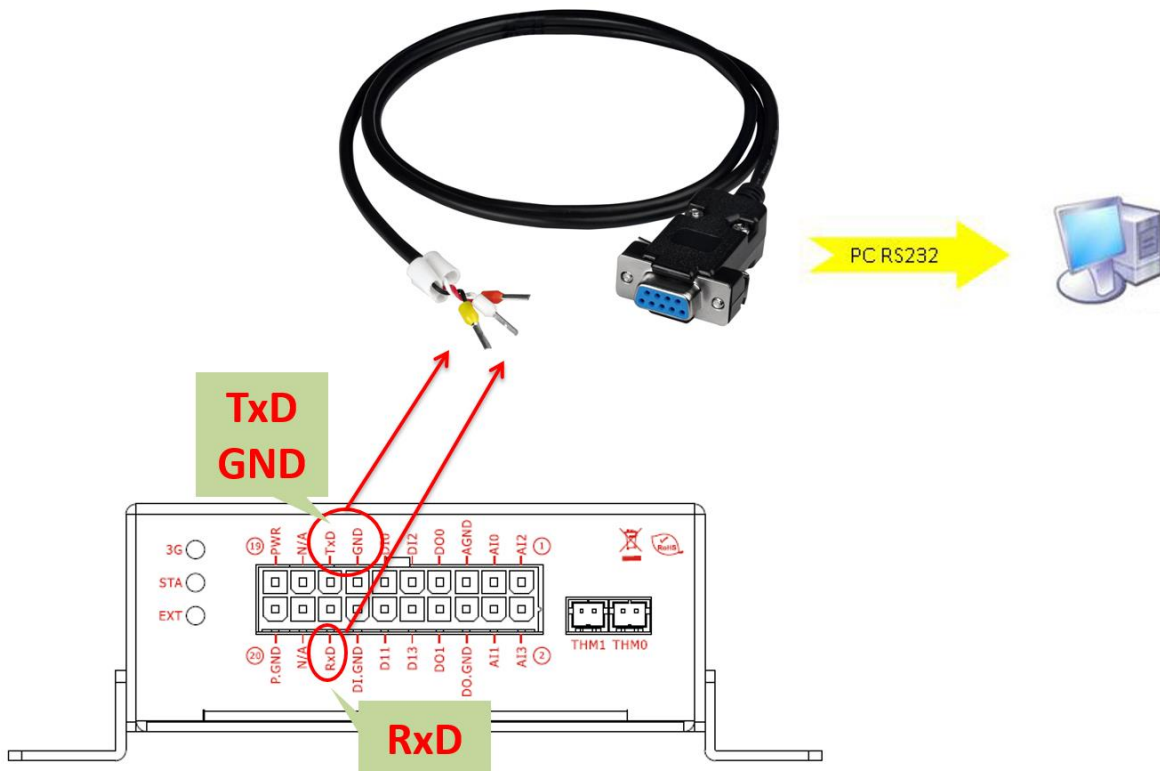
GPS Antenna   3G Antenna

Connect to power supply(+10 ~ +30VDC)

◤ Utility

1. Connect to PC

   (1) STA is blinking.

LED Name	LED Status	LED Description
STA (Yellow)	Blinking(250 ms)	Network registered. GPS searching for satellite.
	Blinking(1 s)	Network registered. GPS is positioned.

   (2) Please connect the RTU-531PM and PC with RS-232 cable.

   (3) Please keep power supply ON during you are wiring the RS-232.
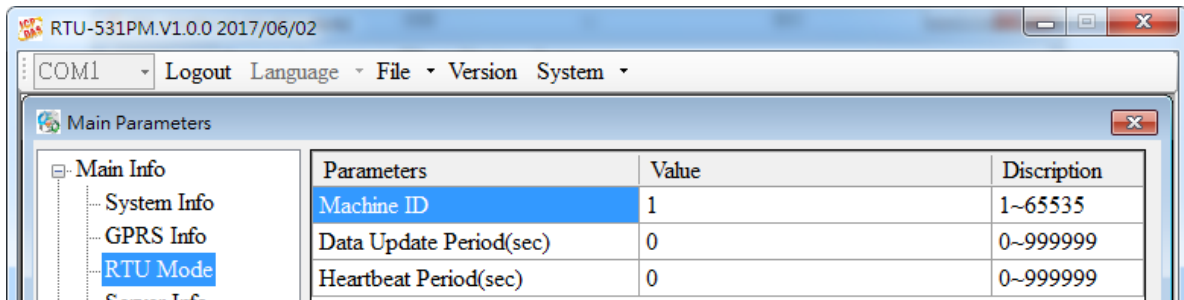
2. Login

(1) Select the COM port number of PC.

(2) Press "Login".

3. Set parameters

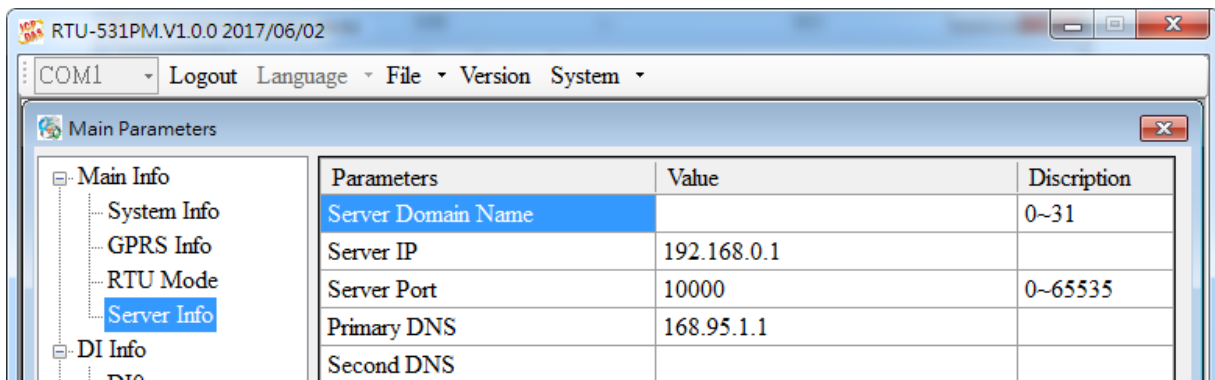(1) Set "Machine ID" and "Data Update Period".

Main Parameters → Main Info → RTU Mode → Machine ID

Note: The RTU-531PM's Machine ID setting cannot be repeated and the M2M RTU Center needs to add the corresponding ID.
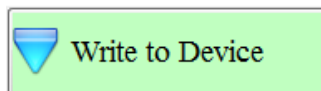
(2) Set "Server IP".

Main Parameters → Main Info → Server Info → Server IP

Note: Server IP must be static IP.

(3) Press "Write to Device".

About the more detail information for the RTU-531PM, please refer to the user's manual.