GT-531 FAQ

Tables of Content

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Q01：How to send general alarm SMS?

1. Setting the parameters by the GT-531 Utility

(1) New and name an "Example1.prj" project in the Utility.

(2) Set the modbus address as 1. (The factory default address is 1)

Parameters	Value	Discription
Protocol	Modbus RTU	Read Only
Modbus Address	1	1~247
Debug Message	Enable	Enable or Disagle
SMS Check Number	Disable	Enable or Disagle
Variable SMS	Disable	Enable or Disagle

(3) Add 2 new phone groups and input phone numbers as follows:

Parameters	Value	Discription
Group Name	group0	1~10 Unicode Char.
Phone 0	0123456789	
Phone 1		
Phone 2		
Phone 3		
Phone 4		

Parameters	Value	Discription
Group Name	group1	1~10 Unicode Char.
Phone 0	9876543210	
Phone 1		
Phone 2		
Phone 3		
Phone 4		

(4) Set the Alarm Channel0 and Channel1 separately as follows:

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Parameters	Value	Discription
Alarm Channel	0	Read Only
On Message	Channel0 ON	54 Unicode Char.
Off Message	Channel0 OFF	54 Unicode Char.
SMS Alarm	Enable	Enable or Disable
Voice Alarm	Disable	Enable or Disable
All Group	☐	
group0	☑	
group1	☐	

Project tree: Project(Example1.pr), System, COM Port, Phone Book, Alarm Message, Alarm0, Alarm1, Alarm2, Alarm3, Alarm4

Parameters	Value	Discription
Alarm Channel	1	Read Only
On Message	Channel1 ON	54 Unicode Char.
Off Message	Channel1 OFF	54 Unicode Char.
SMS Alarm	Enable	Enable or Disable
Voice Alarm	Disable	Enable or Disable
All Group	☐	
group0	☐	
group1	☑	

Project tree: Project(Example1.pr), System, COM Port, Phone Book, Alarm Message, Alarm0, Alarm1, Alarm2, Alarm3, Alarm4

(5) Connect to the GT-531 and download these parameters to it.

GT-531 Utility V1.0.0
Project   Language   Exit
COM1   ✔ Disconnect   ✔ Download   ▲ Upload   ① Learn   ● System ▾

2. Modbus RTU commands

(1) Connect COM2 (RS-232) or COM3 (RS-485) of the GT-531 to the Host.

SMS Messages

Modbus RTU

RS-232 or RS485

HMI , PLC , PAC

(2) Sending the Modbus commands from the Host to the GT-531 to transmit the alarm SMS as follows:

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Commands and Description:

Commands	Sending Alarm SMS (Hex)	Command	01 05 00 00 FF 00 8C 3A
		Response	01 05 00 00 FF 00 8C 3A
Description	The GT-531 receives the Modbus command then sends the alarm message. The content of the alarm SMS is "On Message"of Alarm Channel0 message. The alarm SMS would send to the defined phone groups.		
Result	The phones defined in the group0 would receive the SMS. The content of the SMS is "Channel0 ON"		

Command Format:

Send the alarm SMS		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	Alarm Channel
	Byte 4 ~ 5	=0xFF00, Sending the field content of "On Message". =0x0000, Sending the field content of "Off Message".
	Byte 6 ~ 7	CRC-16
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	Alarm Channel
	Byte 4 ~ 5	=0xFF00 or =0x0000
	Byte 6 ~ 7	CRC-16
Error Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x85
	Byte 2	Error Code 06: Buffer overflow
	Byte 3 ~ 4	CRC-16

Q02：How to send variable alarm SMS

The alarm SMS includes the content defined in "Alarm Messages" (max 54 chars) and the content (max 16 chars) by Modbus command.

1. Setting the parameters by the GT-531 Utility

(1) New and name an "Example2.prj" project in the Utility.
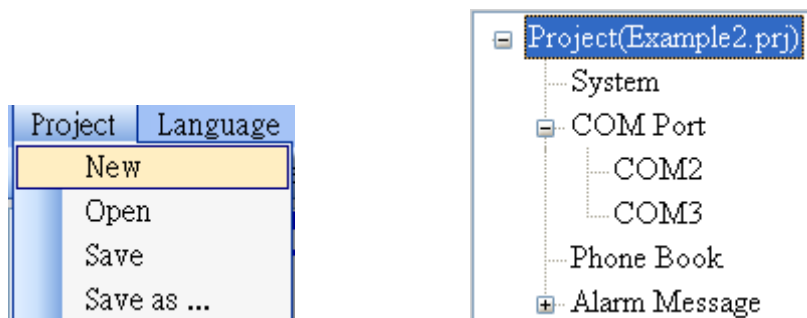
(2) Set the Modbus address as 1 (the factory default address is 1) and "Variable SMS" as enable.

(3) Add 2 new phone groups and input phone numbers as follows:

(4) Set the Alarm Channel0 and Channel1 separately as follows:

Parameters	Value	Discription
Alarm Channel	0	Read Only
On Message	Channel0 ON	54 Unicode Char.
Off Message	Channel0 OFF	54 Unicode Char.
SMS Alarm	Enable	Enable or Disable
Voice Alarm	Disable	Enable or Disable
All Group	☐	
group0	☑	
group1	☐	

Project(Example2.pr
— System
⊞ COM Port
⊞ Phone Book
⊟ Alarm Message
 — Alarm0
 — Alarm1
 — Alarm2
 — Alarm3
 — Alarm4

Parameters	Value	Discription
Alarm Channel	1	Read Only
On Message	Channel1 ON	54 Unicode Char.
Off Message	Channel1 OFF	54 Unicode Char.
SMS Alarm	Enable	Enable or Disable
Voice Alarm	Disable	Enable or Disable
All Group	☐	
group0	☐	
group1	☑	

Project(Example2.pr
— System
⊞ COM Port
⊞ Phone Book
⊟ Alarm Message
 — Alarm0
 — Alarm1
 — Alarm2
 — Alarm3
 — Alarm4

(5) Connect to the GT-531 and download these parameters to the GT-531.

2. Modbus RTU Command

(1) Connect COM2 (RS-232) or COM3 (RS-485) of the GT-531 to the Host.

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(2) The host needs to send the SMS content command to define the variable part of the alarm SMS first. Then, send the transmitting SMS command.

Commands and Description:

Command	Setting the variable SMS content	Command	01 10 01 7F 00 06 0C 2B 00 56 00 53 00 4D 00 53 00 00 00 E7 DD
		Response	01 10 01 7F 00 06 702F
	Transmitting the SMS	Command	01 05 00 01 FF 00 DD FA
		Response	01 05 00 01 FF 00 DD FA
Description	Set the variable SMS content as "+VSMS". Send the SMS. The content of the SMS is the "On Message" field of Alarm Channel1 and the variable content. Transmitting the SMS to the phones of group1		
Result	The phone numbers in group1 would receive the SMS. The content of the SMS is "Channel1 ON+VSMS".		

Format Description:

Setting the variable SMS content		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 16
	Byte 2 ~ 3	The start address of the variable content of the SMS
	Byte 4 ~ 5	Register Count: The quantity of the SMS content (The max is 16 chars)
	Byte 6	Byte Count (Register Count x 2)
	Byte7 ~ 18	Variable SMS Content (Unicode) : In this example, it is "+VSMS" messages and the end char is 0x0000. If the quantity is 16, it needs not the end char.
	Byte19 ~ 20	CRC-16 check code
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 16 (0x10)
	Byte 2 ~ 3	The start address of the variable content of the SMS
	Byte 4 ~ 5	Register Count: The quantity of the SMS content (The max is 16 chars)
	Byte 6 ~ 7	CRC-16 check code

	Byte 0	The Modbus Address of the GT-531
Error Response	Byte 1	= 0x90
	Byte 2	Error Code 02: Format error
	Byte 3 ~ 4	CRC-16 check code

Sending the SMS		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	Alarm Channel
	Byte 4 ~ 5	=0xFF00, Sending the field content of "On Message" =0x0000, Sending the field content of "Off Message"
	Byte 6 ~ 7	CRC-16 check code
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	Alarm Channel
	Byte 4 ~ 5	=0xFF00 或 =0x0000
	Byte 6 ~ 7	CRC-16 check code
Erro Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x85
	Byte 2	Error Code 06: Buffer overflow
	Byte 3 ~ 4	CRC-16 check code

Q03：**How to send the alarm SMS dynamically?**

This example is shown how to send the variable SMS to the variable phones by modbus commands. The max chars of the variable SMS is 70 Unicode.

For sending the variable SMS, it is not needed to be set by the GT-531 Utility. This function can be finished by Modbus commands as follows.

(1) Connect to COM2(RS-232) or COM3(RS-485) of the GT-531 to the Host PC.

(2) The host sends the Modbus commands to the GT-531 to set the content of the SMS and phone number first. Then, send the command to transmit the SMS.

Commands and Description:

Command	Setting the phone number (Hex)	Command	01 10 01 D5 00 06 0C 30 31 32 33 34 35 36 37 38 39 00 00 D5 2B
		Response	01 10 01 D5 00 06 50 0F
	Setting the SMS content (Hex)	Command	01 10 01 8F 00 0C 18 44 00 79 00 6E 00 61 00 6D 00 69 00 63 00 20 00 53 00 4D 00 53 00 00 00 AC 3B
		Response	01 10 01 8F 00 0C F0 1B
	Sending the SMS (Hex)	Command	01 05 00 80 FF 00 8D D2
		Response	01 05 00 80 FF 00 8D D2
Description	1. The phone number：0123456789 2. The content of the SMS：Dynamic SMS 3. Transmitting the SMS		
Result	The phone number "0123456789" would receive the "Dynamic SMS" SMS.		

Format Description:

Setting the variable phone number		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 16 (0x10)
	Byte 2 ~ 3	The start address of the phone number
	Byte 4 ~ 5	Register Count: The register size of the phone number
	Byte 6	Byte Count(Register Counter x 2)
	Byte7 ~ 18	The phone number (ASCII code). The end char is 0x00. If the number size is 20, it is needed not the end char.
	Byte 19 ~ 20	CRC-16 check code
Correct response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 16 (0x10)
	Byte 2 ~ 3	The start address of the phone number
	Byte 4 ~ 5	Register Count: The register size of the phone number
	Byte 6 ~ 7	CRC-16 check code
Error response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x90
	Byte 2	Error Code 02: The GT-531 is sending the SMS. The phone number is unchangeable.
	Byte 3 ~ 4	CRC-16 check code

Setting the content of the SMS		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 16 (0x10)
	Byte 2 ~ 3	The start address of the sent SMS
	Byte 4 ~ 5	Register Count: The size of the SMS. The max is 70 Unicode.
	Byte 6	Byte Count(Register Counter x 2)
	Byte7 ~ 30	The content of the SMS (Unicode code). The end char is 0x0000. If the size of the SMS is 70, it is not needed the end char.
	Byte 31 ~ 32	CRC-16 check code
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 16 (0x10)
	Byte 2 ~ 3	The start address of the sent SMS

	Byte 4 ~ 5	Register Count: The size of the SMS. The max is 70 Unicode.
	Byte 6 ~ 7	CRC-16 check code
Error Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x90
	Byte 2	Error Code 02: The GT-531 is sending the SMS. The content of the SMS is unchangeable.
	Byte 3 ~ 4	CRC-16 check code

Sending the SMS		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	= 0x0080
	Byte 4 ~ 5	= 0xFF00
	Byte 6 ~ 7	CRC-16 check code
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	= 0x0080
	Byte 4 ~ 5	= 0xFF00
	Byte 6 ~ 7	CRC-16 check code
Error Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x85
	Byte 2	Error Code: 06: Sending buffer overflow or the SMS is sending
	Byte 3 ~ 4	CRC-16 check code

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Q04：How to send the alarm voice?

1. Setting the parameters by the GT-531 Utility

(1) New and name an "Example4.prj" project in the Utility.

(2) Set the modbus address as 1 (the factory default address is 1).

Parameters	Value	Discription
Protocol	Modbus RTU	Read Only
Modbus Address	1	1~247
Debug Message	Disable	Enable or Disagle
SMS Check Number	Disable	Enable or Disagle
Variable SMS	Disable	Enable or Disagle

(3) Add 2 new phone groups and input phone numbers as follows:

Parameters	Value	Discription
Group Name	group0	1~10 Unicode Char.
Phone 0	0123456789	
Phone 1		
Phone 2		
Phone 3		
Phone 4		

Parameters	Value	Discription
Group Name	group1	1~10 Unicode Char.
Phone 0	9876543210	
Phone 1		
Phone 2		
Phone 3		
Phone 4		

(4) Set the "Voice Alarm" fields as enable in Alarm Channel0 and Alarm Channel1 as follows.

Parameters	Value	Discription
Alarm Channel	0	Read Only
On Message	Channel0 ON	54 Unicode Char.
Off Message	Channel0 OFF	54 Unicode Char.
SMS Alarm	Disable	Enable or Disable
Voice Alarm	Enable	Enable or Disable
All Group	☐	
group0	☑	
group1	☐	

Project(Example4.pr
- System
- COM Port
- Phone Book
- Alarm Message
  - **Alarm0**
  - Alarm1
  - Alarm2
  - Alarm3
  - Alarm4

Parameters	Value	Discription
Alarm Channel	1	Read Only
On Message	Channel1 ON	54 Unicode Char.
Off Message	Channel1 OFF	54 Unicode Char.
SMS Alarm	Disable	Enable or Disable
Voice Alarm	Enable	Enable or Disable
All Group	☐	
group0	☐	
group1	☑	

Project(Example4.pr
- System
- COM Port
- Phone Book
- Alarm Message
  - Alarm0
  - **Alarm1**
  - Alarm2
  - Alarm3
  - Alarm4

(5) Connect to the GT-531 and download these parameters to the GT-531.

GT-531 Utility V1.0.0

Project   Language   Exit

COM1 ✓ ✓ Disconnect ↓ Download ⬆ Upload ⓘ Learn ◉ System ▾

(6) Select the "System->Voice File Management" to download or confirm the voice files of the Alarm0 ON/OFF and Alarm1 ON/OFF are in the SD card.

Channel	Value	Existed	File at Device	File on PC	Browse	Download	Delete
Alarm0	ON	☑	DO0_ON.WAV	E:\GT-5xx\GT-534\sound\VDI0.WAV	📄	↓	🗑
	OFF	☑	DO0_OFF.WAV	E:\GT-5xx\GT-534\sound\VDI1.WAV	📄	↓	🗑
Alarm1	ON	☑	DO1_ON.WAV	E:\GT-5xx\GT-534\sound\VDI2.WAV	📄	↓	🗑
	OFF	☑	DO1_OFF.WAV	E:\GT-5xx\GT-534\sound\VDI3.WAV	📄	↓	🗑
Alarm2	ON	☐	DO2_ON.WAV		📄	↓	🗑
	OFF	☐	DO2_OFF.WAV		📄	↓	🗑

2. Modbus RTU command

(1) Connect to COM2(RS-232) or COM3(RS-485) of the GT-531 by RS-232 or RS-485 of the Host.

SMS Messages

Modbus RTU

RS-232 or RS485

HMI , PLC , PAC

(2) The host sends the Modbus command to transmit the voice alarm from the GT-531.

Command and Description:

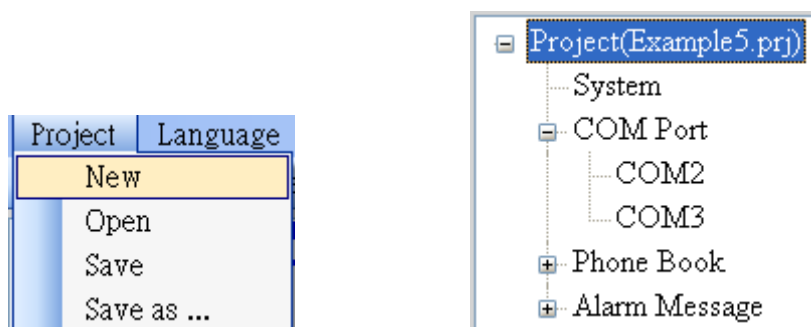| Command	Sending the voice alarm (16 Hex)	Command	01 05 00 00 FF 00 8C 3A
		Response	01 05 00 00 FF 00 8C 3A
Description	As the GT-531 receives the command, it would sent the voice alarm. If the "SMS Alarm" is set as enable, the SMS would be sent. The voice file is DO0_ON.WAV. The voice is sent to the phones in the group0.		
Result	The phones in Group0 would receive the voice call from the GT-531. As take the call, you would heart the alarm voice in DO0_ON.WAV.		

Format Description:

Sending the voice alarm		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	Alarm Channel
	Byte 4 ~ 5	=0xFF00, To play DOx_ON.WAV file. The x is the number of Alarm channel. =0x0000, To play DOx_OFF.WAV file. The x is the number of Alarm channel.
	Byte 6 ~ 7	CRC-16 check code
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	Alarm Channnle
	Byte 4 ~ 5	=0xFF00 or =0x0000
	Byte 6 ~ 7	CRC-16 check code
Error Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x85
	Byte 2	Error Code 06: Transmitting Buffer overflow
	Byte 3 ~ 4	CRC-16 check code

Q05：How to Receiving the SMS?

1. Setting the parameters by the GT-531 Utility
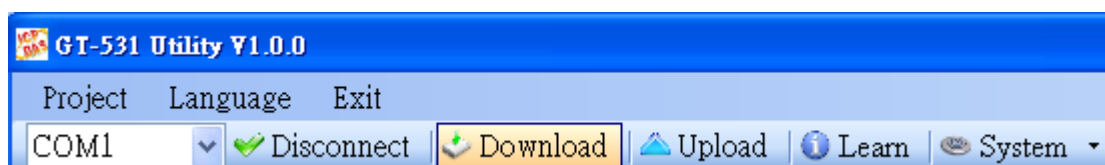
(1) New and name an "Example5.prj" project in the Utility.

(2) Set the modbus address as 1 (the factory default address is 1).

Parameters	Value	Discription
Protocol	Modbus RTU	Read Only
Modbus Address	1	1~247
Debug Message	Enable	Enable or Disagle
SMS Check Number	Disable	Enable or Disagle
Variable SMS	Disable	Enable or Disagle

(3) Add a new phone group and input phone numbers above. The GT-531 is built-in the phone filter. The SMS would be received according to the defined phone numbers.

Parameters	Value	Discription
Group Name	group0	1~10 Unicode Char.
Phone 0	0123456789	
Phone 1		
Phone 2		
Phone 3		

(4) Connect to the GT-531 and download these parameters to the GT-531.

2. Modbus RTU commands
(1) Connect to COM2(RS-232) or COM3(RS-485) of the GT-531 to the Host.

(2) The host can send the Modbus command periodically to inquire the GT-531 whether has received the SMS. If the GT-531 has received the SMS, you can send the command to read it.

Command and Description:

Command	Checking the received SMS (Hex)	command	01 02 00 01 00 01 E8 0A
		Response	01 02 01 00 A1 88 (No SMS)
			01 02 01 01 60 48 (Receiving the SMS)
	Reading the phone number of the received SMS (Hex)	command	01 04 00 1E 00 0A 10 0B
		Response	01 04 14 38 38 36 39 32 38 37 36 36 35 30 37 00 00 00 00 00 00 00 00 B6 6E
	Reading the date of the received SMS (Hex)	command	01 04 00 28 00 07 31 C0
		Response	01 04 0E 32 30 31 31 30 34 32 32 30 39 35 35 33 31 3D 79
	Reading the content of the received SMS (Hex)	command	01 04 00 2F 00 51 00 3F
		Response	01 04 A2 00 00 48 65 6C 6C 6F 2C 47 54 2D 35 33 31 21 00 00 00 ………(Size is 162 Bytes)
Description	The phone of Groups transmits the SMS to the GT-531. The SMS is "Hello,GT-531!". To inquire the GT-531 whether has received the SMS periodically. If the GT-531 has received the SMS, send the command to read the phone number, date and the SMS. Because these addresses of these information are continuous, you can send one command to read that.		
Result	The phone of transmitting SMS：886928766507 Date：20110422095531(2011/04/22/ 09:55:31) The SMS：Hello,GT-531!		

Format Description：

Inquiring the GT-531 whether has received the SMS		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 2
	Byte 2 ~ 3	The address to indicate whether the GT-531 has received the SMS
	Byte 4 ~ 5	Bit Count，1 bit
	Byte 6 ~ 7	CRC-16 check code
Correct response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 2
	Byte 2	Byte Count，(The size of Data)
	Byte 3	= 0, No SMS = 1, Having received the SMS
	Byte 4 ~ 5	CRC-16 check code
Error response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x82
	Byte 2	Error Code 02: Error format
	Byte 3 ~ 4	CRC-16 check code

Reading the phone number of the received SMS		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 4
	Byte 2 ~ 3	The data address of the sending phone number
	Byte 4 ~ 5	Register Count (The inquired count of register. It is fixed as 10(0x0A)
	Byte 6 ~ 7	CRC-16 check code
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 4
	Byte 2	Byte Count
	Byte 3 ~ 22	The sending phone number (ASCII coed, 0x00 is the end char)
	Byte 23 ~ 24	CRC-16 check code
Error Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x84
	Byte 2	Error Code 02: Error format
	Byte 3 ~ 4	CRC-16 check code

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Reading the date of the SMS		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 4
	Byte 2 ~ 3	The data address of the received SMS date
	Byte 4 ~ 5	Register Count (The inquired count of register. It is fixed as 7(0x07)
	Byte 6 ~ 7	CRC-16 check code
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 4
	Byte 2	Byte Count
	Byte 3 ~ 16	Date and Time (ASCII code，yyyyMMddHHmmss)
	Byte 17 ~ 18	CRC-16 check code
Error Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x84
	Byte 2	Error Code: 06: Error format
	Byte 3 ~ 4	CRC-16 check code

Reading the SMS		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 4
	Byte 2 ~ 3	The address of the received SMS content
	Byte 4 ~ 5	Register Count (The inquired count of register. It is fixed as 81(0x51)
	Byte 6 ~ 7	CRC-16 check code
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 4
	Byte 2	Byte Count
	Byte 3 ~ 4	=0x0000, The data is ASCII code. =0x0001, The data is Unicode code.
	Byte 5 ~ 164	The SMS content. The end char is 0x00 if the data is ASCII code. If the end char is 0x0000, it is Unicode.
	Byte 165 ~ 166	CRC-16 check code

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Error Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x84
	Byte 2	Error Code: 02: Error format
	Byte 3 ~ 4	CRC-16 check code

Q06：If the System led (STA) is always on, how dose user do?

A06：

(1) Check SIM card.

(2) Check Antenna.

(3) Check the GSM signal strength.

Q07：What to do if SMS DBS could not received the SMS from GT-531?

A07：User must add "ALARM;" to the start of the short message.

Q08：What to do if user can not hear the voice alarm form GT-531?

A08：Confirm the SD card is normal and the voice file is in it.

Q09：What type of voice file does GT-531 support?

A09：GT-531 only support WAV file and following file format needed.

File type	*.Wav
Audio type	PCM
Data bit	16 bits
Channel	Single track
Sample rate	8 kHz,11 kHz

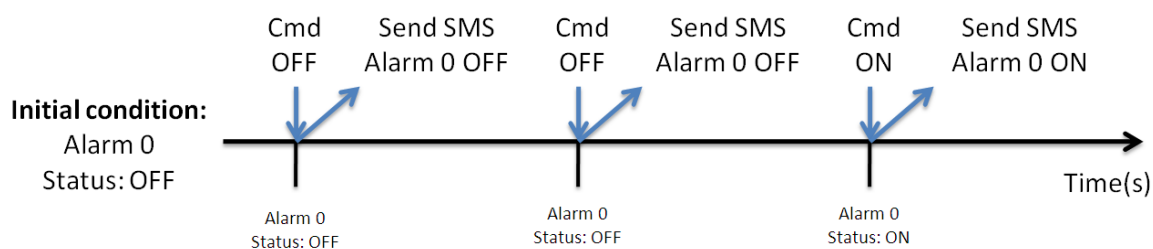## Q10：If GT-531 is not replied by modbus command, how does user do?

A10：

(1) Confirm the wire connection.

(2) Confirm the Modbus ID of the GT-531.
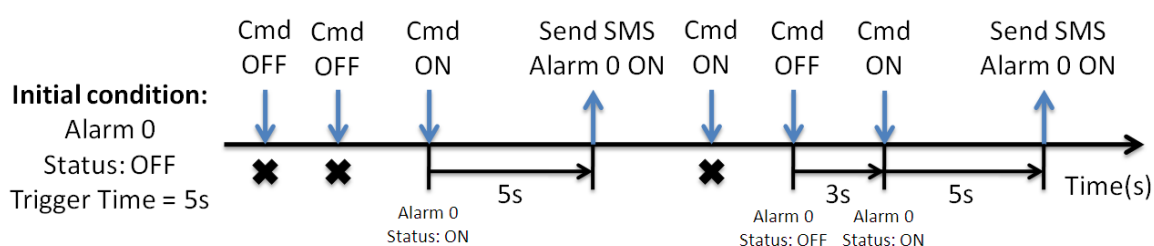
(3) Confirm the COM port configuration.

Q11：What is the different between Level Trigger and Edge Trigger modes?

A11：

(1) Level Trigger mode：The SMS will be sent when GT-531 receive command.

(2) Edge Trigger mode：When the alarm status change, the SMS will be sent.
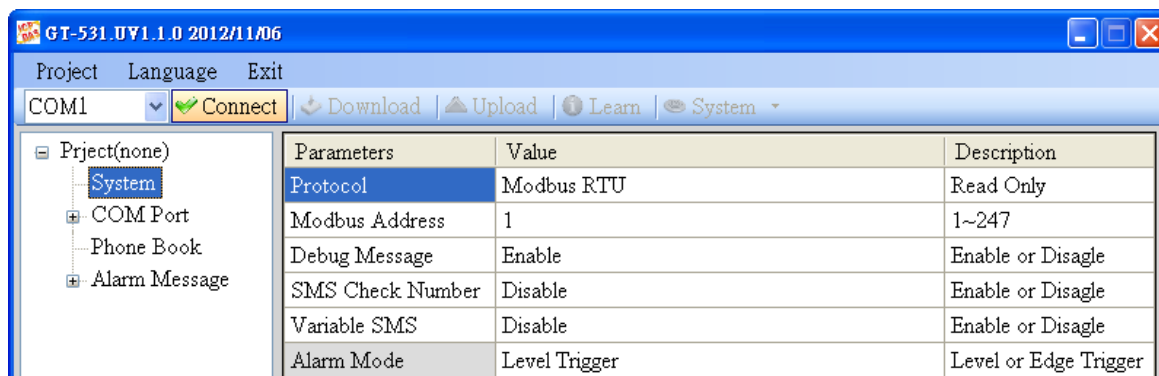

Q12：Can I use Trigger Time on Level Trigger mode?
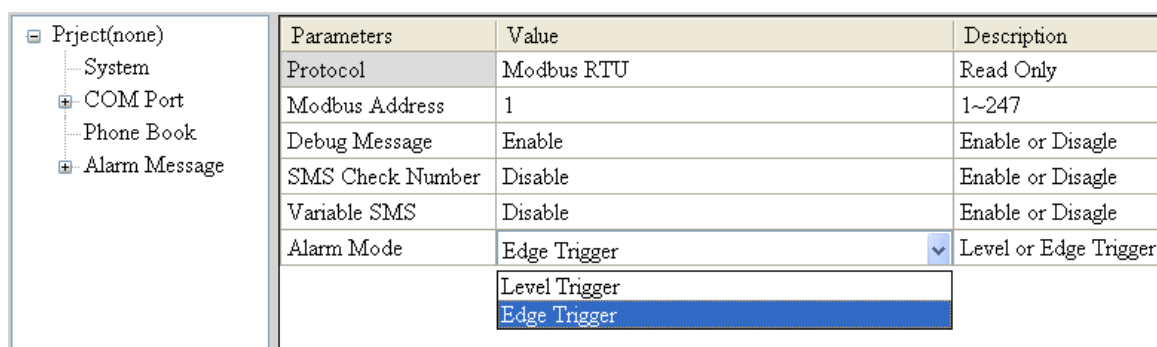
A12：Trigger Time only support Edge Trigger mode.

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Q13：How to send the general alarm SMS on Edge Trigger mode?

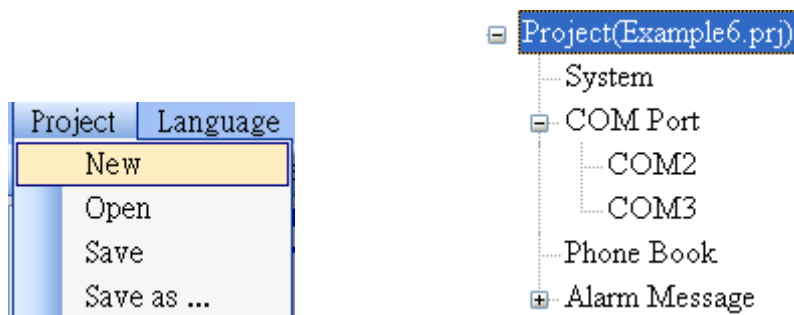**1. Setting the parameters by the GT-531 Utility**

(1) Connect to the GT-531. The Alarm Mode field will be enabled.

(2) Choose the edge trigger mode.

(3) New and name an "Example6.prj" project in the Utility.

(4) Set the modbus address as 1. (The factory default address is 1)

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Parameters	Value	Description
Protocol	Modbus RTU	Read Only
Modbus Address	1	1~247
Debug Message	Enable	Enable or Disagle
SMS Check Number	Disable	Enable or Disagle
Variable SMS	Disable	Enable or Disagle
Alarm Mode	Edge Trigger	Level or Edge Trigger

(5) Add 2 new phone groups and input phone numbers as follows:

Parameters	Value	Description
Group Name	group0	1~10 Unicode Char.
Phone 0	0123456789	
Phone 1		
Phone 2		
Phone 3		
Phone 4		

Parameters	Value	Description
Group Name	group1	1~10 Unicode Char.
Phone 0	9876543210	
Phone 1		
Phone 2		
Phone 3		
Phone 4		

(6) Set the Alarm Channel0 and Channel1 separately as follows:

Parameters	Value	Description
Alarm Channel	0	Read Only
On Message	Channel0 ON	54 Unicode Char.
Off Message	Channel0 OFF	54 Unicode Char.
SMS Alarm	Enable	Enable or Disable
Voice Alarm	Disable	Enable or Disable
Trigger Time	10	0~9999 Secs
All Group	☐	
group0	☑	
group1	☐	

Parameters	Value	Description
Alarm Channel	1	Read Only
On Message	Channel1 ON	54 Unicode Char.
Off Message	Channel1 OFF	54 Unicode Char.
SMS Alarm	Enable	Enable or Disable
Voice Alarm	Disable	Enable or Disable
Trigger Time	20	0~9999 Secs
All Group	☐	
group0	☐	
group1	☑	

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(7) Connect to the GT-531 and download these parameters to it.

2. Modbus RTU commands

(1) Connect COM2 (RS-232) or COM3 (RS-485) of the GT-531 to the Host.

(2) Sending the Modbus commands from the Host to the GT-531 to transmit the alarm SMS as follows:

Commands and Description:

Commands	Sending Alarm SMS (Hex)	Command	01 05 00 00 FF 00 8C 3A
		Response	01 05 00 00 FF 00 8C 3A
Description	The GT-531 receives the Modbus command then sends the alarm message. The content of the alarm SMS is "On Message"of Alarm Channel0 message. The alarm SMS would send to the defined phone groups.		
Result	The phones defined in the group0 would receive the SMS after 10 secs. The content of the SMS is "Channel0 ON"		

Command Format:

Send the alarm SMS		
Command	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	Alarm Channel
	Byte 4 ~ 5	=0xFF00, Sending the field content of "On Message". =0x0000, Sending the field content of "Off Message".
	Byte 6 ~ 7	CRC-16
Correct Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	Function Code = 0x05
	Byte 2 ~ 3	Alarm Channel
	Byte 4 ~ 5	=0xFF00 or =0x0000
	Byte 6 ~ 7	CRC-16
Error Response	Byte 0	The Modbus Address of the GT-531
	Byte 1	= 0x85
	Byte 2	Error Code 06: Buffer overflow 13: Alarm status are the same (EX: Original status is ON, want to change the status to ON)
	Byte 3 ~ 4	CRC-16

Q14：Why can't I read signal strength from GT-531 utility?

A14：

(1) Check the telecommunication company is using the GSM system.

(2) Before GT-531 utility is connected to the GT-531, please confirm the STA LED is blanking per 1 sec.

Q15：Can I use text editor to edit .prj file that is saved from GT-531 utility?

A15：The .prj file is only edited by GT-531 utility.

Q16：Why the voice alarm has serious noise?

A16：Check the format of .wav file is 8k Hz or 11k Hz sample rate.

Q17：What to do if I use SMS-DBS to receive SMS from GT-531?

A17：

(1) SMS Check Number that is the system parameter of GT-531 must enable.

(2) Add "ALARM;" to the start of the short message.

Q18：When I use edge trigger mode and trigger GT-531 to send SMS by Modbus command, I got the error response "0x01 0x85 0x13 0x03 0x5D".

A18：Error code 0x13 means alarm status are the same. (Example: Original status is ON, want to change the status to ON)

Q19：Why GT-531 has received SMS but I can't read it by Modbus command?

A19：GT-531 has built-in phone filter. The SMS would be received according to the defined phone numbers.

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