

GTM-203M-3GWA

Industrial Quad-band 3G Modem

User's Manual V1.0



High Quality, Industrial Data Acquisition, and Control Products

Warranty

All products manufactured by ICP DAS are warranted against defective materials for a period of one year from the date of delivery to the original purchaser.

Warning

ICP DAS assumes no liability for damages consequent to the use of this product. ICP DAS reserves the right to change this manual at any time without notice. The information furnished by ICP DAS is believed to be accurate and reliable. However, no responsibility is assumed by ICP DAS for its use, or for any infringements of patents or other rights of third parties resulting from its use.

Copyright

Copyright 2015 by ICP DAS CO., LTD. All rights reserved worldwide.

Trademark

The names used for identification only may be registered trademarks of their respective companies.

Contact us

If you have any problem, please feel free to contact us.
You can count on us for quick response.

Email : service@icpdas.com

Symbol description



CE

Manufacture of this product comply with CE certification standards



RoHS

Manufacture of this product strictly abide by the rules of lead-free and does not contain any harmful substances.



WEEE

This symbol means this product must be collected at the time of discarding in the EU.



HOT SURFACE DO NOT TOUCH

This symbol means this product's enclosure may be with high temperature, do not touch before cooling or else will be burned.



USB

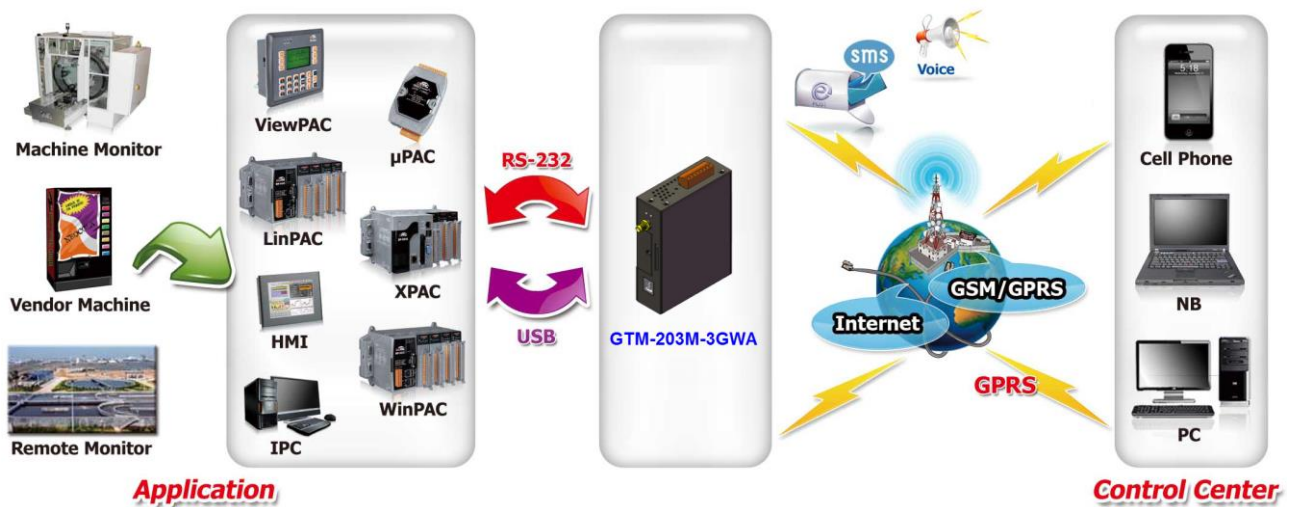
This product support USB 2.0 interface.

Table of Contents

1. Introduction	1
2. Hardware Specifications	2
3. Hardware Appearance	3
3.1 View of the GTM-203M-3GWA Panel	3
3.2 Pin Assignments	3
3.3 LED Indicators	4
4. Hardware Wire Connection	5
4.1 Reset Wire Connection	5
4.2 Installation	6
4.3 Quick Test	7
4.3.1 Hardware installation	7
4.3.2 Software installation (Hyper terminal)	8
5. GPRS Connection	13
5.1 XPAC-8000 (Microsoft Windows XP)	13
5.1.1 GTM-203M-3GWA Hardware Requirement	13
5.1.2 Create a New Modem	14
5.1.3 Create a New Dial-up and Networking Connection	20
6. USB Driver Installation	28
6.1 XPAC-8000 (Microsoft Windows XP)	28
7. Revision History	35

1. Introduction

The GTM-203M-3GWA is an industrial Quad-band 3G and Quad-band GSM modem with RS-232 and USB interfaces that work at frequencies of UMTS 850 / 900 / 1900 / 2100 MHz and GSM 850 / 900 / 1800 / 1900 MHz. The modem utilize the 3G or GPRS network to transfer data. The features of GTM-203M-3GWA allows a variety of PLC and PC applications to take advantage of SMS, 3G and GPRS connectivity.

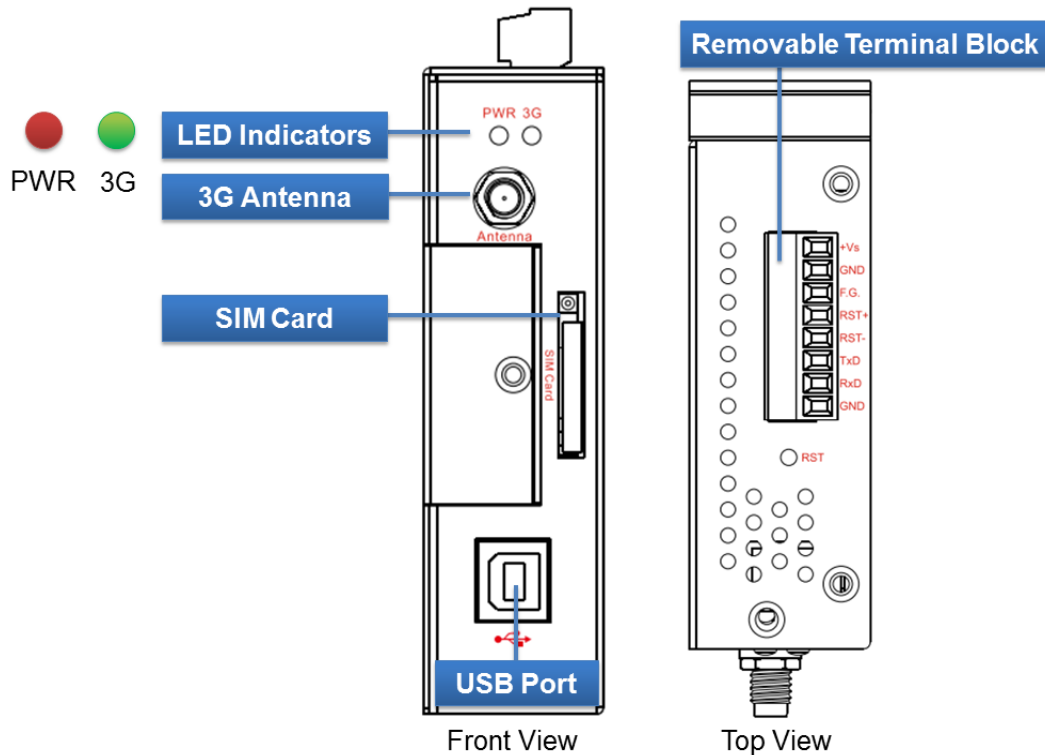


2. Hardware Specifications

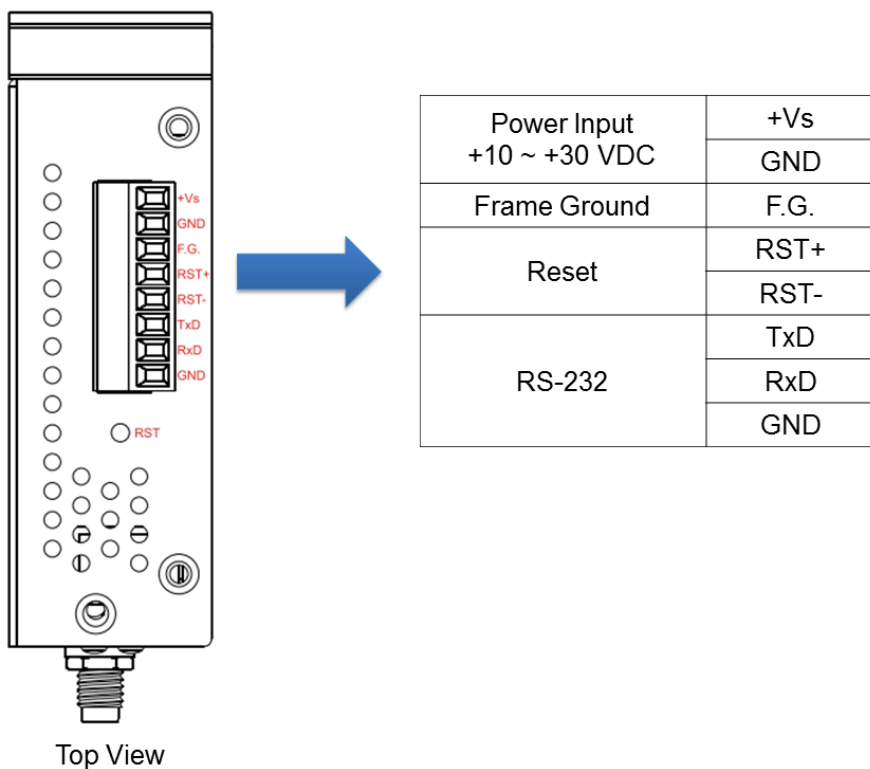
Item	GTM-203M-3GWA
GSM / GPRS Interface	
Frequency Band	GSM 850/900/1800/1900 MHz
GPRS Connectivity	GPRS class 12; GPRS station class B
CSD	GSM max. 9.6 kb/s UMTS max. 64 kb/s
Coding Schemes	CS 1, CS 2, CS 3, CS 4
3G Interface	
Frequency Band	WCDMA 850/900/1900/2100 MHz
SMS	
SMS	MT, MO, CB, Text, and PDU mode
Comm. Interface	
COM Port	RxD, TxD, GND
COM Port Baud Rate	9600 bps ~ 115200 bps (default : 115200 bps)
USB	USB 2.0 (high speed)
USB Driver Support	Windows XP/Vista/7/8, Linux
LED Indicators	
Power	Red
3G/GSM	Green
Power	
Protection	Power reverse polarity protection
Frame Ground Protection	ESD, Surge, EFT, Hi-Pot
Required Supply Voltage	+10 V _{DC} ~ +30 V _{DC}
Rated Current	30 ~ 15 mA / 10 ~ 30 V _{DC}
Reset Input	
Input Type	Isolated, 3750 V _{rms}
On Voltage Level	+3.5 V _{DC} ~ +30V _{DC}
Off Voltage Level	+1 V _{DC} max.
Input Impedance	3 kΩ, 0.25W
Mechanical	
Casing	Metal
Dimensions (W x L x H)	28 mm x 78.5 mm x 100 mm
Installation	DIN-Rail
Environment	
Operation Temperature	-25°C to 70°C
Storage Temperature	-40°C to 80°C
Humidity	5~90% RH, non-condensing

3. Hardware Appearance

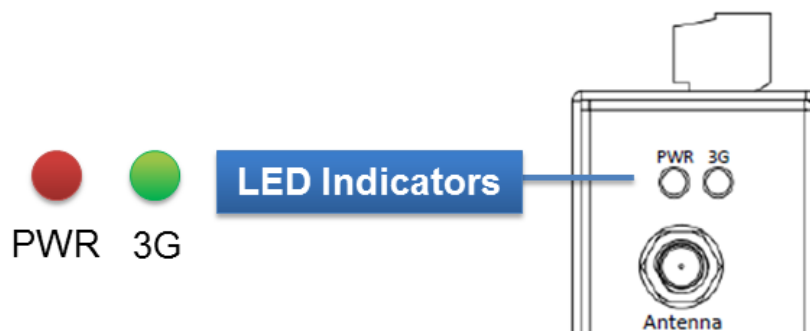
3.1 View of the GTM-203M-3GWA Panel



3.2 Pin Assignments



3.3 LED Indicators



There are two LED indicators to help users to judge the various conditions of GTM-203M-3GWA. The description is as follows :

- A. PWR(Red) : The PWR LED can indicate the status of Power module.

Power normal	Power fail
Always ON	Always OFF

- B. 3G (Green) : The modem LED can indicate the status of GSM module.

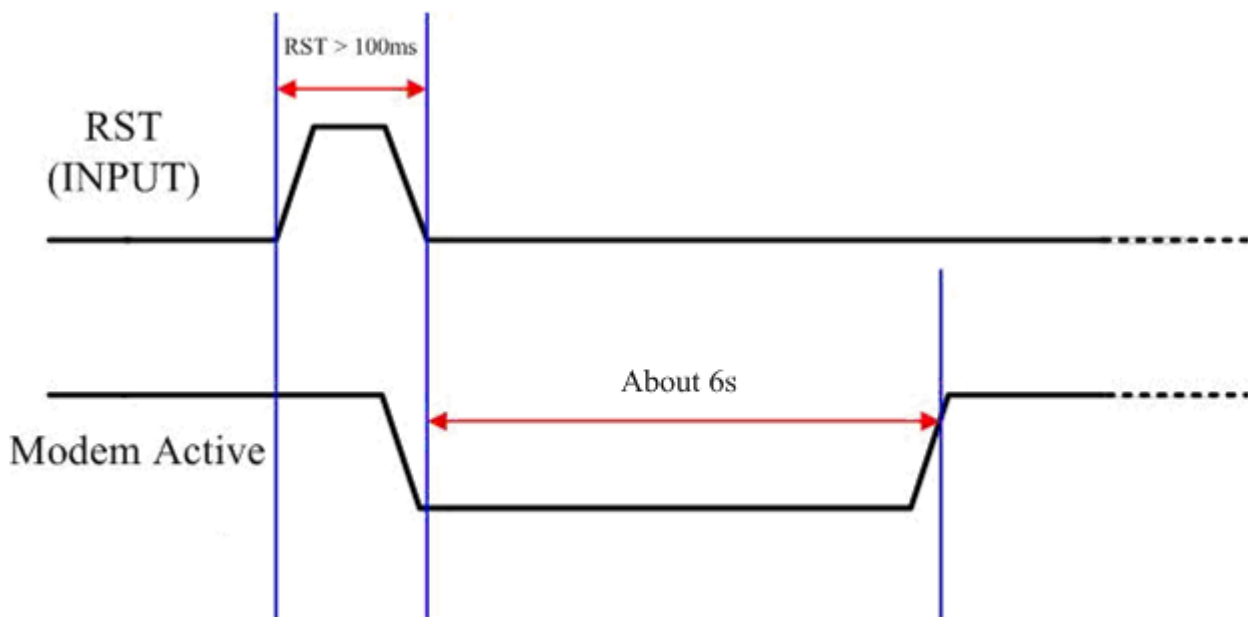
	3G module normal	3G module fail	Data transmission
2G Mode	Blinking per 2 sec	OFF or	Always ON
3G Mode	Blinking twice per 2 sec	Blinking (not 3 sec)	

4. Hardware Wire Connection

4.1 Reset Wire Connection

Input Type	Reset State ON	Reset State OFF
Reset Input		

Reset Input	
ON Voltage Level	+3.5 V _{DC} ~ +30 V _{DC}
OFF Voltage Level	+1 V _{DC} max.



Timing of restarting the modem

4.2 Installation

GTM-203M-3GWA should be installed by technical person who should be with the proper authorization.

GTM-203M-3GWA should install on the location that general person will not be touch.

- SIM card and 3G antenna installation



WARNING! HOT SURFACE DO NOT TOUCH



The product's enclosure may be with high temperature, do not touch before cooling or else will be burned.

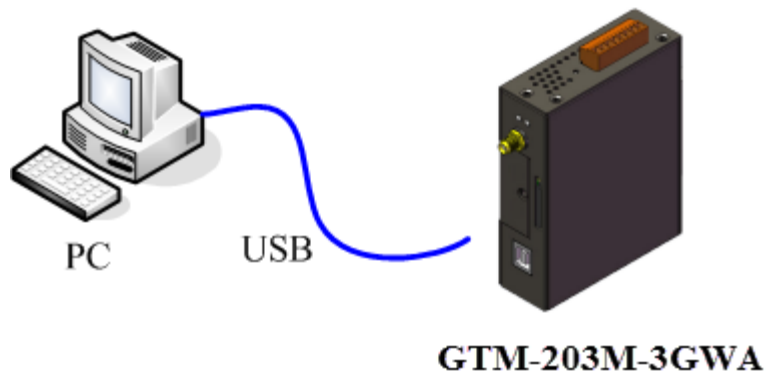
SAFETY INSTRUCTION NOTES



The unit installation to final system and the DC source (SELV, Limited Power Source) that is intended to connect with power input pins (DC.+VS / DC.GND) should be complied with requirements of EN 60950-1. Be sure before connect to input pins.

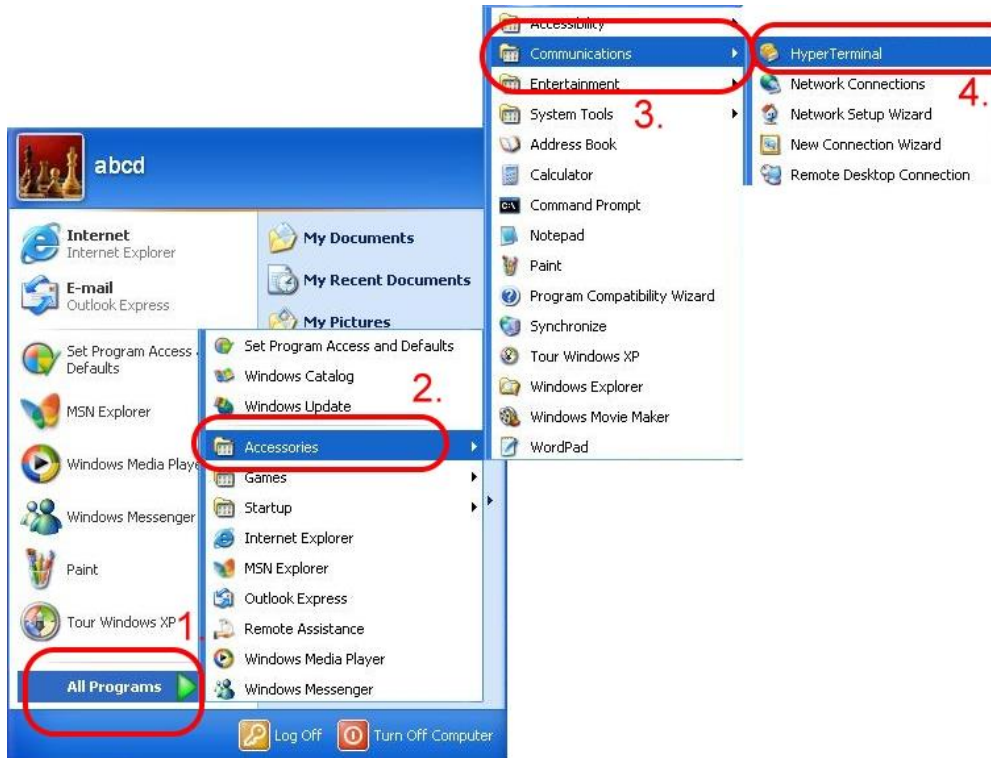
4.3 Quick Test

4.3.1 Hardware installation



4.3.2 Software installation (Hyper terminal)

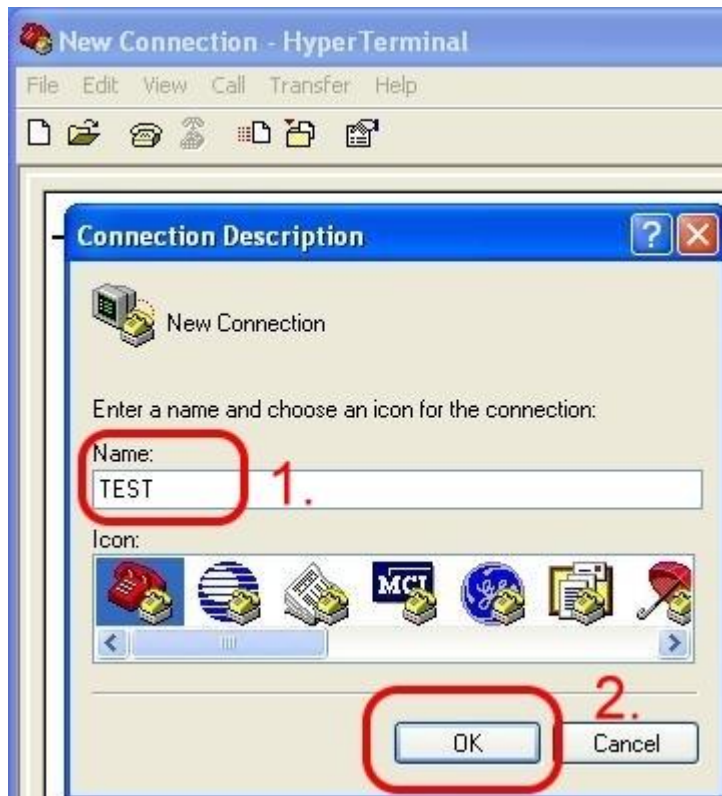
Step 1 : Start → All Programs → Accessories → Communications → Hyper Terminal



Step 2 : If there is a pop-up form that says “Default Telnet Program?”, please select “Yes”



Step 3 : Input new connection name → Click “OK”

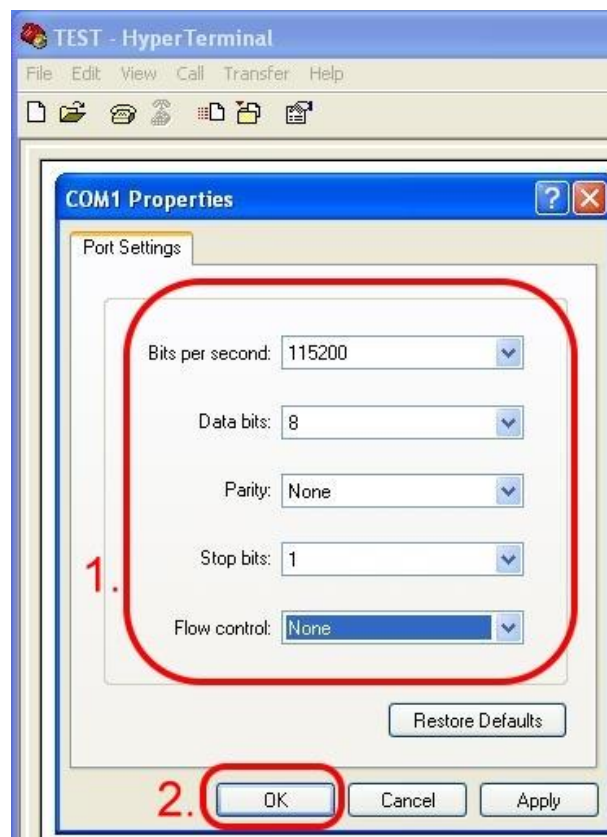


Step 4 : Select your PC serial port → Click “OK”

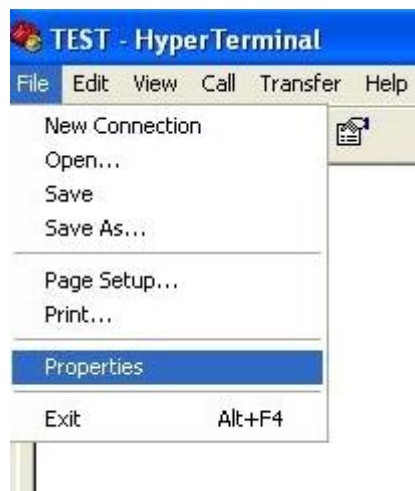


Step 5 : Please refer to the following settings

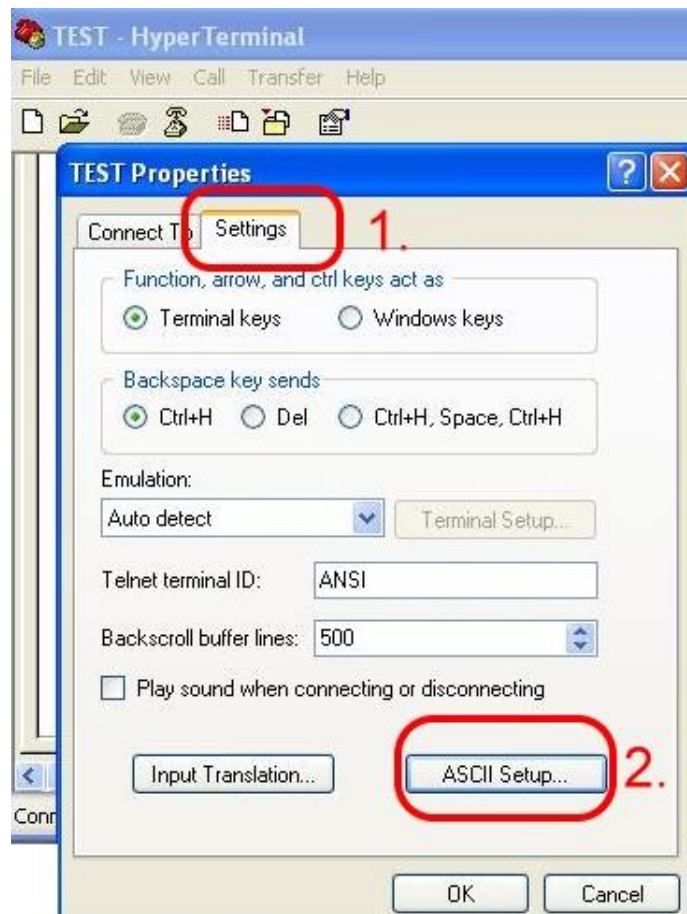
Bits per second	115200
Data bits	8
Parity	None
Stop bits	1
Flow control	None



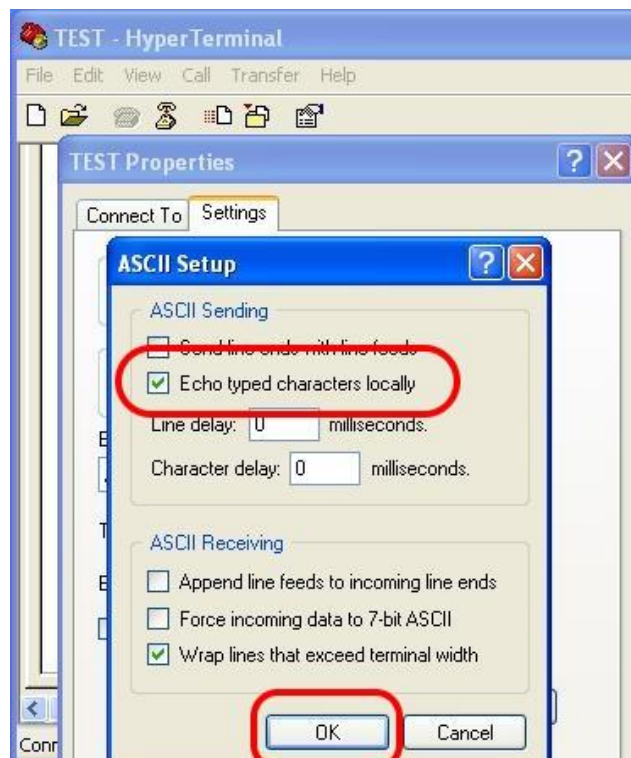
Step 6 : File → Properties



Step 7 : Settings → Click “ASCII Setup…”



Step 8 : Select “Echo typed characters locally” → Click “OK”



Step 9 : Input “AT” and press “Enter” , then you will receive “AT OK”



5. GPRS Connection

5.1 XPAC-8000 (Microsoft Windows XP)

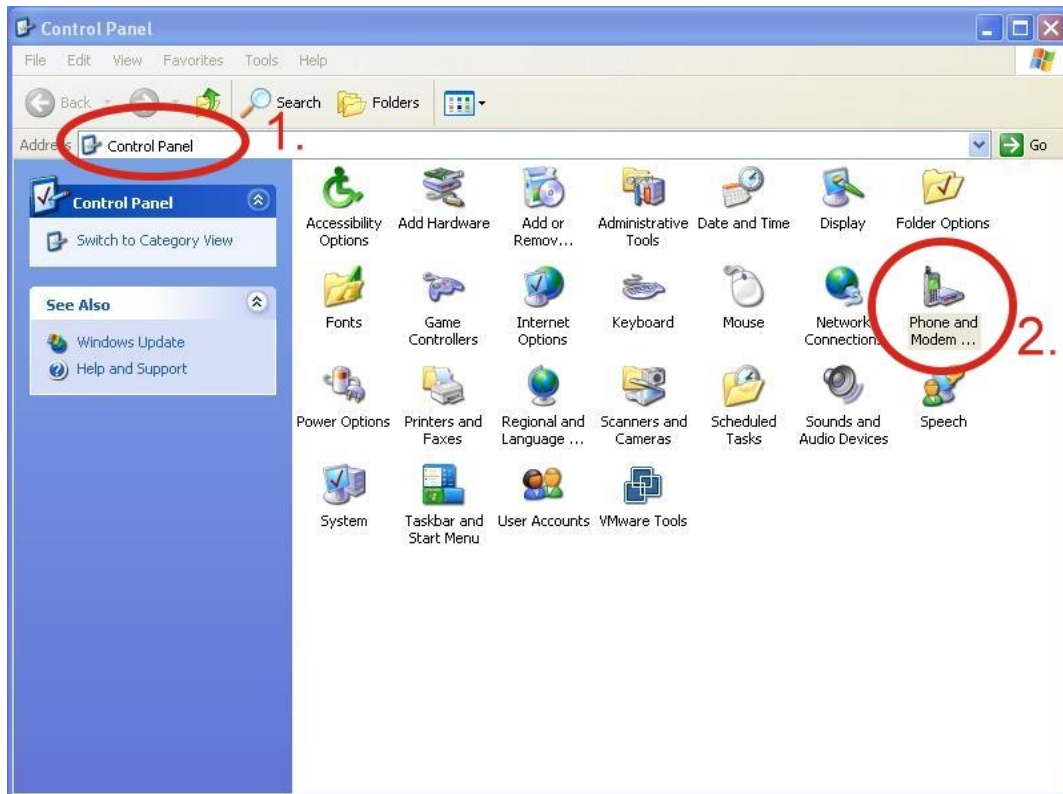
5.1.1 GTM-203M-3GWA Hardware Requirement

- A. GTM-203M-3GWA (Please install USB driver first)
- B. XPAC-8000
- C. USB cable

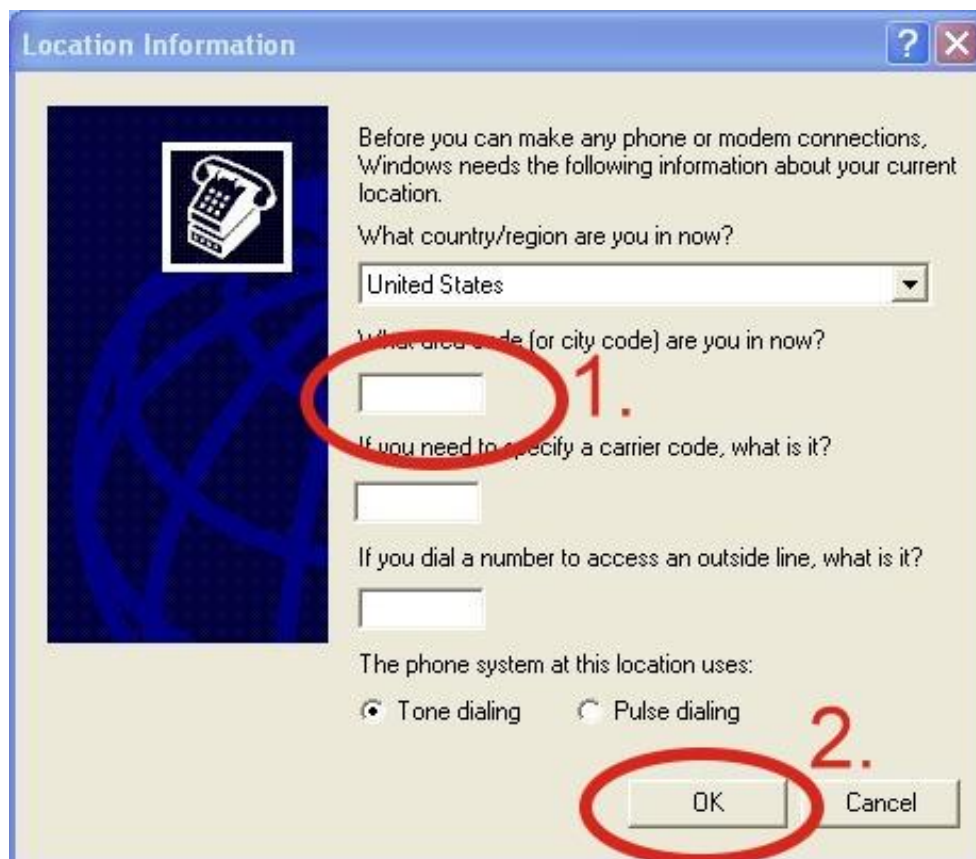


5.1.2 Create a New Modem

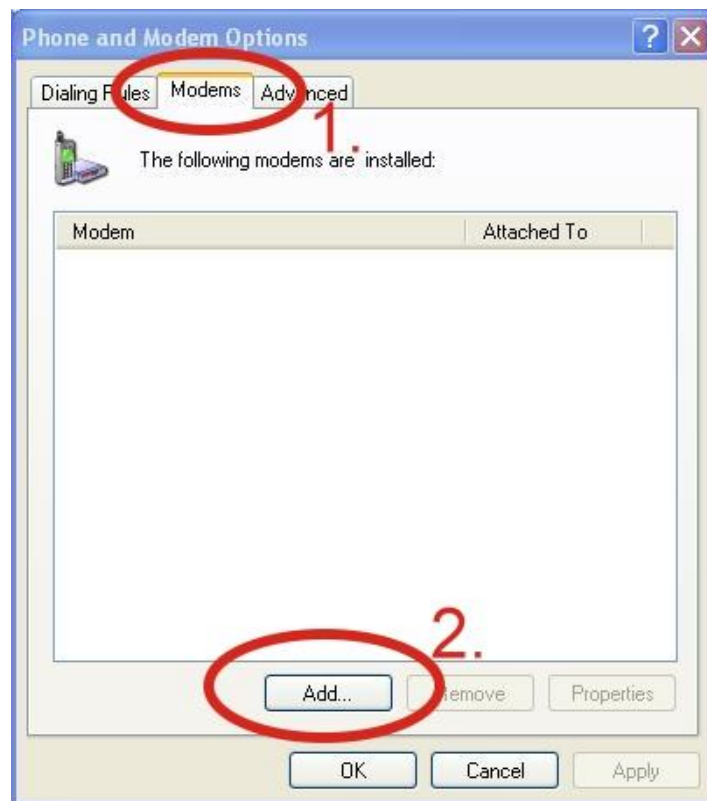
Step 1 : Control Panel → Double-click “Phone and Modem Options”



Step 2 : Set the area code for the first time → Click “OK”



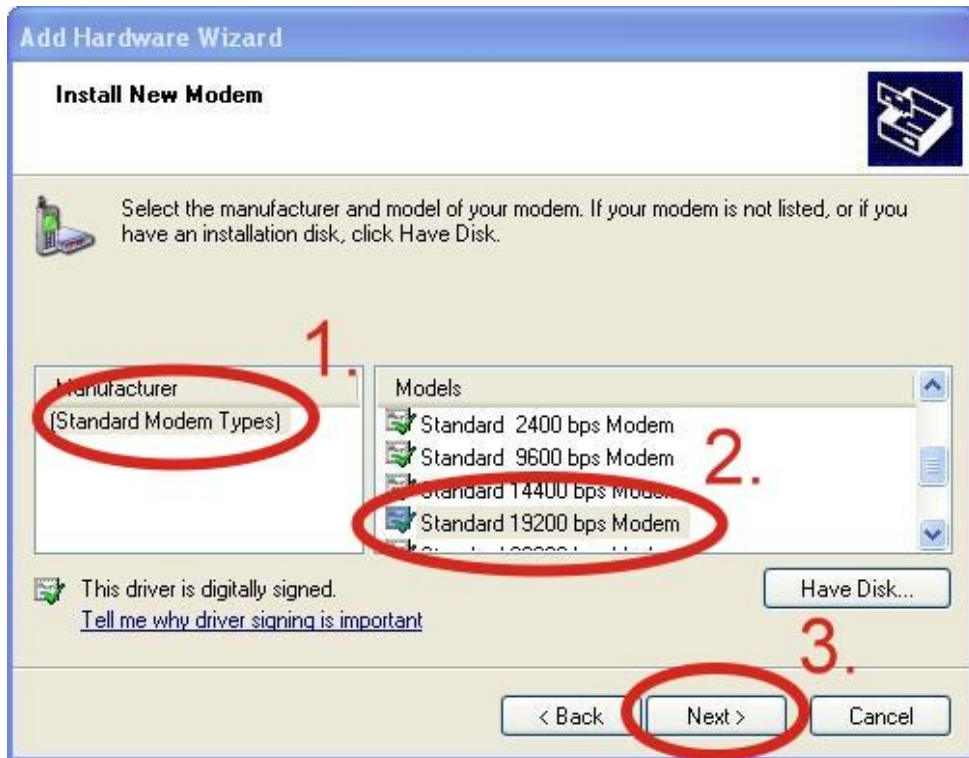
Step 3 : Control Panel → Double-click “Phone and Modem Options” → Modem → Click “Add”



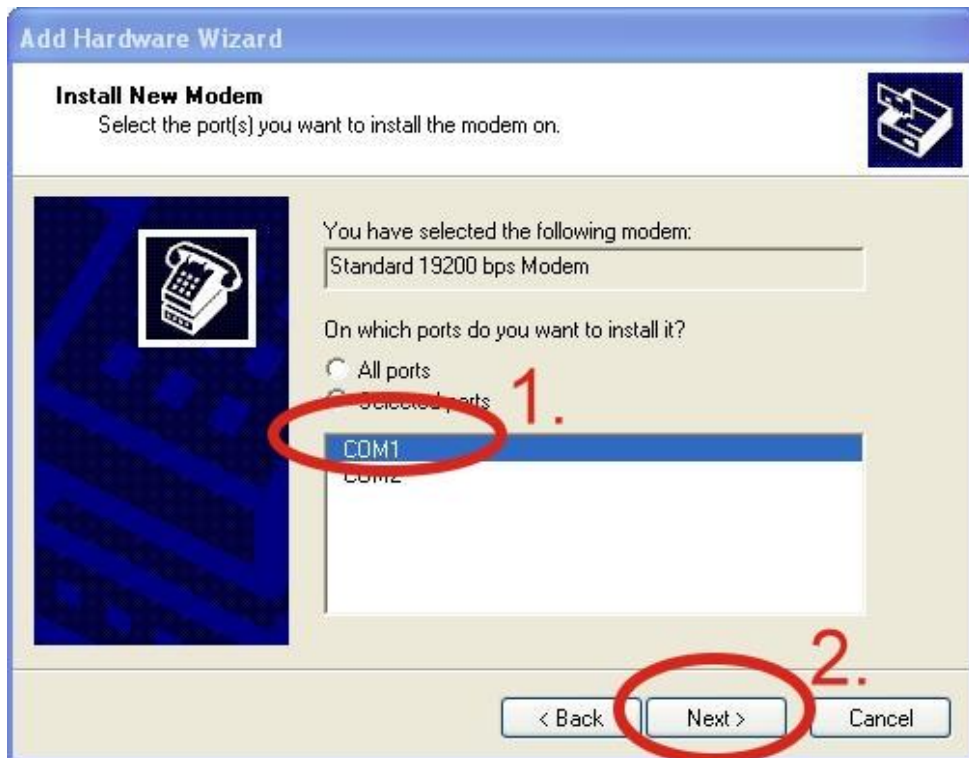
Step 4 : Select “Don't detect my modem; I will select it from a list.” → Click “Next”



Step 5 : Select “Standard Modem Types” → Select “Standard 19200 bps Modem”
→ Click “Next”



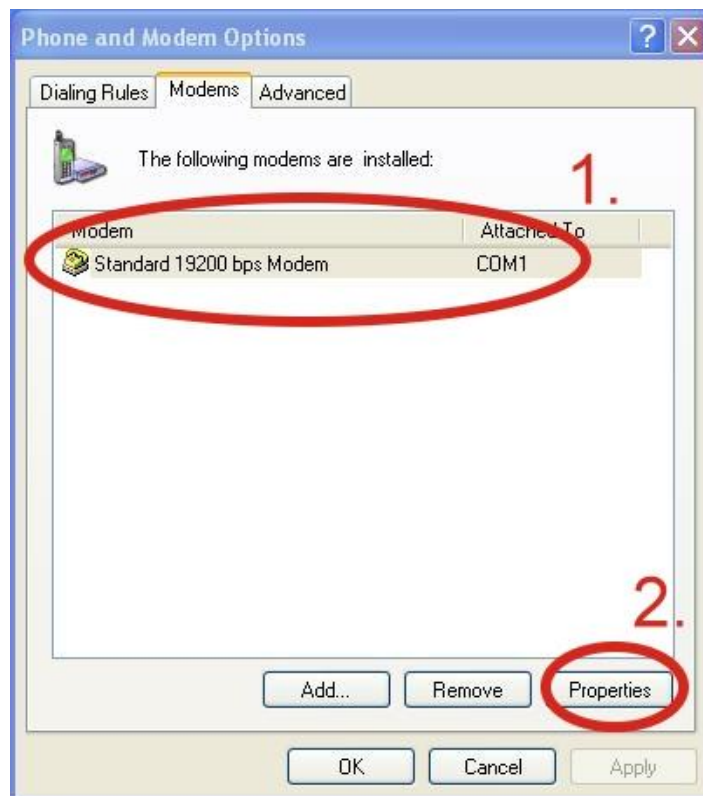
Step 6 : Select your COM Port to connect to the modem → Click “Next”



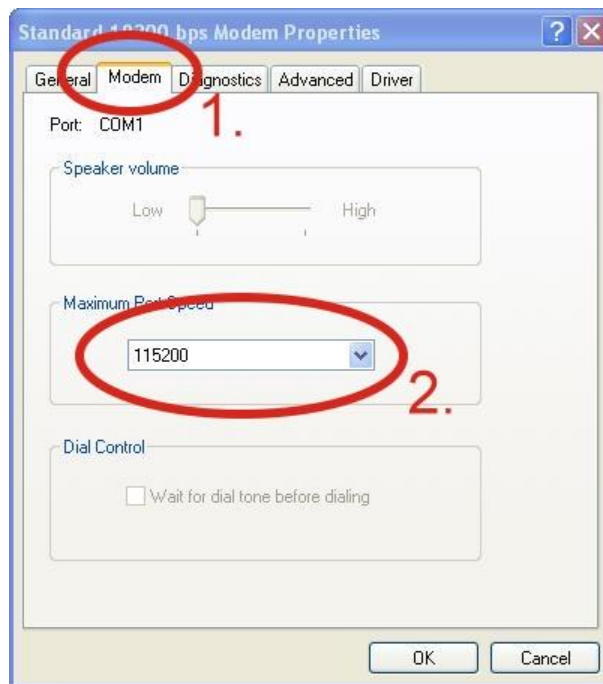
Step 7 : Click “Finish” to finish the install new modem.



Step 8 : Control Panel → Double-click “Phone and Modem Options” → Modem → Select “Standard 19200 bps Modem” → Click “Properties”



Step 9 : Modem → Maximum Port Speed → 115200



Step 10 : Advanced → Extra initialization commands

Note : GPRS's APN must be provided from your Telecom. CO., LTD.

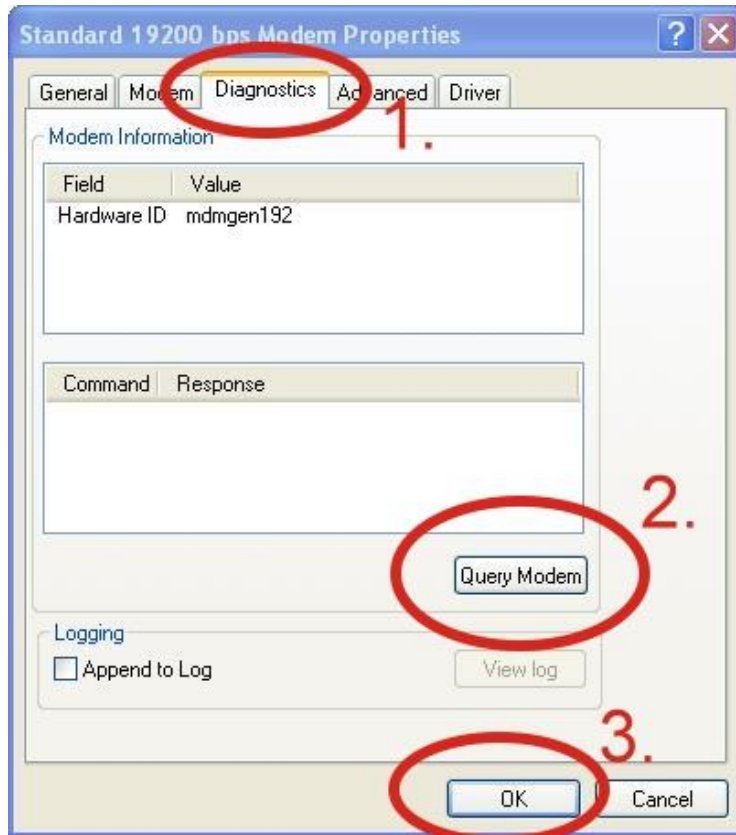
For example in Taiwan: AT+CGDCONT=1,"IP","INTERNET"

For example in China: AT+CGDCONT=1,"IP","CMNET"

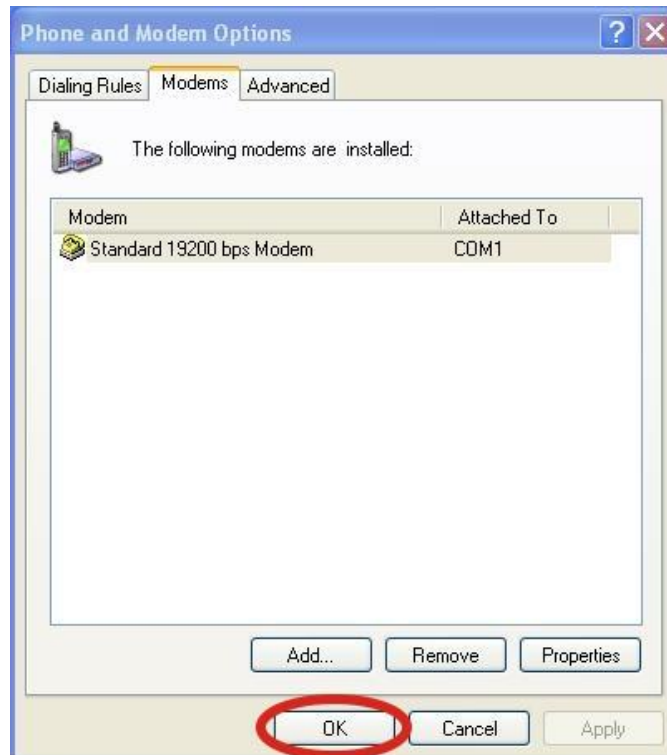


Step 11 : Diagnostics → Query Modem → Click “OK”

Note : If user queries modem that gets an Error, Please try again.

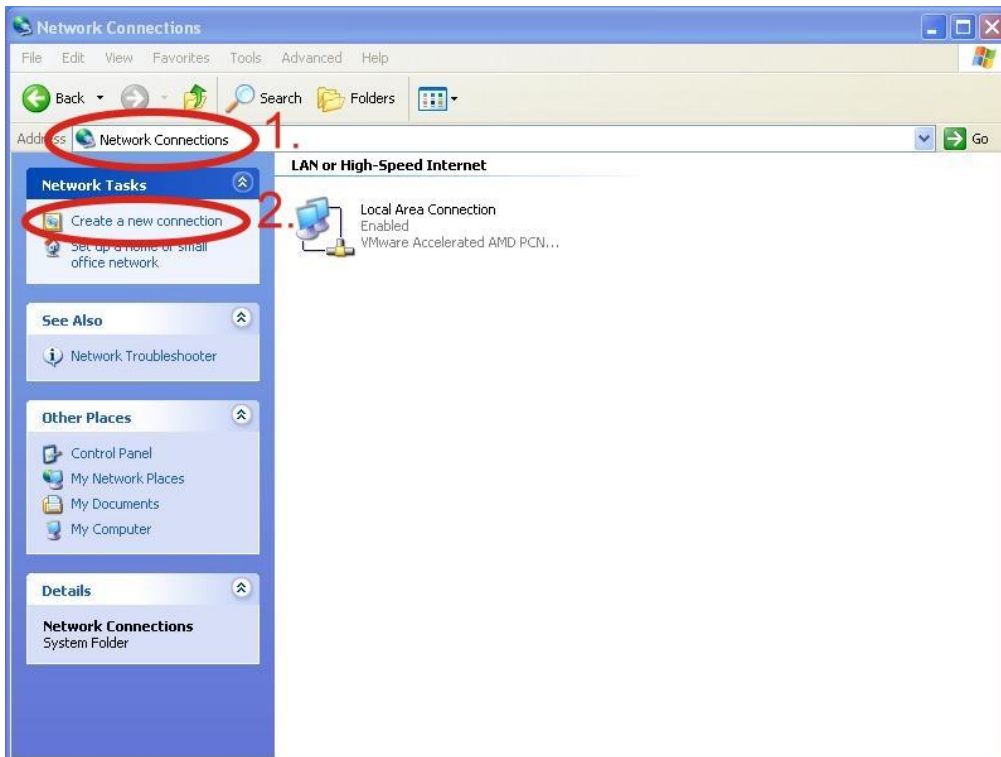


Step 12 : Click “OK”



5.1.3 Create a New Dial-up and Networking Connection

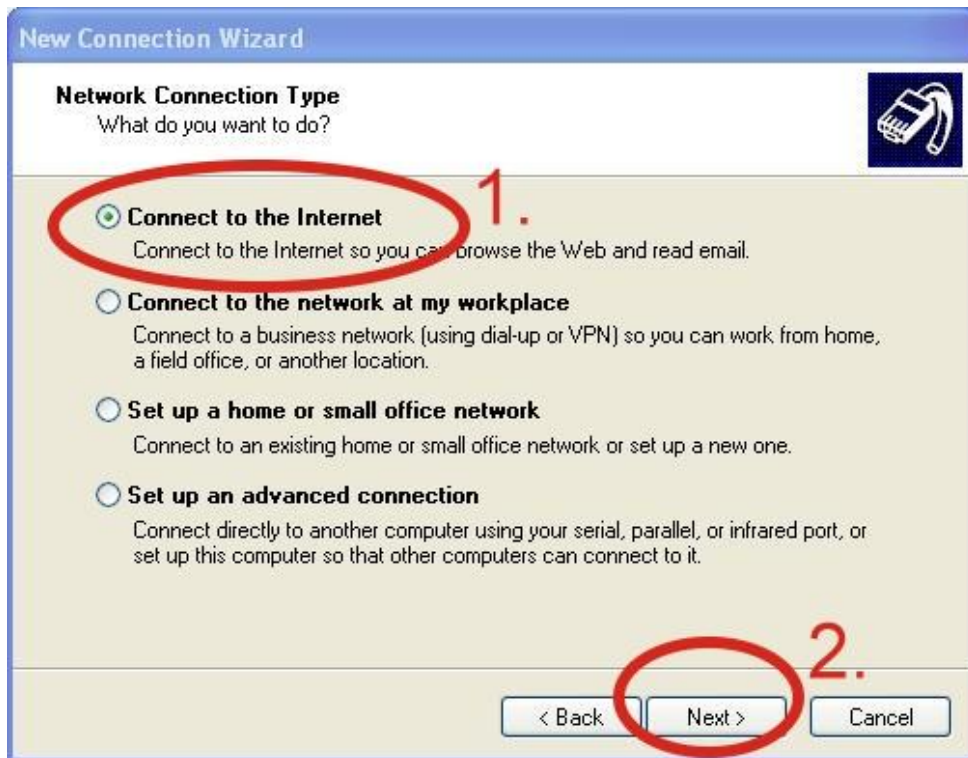
Step 1 : Control Panel → Network Connections → Click “Create a new connection”



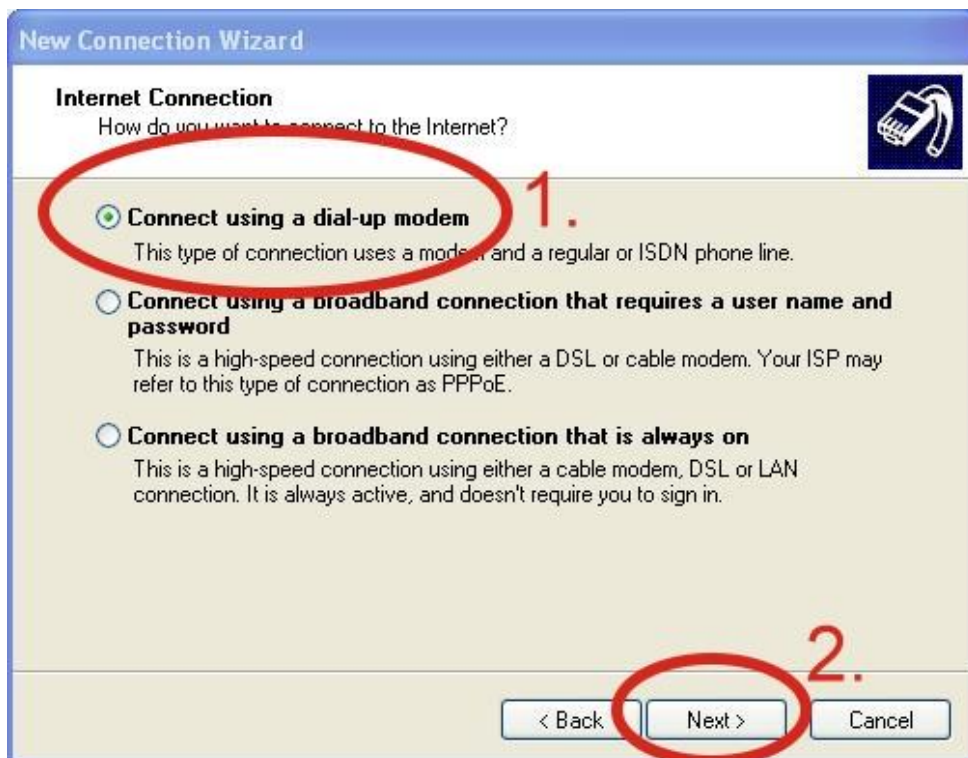
Step 2 : Click “Next”



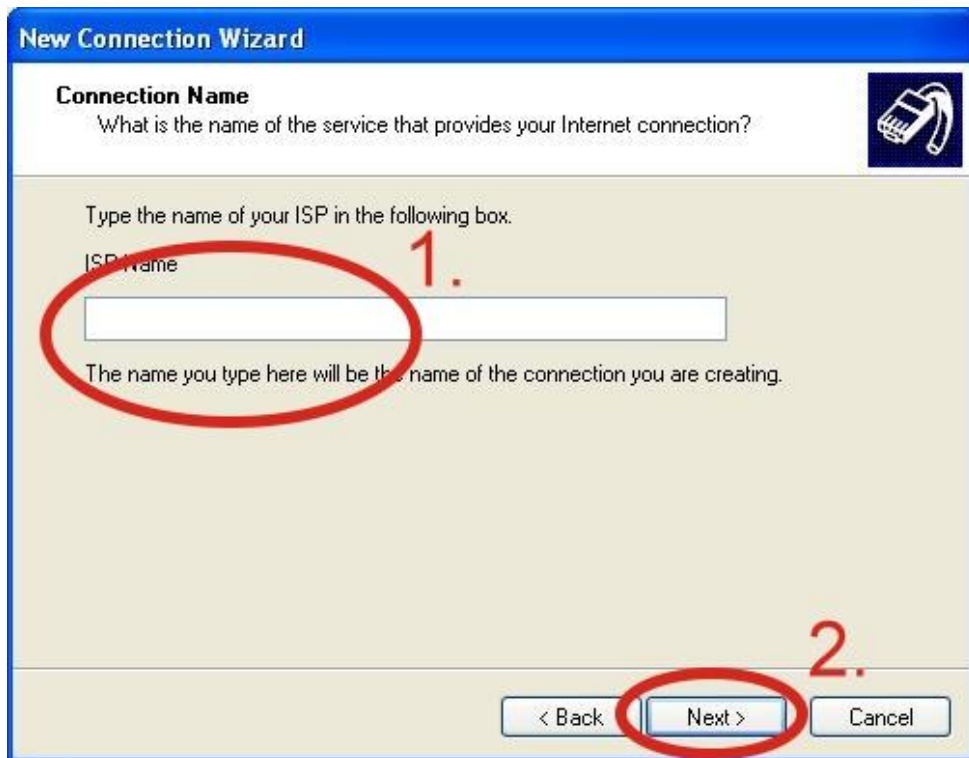
Step 3 : Select "Connect to the Internet" → Click "Next"



Step 4 : Select "Connect using a dial-up modem" → Click "Next"



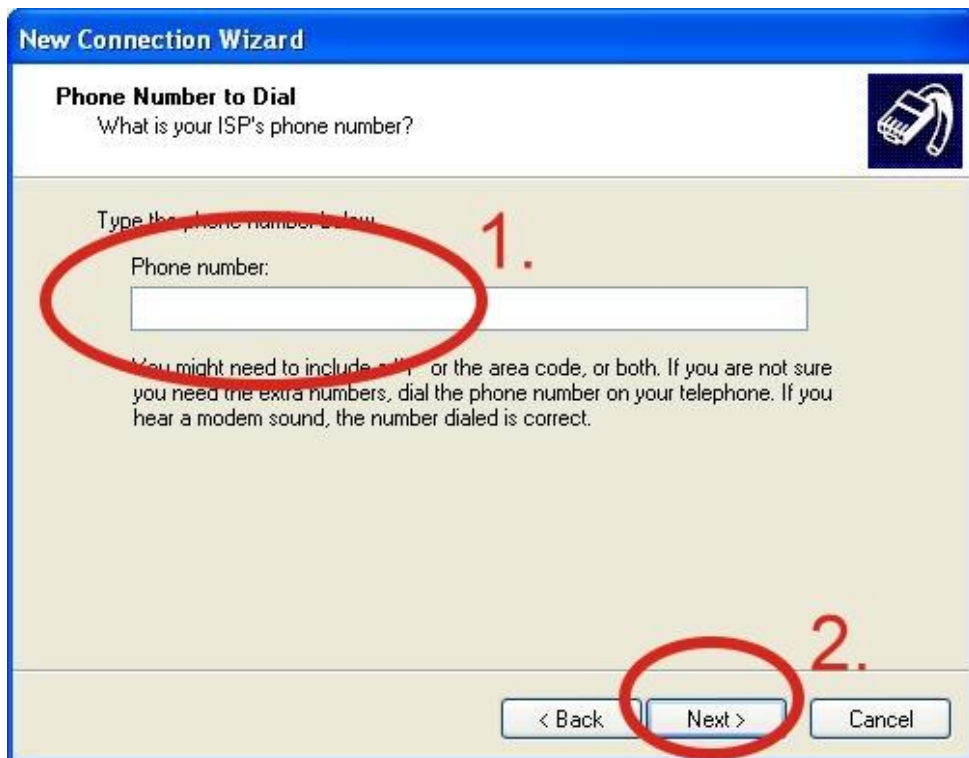
Step 5 : ISP Name → Your GPRS' s name → Click “Next”



Step 6 : Phone Number: → Click “Next”

Note : Phone Number must be provided from your Telecom. CO., LTD.

For example in Taiwan: *99***1#



Step 7 : GPRS' s User name and GPRS' s Password → Click “Next”

Note : GPRS's User name and GPRS's Password must be provided from your Telecom. CO., LTD.

New Connection Wizard

Internet Account Information
You will need an account name and password to sign in to your Internet account.

Type an ISP account name and password, then write down this information and store it in a safe place. (If you have forgotten an existing account name or password, contact your ISP.)

User name:

Password:

Confirm password:

Use this account name and password when anyone connects to the Internet from this computer.

Make this the default Internet connection.

Turn on Internet Connection Firewall for this connection.

< Back **Next >** Cancel

Step 8 : Click “Finish”

New Connection Wizard

Completing the New Connection Wizard

You have successfully completed the steps needed to create the following connection:

Dial-up Connection

- Make this the default connection
- This connection is firewalled
- Share with all users of this computer
- Use the same user name & password for everyone

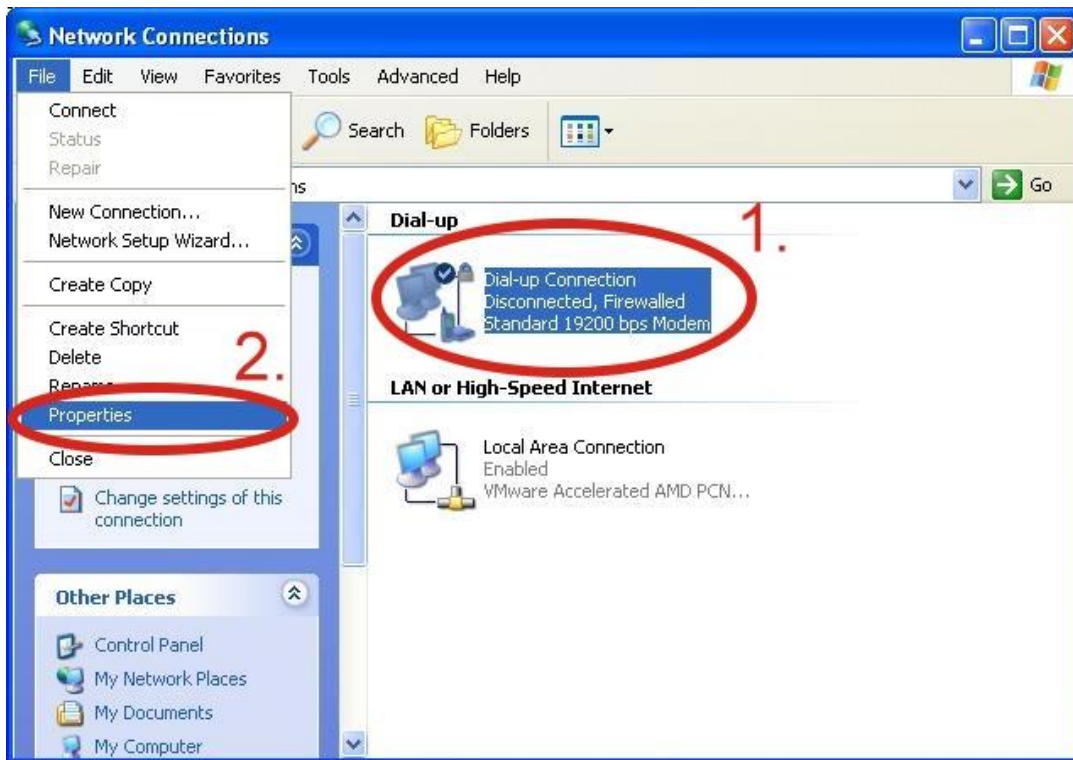
The connection will be saved in the Network Connections folder.

Add a shortcut to this connection to my desktop

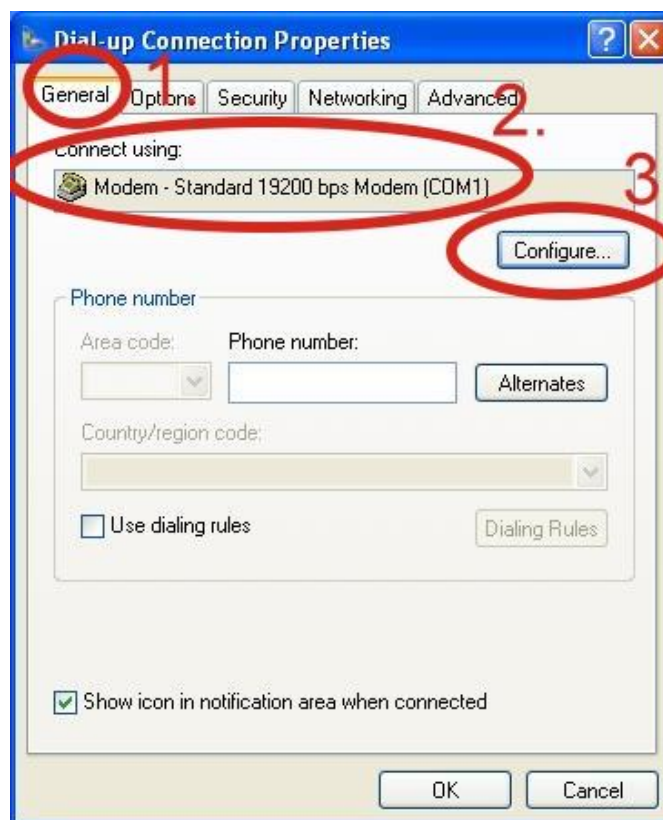
To create the connection and close this wizard, click Finish.

< Back **Finish** Cancel

Step 9 : Control Panel → Network Connections → Click “Your GPRS’ s name” → File → Properties



Step 10 : General → Select “Standard 19200 bps Modem” → Click “Configure”

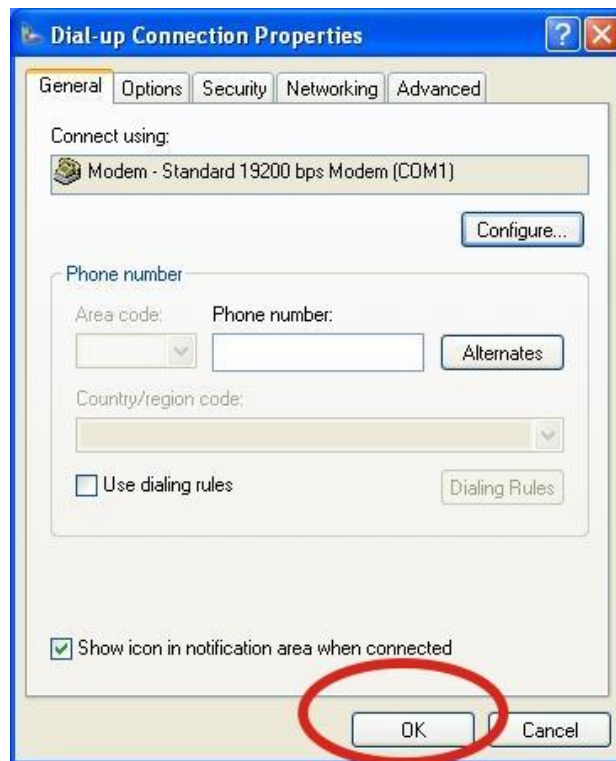


Step 11 : Maximum speed(bps) → Select “115200” → disable “Enable hardware flow control” (Note) → Click “OK”

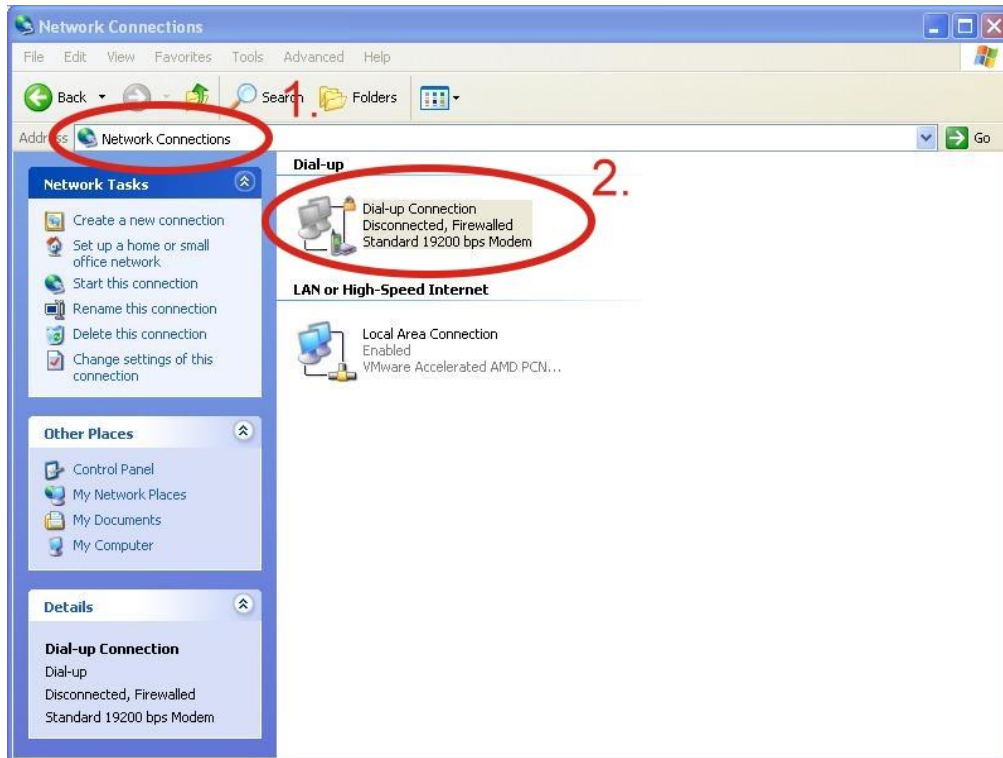
Note : Please don't select “Enable hardware flow control”



Step 12 : Click “OK”



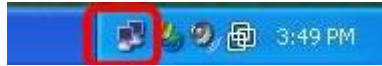
Step 13 : Control Panel → Network Connections → Double-Click “Your GPRS’ s name”



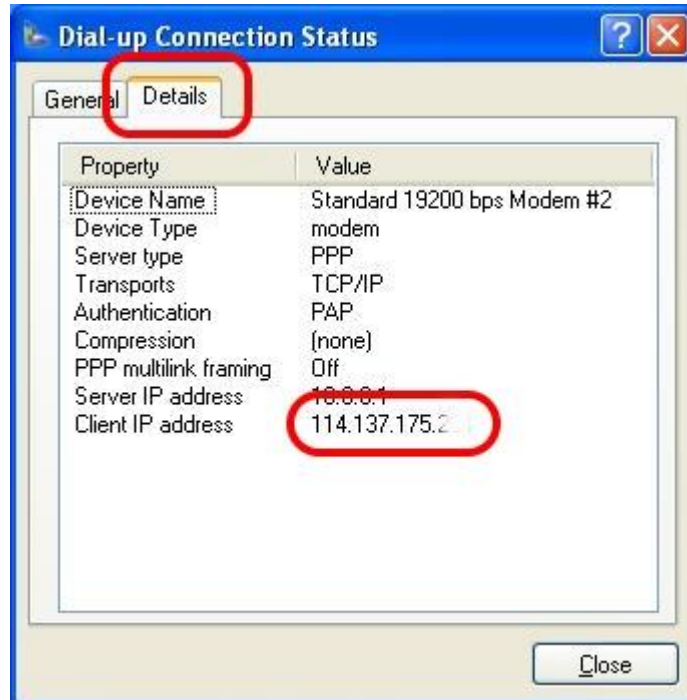
Step 14 : Click “Dial”



Step 15 : If you connect to internet successfully, your toolbar has new logo



Step 16 : You can Double-Click the new logo → Click “Details” → Get your IP address

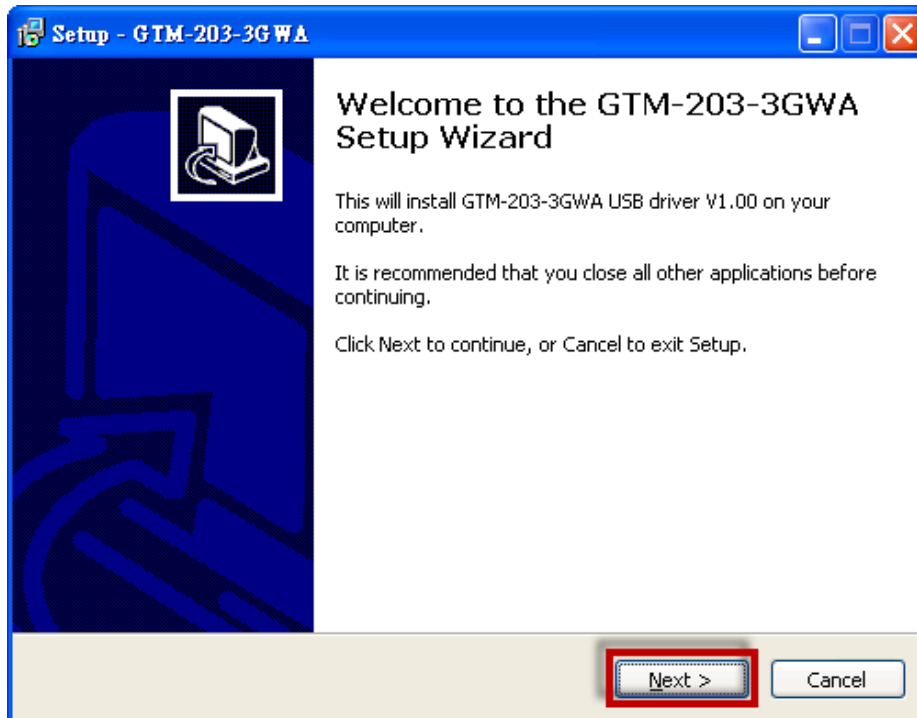


6. USB Driver Installation

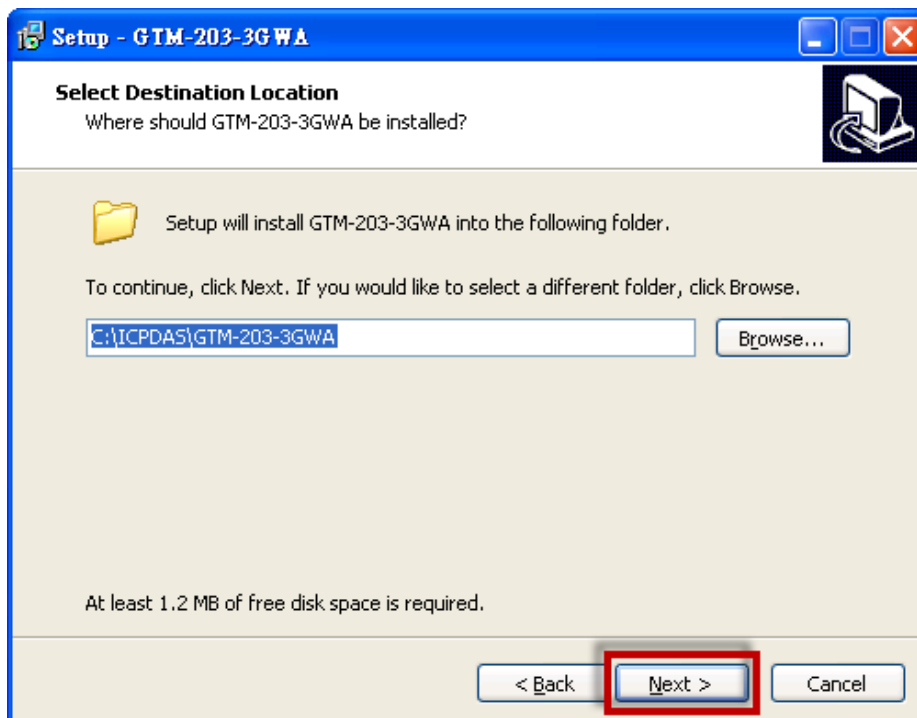
6.1 XPAC-8000 (Microsoft Windows XP)

Step 1 : Double Click "GTM-203-3GWA USB driver V1.00.exe" to install the driver.

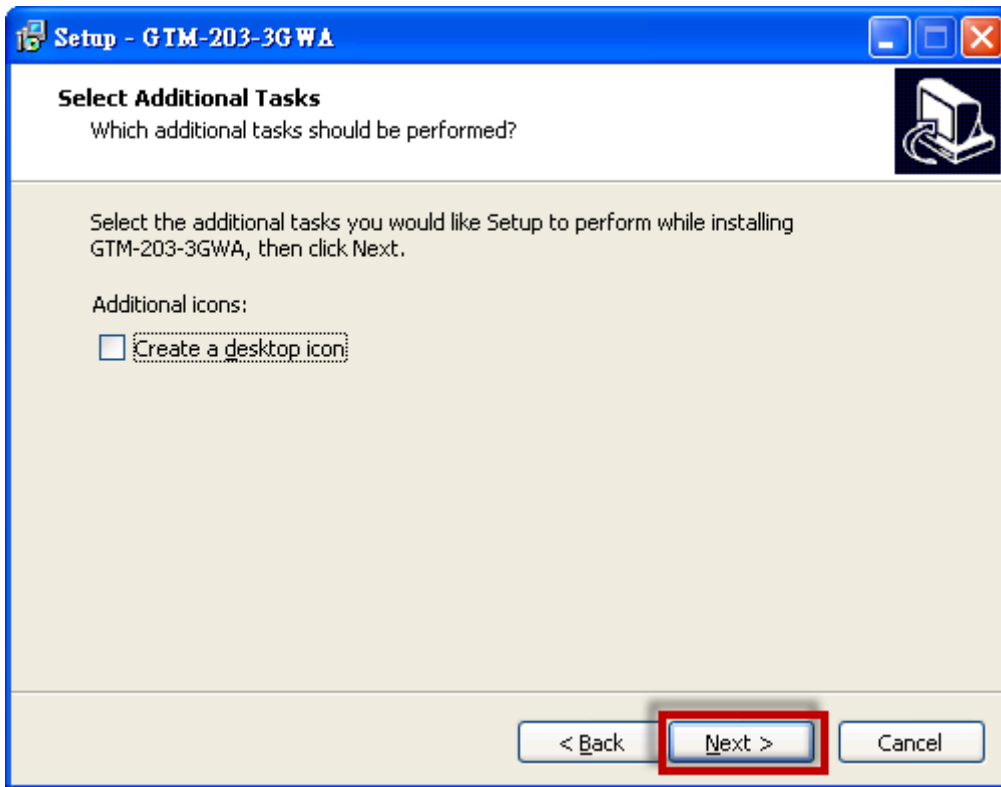
Step 2 : Click "Next".



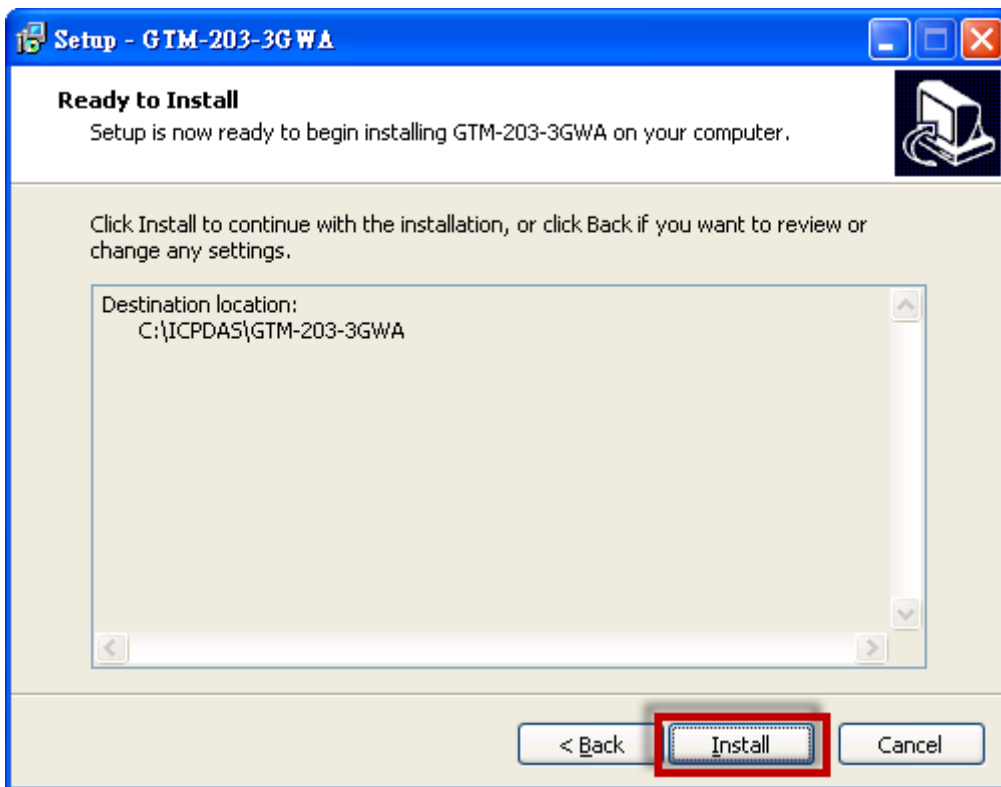
Step 3 : Click "Next"



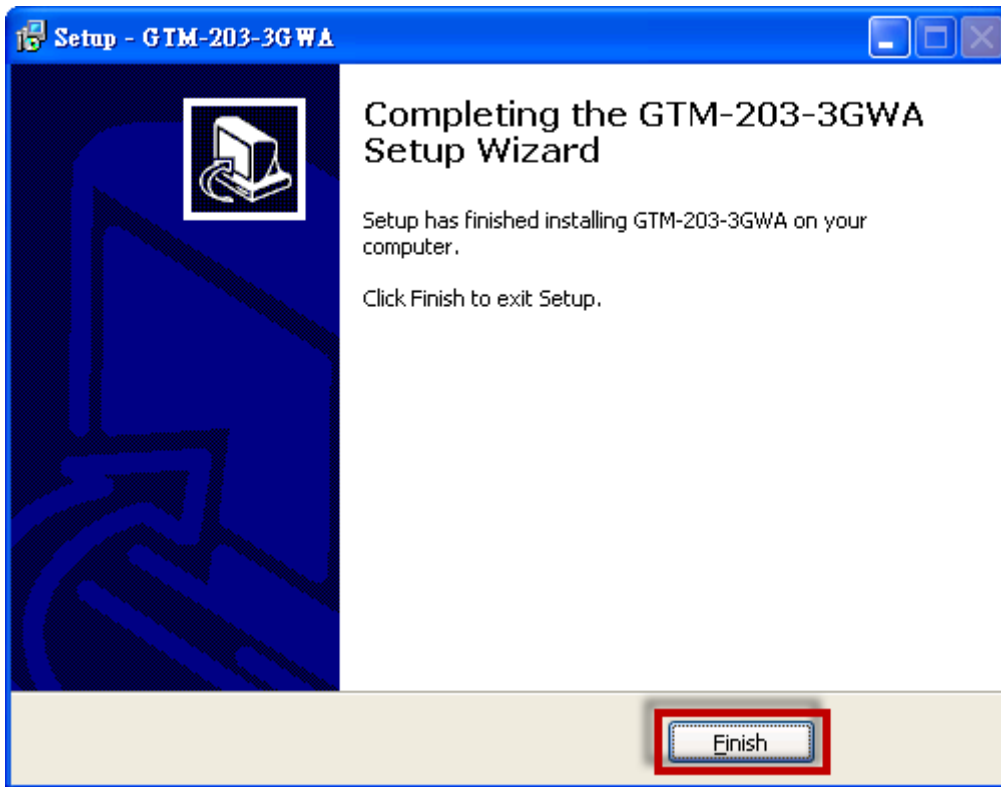
Step 4 : Click "Next"



Step 5 : Select "Install"



Step 6 : Click "Finish"

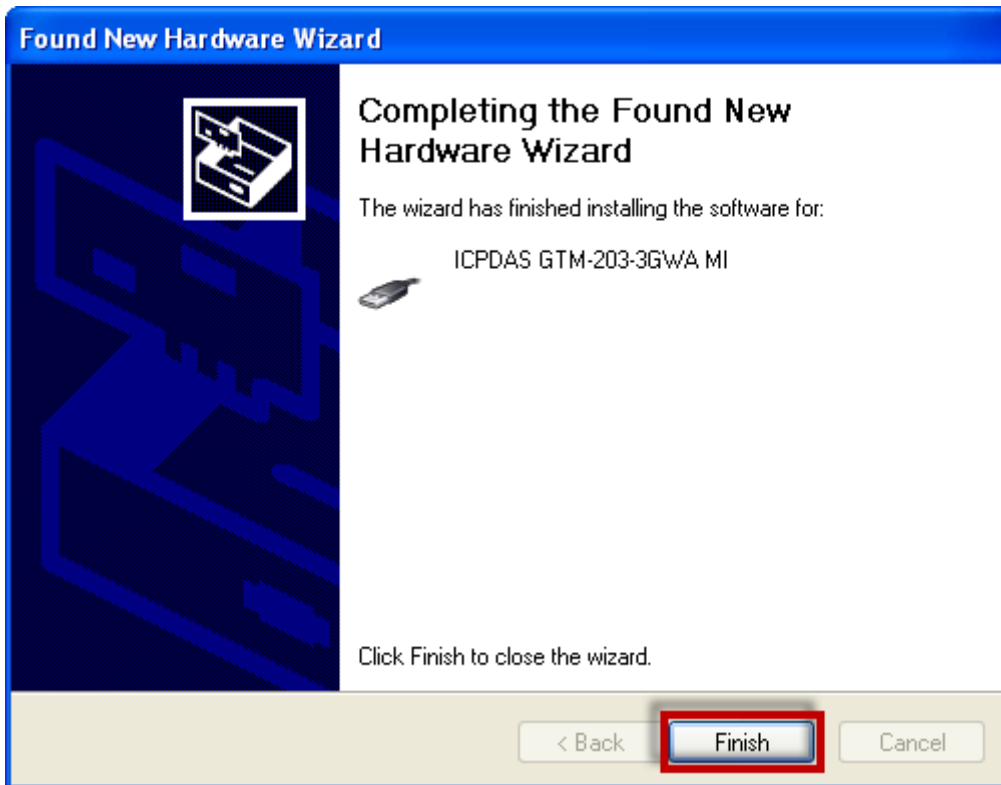


Step 7 : Connect the USB of GTM-203M-3GWA with the PC

Step 8 : The "Found New Hardware Wizard" window for "ICPDAS GTM-203-3GWA MI" will pop-out. Please click "Next".



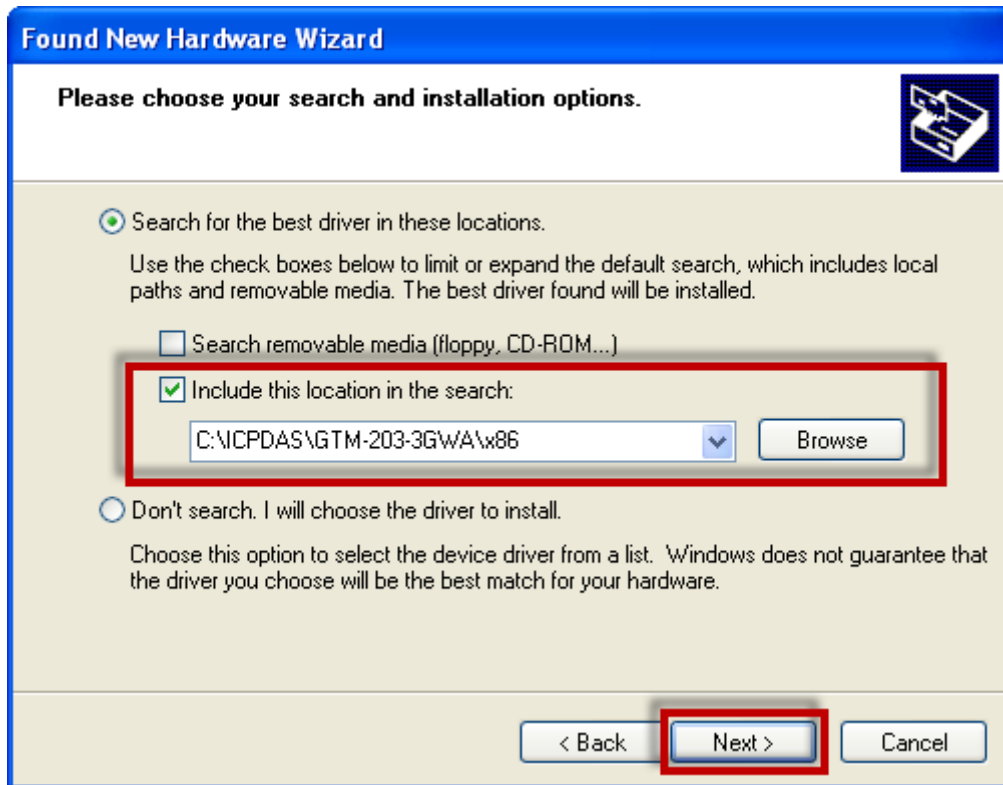
Step 8-1 : Click "Finish" if you got a success message.



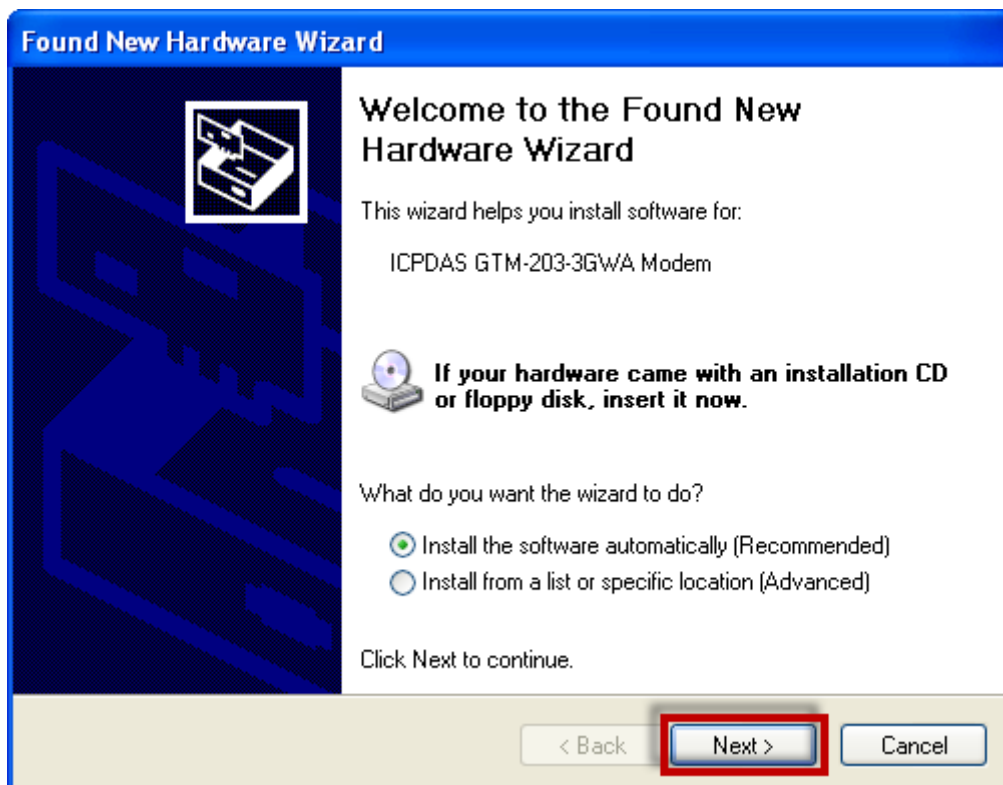
Step 8-2 : Click "Back" if you got a fail message, and then choose "Install from a list or specific location" in all install steps.



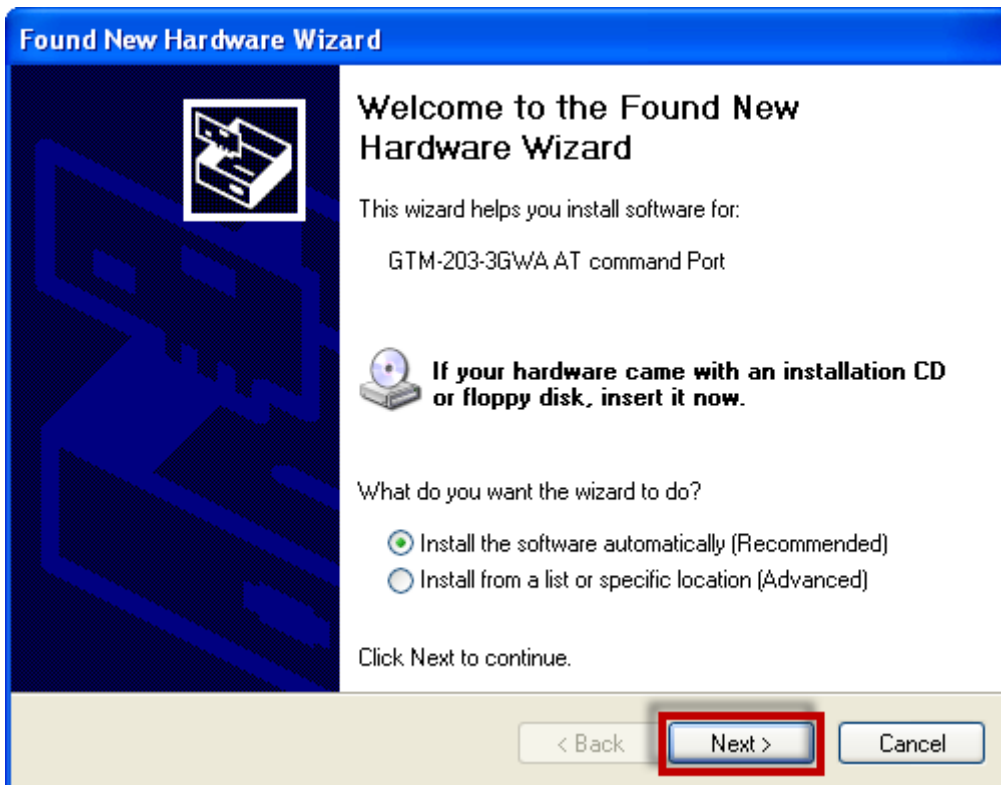
Step 8-3 : Click “Browse” to choose your installing folder, and Click “Next”.



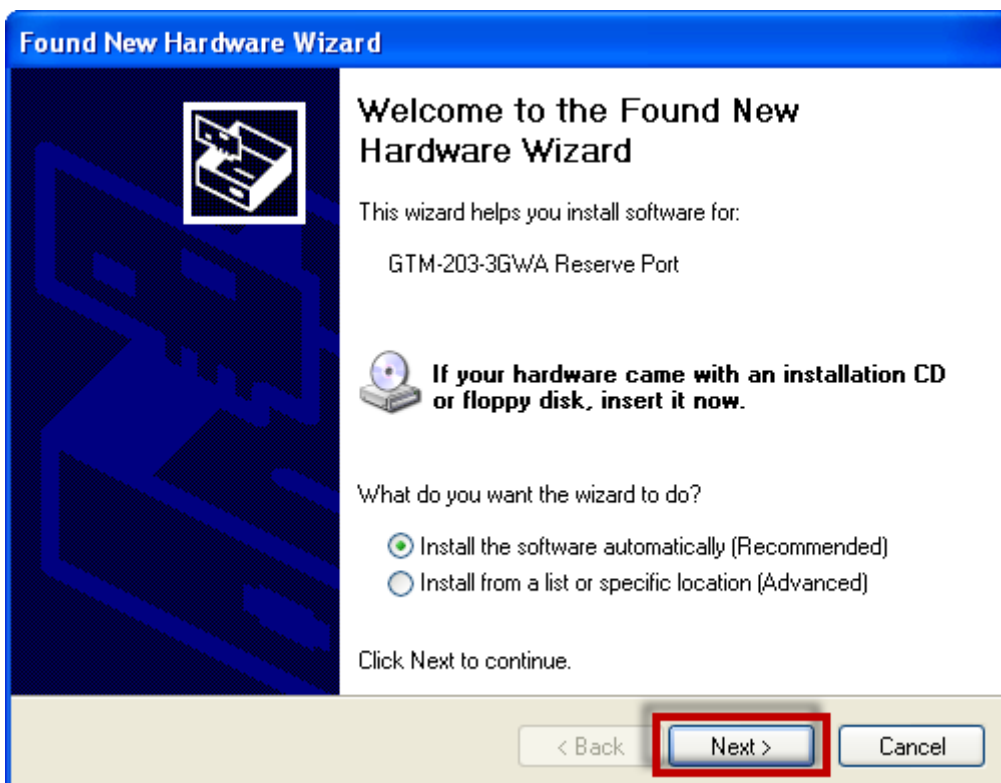
Step 9 : The “Found New Hardware Wizard” window for “ICPDAS GTM-203-3GWA Modem” will pop-out. Please click “Next”.



Step 10 : The “Found New Hardware Wizard” window for “GTM-203-3GWA AT command Port” will pop-out. Please click “Next”.



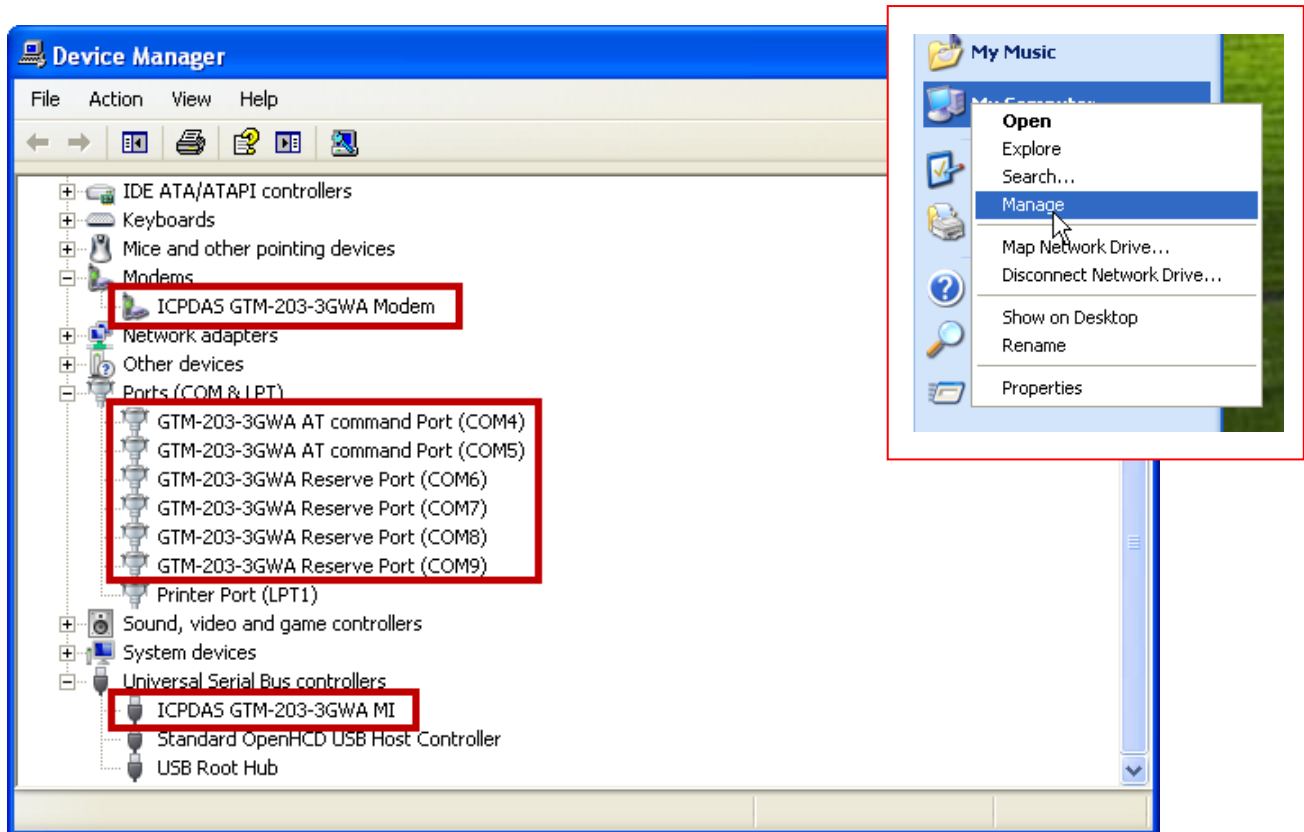
Step 11 : The “Found New Hardware Wizard” window for “GTM-203-3GWA Reserve Port” will pop-out. Please click “Next”.



Step 12 : Finish the all install steps. Please open “Device manager”, and you will found new 8 items in your computer.

The “ICPDAS GTM-203-3GWA Modem” is a Modem for dial-up to 3G/GPRS Network.

The “GTM-203-3GWA AT command Port” is an “AT command port” for GSM library.



7. Revision History

Revision	Date	Author	Description
1.0	2015/06/12	William	First Release