Industrial Quad-band GPRS/GSM Modem GTM-201 Series

User Manual

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Chapter 1 Introduction

The GTM-201 series are industrial Quad-band GSM/GPRS modems with RS-232 and USB interfaces that work on frequencies of GSM 850 MHz, EGSM 900 MHz, DCS 1800 MHz and PCS 1900 MHz. The modems utilize the GSM/GPRS network for convenient and inexpensive data transfer from remote instruments, meters, computers or control systems in either live data or packet data. GTM-201 series have the integrated TCP/IP stack so that even simple controllers with serial communications ports can be connected to the modem without the need for special driver implementation. With the features of GTM-201 series, the systems can be SMS and GPRS connection applications with various PLC and PC. Moreover, with the voice interface, these modems can also be applied to the alarm system with sounds.



Chapter 2 Hardware Specifications

2.1 GTM-201 Series



2.2 GTM-201 Specifications

| Models | GTM-201-RS232 | GTM-201-USB |
|--------------------------------|--|---|
| GSM/GPRS System | | |
| GPRS/GSM | | |
| Quad-band | 850/900/1800/1900 MHz | |
| GPRS Multi-slot | Class 10/8 | |
| GPRS Mobile | Class B | |
| Station | | |
| GPRS Class 10 | Max. download speed 85.6 kbp | S |
| CSD | Up to 14.4 kbps | |
| Compliant to GSM Phase 2/2+ | Class 4 (2 W @ 850/900 MHz); | Class 1 (1 W @ 1800/1900 MHz) |
| Coding Schemes | CS 1, CS 2, CS 3, CS 4 | |
| SMS | Text and PDU Mode | |
| Serial Ports | | |
| Serial Standards | RS-232 (DB9 Female) | USB (B-TYPE) to RS232(VCP) |
| DC 222 | TxD, RxD, RTS, CTS, DTR, | TxD, RxD, DTR, DSR, DCD, RI, |
| NO-232 | DSR, DCD, RI, GND | GND |
| Baud Rate | 9600 bps ~ 115200 bps | - |
| Include Cable | RS-232 9-Pin Female to Male | USB Type A to Type B cable |
| | cable(CA-0915) | (CA-USB18) |
| Compatibility | - | USB 1.1 and 2.0 standard |
| | | Windows 98 and 2000 Windows XP and XP 64-bit |
| USB Driver | - | Windows Vista and Vista 64-bit |
| Support | | • <u>WinPAC(WinCE 5.0)</u> |
| Posot Input | | • <u>LinPAC</u> (Linux kernel 2.6) |
| | Isolated 2750 V | |
| | $+3.5 V_{rac} + 30 V_{rms}$ | |
| Off Voltage Level | $+3.5 \text{ v}_{\text{DC}} \sim +30 \text{ v}_{\text{DC}}$ | |
| | $+1 \vee 111dX$ | |
| | 3 K12, 0.23 VV | |
| LED Indicators | Pod color | |
| | | |
| Bower | Green color | |
| Protection | Power Development of the standard stand | |
| FIDIECTION | Fower reverse polarity protection | ווע |

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| Frame Ground Protection | ESD, Surge, EFT, Hi-Pot | |
|----------------------------|--|--|
| Required Supply Voltage | +10 V _{DC} ~ +30 V _{DC} | |
| Power Consumption | Idle: 25 mA @ 24 V_{DC} ; Data Link: 100 ~ 400 mA (peak) @ 24 V_{DC} | |
| Connection | 5-Pin 3.81 mm Removable Terminal Block | |
| Mechanical | | |
| Casing | Plastic | |
| Flammability | UL 94V-0 materials | |
| Dimensions (W x L x H) | 33 mm x 87 mm x 107 mm | |
| Installation | DIN-Rail | |
| Environment | | |
| Operating Temperature | -25 °C ~ +55 °C | |
| Storage Temperature | -40 °C ~ +80 °C | |
| Humidity | 5 ~ 95% RH, non-condensing | |

Note1: The baud rate of GTM-201-RS232 and GTM-201-USB are default in 115200 bps.

Chapter 3 Application architecture

3.1 Application 1



3.2 Application 2



3.3 Application 3



3.4 Application 4



Chapter 4 Hardware Appearance

4.1 View of the GTM-201-RS232 and GTM-201-USB Panel

➢ GTM-201-RS232 :



GTM-201-USB :





4.2 Pin Assignments

4.3 Hardware Dimensions

➢ GTM-201-RS232







Bottom View

Unit:mm









Bottom View

Unit:mm

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4.4 LED indicators



There are two LED indicators to help users to judge the various conditions of GTM-201. The description is as follows :

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

| Power normal | Power fail |
|--------------|------------|
| Always on | Always off |

GSM (Green) : The modem LED can indicate the status of GSM module.

| Modem normal | Modem fail |
|------------------|----------------------|
| | Off |
| Blanking (3 sec) | or |
| | Blanking (not 3 sec) |

Chapter 5 Hardware Wire Connection

5.1 Reset Wire Connection

Reset Wire Connection

| Input Type | Reset State ON | Reset State OFF |
|------------|----------------|-----------------|
| Reset | RST- | RST- |
| Input | RST+ | RST+ |

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

> Timing of restart modem



5.2 GSM/GPRS Installation

SIM card Installation



> GPRS/GSM Antenna Installation



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5.3 Quick Test

Hardware installation :



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Software Installation: (Hyper Terminal)

Step1. Start \rightarrow All Programs \rightarrow Accessories \rightarrow Communications \rightarrow Hyper Terminal



Step2. If these is a pop-up form that "Default Telent Program?", please select "Yes"

| Default 1 | ielnet Program? 🛛 🛛 🕅 🔀 |
|-----------|---|
| ⚠ | We recommend that you make HyperTerminal your default telnet program. Do you want to do this? |
| | Yes No |

Step3. Input new connection name \rightarrow Click "OK"

| Rew Connection - HyperTerminal |
|---|
| File Edit View Call Transfer Help |
| D 🖨 🚳 🖇 🕒 🛗 |
| |
| - Connection Description |
| New Connection Enter a name and choose an icon for the connection: Name: TEST 1. |
| Icon: |

Step4. Select your PC serial port \rightarrow Click "OK"



Step5. Please refer to the following settings

| Bits per second | 115200 |
|-----------------|-------------|
| Data bits | 8 |
| Parity | None |
| Stop bits | 1 |
| Flow control | None (Note) |
| | |

Note: Please select "None" mode on the GTM-201-RS232 SW1 Hardware

| Rie Edit | H <mark>yperTerminal</mark> View Call Transfer Heln | |
|--------------|--|---|
| 0 📽 💡 |) 🏾 🖰 🗳 | |
| COM1 Port | Properties ? | × |
| | Bits per second: 115200 | |
| | Data bits: 8 | |
| 1. | Stop bits: 1 | |
| | Flow control: None | |
| | 2. OK Cancel Apply | |

Step6. File \rightarrow Properties



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| Step7. Settings \rightarrow Click "ASCII Setup" |
|---|
| 🍳 TEST - HyperTerminal |
| File Edit View Call Transfer Help |
| D 🚔 🐲 🌋 🗈 🗃 😭 |
| TEST Properties |
| Connect To Settings |
| Function, arrow, and ctrl keys act as Terminal keys O Windows keys |
| Backspace key sends Ctrl+H O Del O Ctrl+H, Space, Ctrl+H |
| Emulation: |
| Auto detect Terminal Setup |
| Telnet terminal ID: ANSI |
| Backscroll buffer lines: 500 |
| Play sound when connecting or disconnecting |
| Conr Input Translation ASCII Setup 2. |
| OK Cancel |

Step8. Select "Echo typed character locally" \rightarrow OK

| 🍓 TEST - HyperTerminal | |
|---|-----|
| File Edit View Call Transfer Help | |
| 다 🗃 🖉 🗅 🖉 🖆 | |
| TEST Properties | ? × |
| Connect To Settings | |
| ASCII Setup | |
| ASCII Sending | |
| Cond line and mill line foods | |
| Echo typed characters locally | |
| E Line delay: U milliseconds. | |
| Character delay: U milliseconds. | |
| ASCII Receiving | |
| E Append line feeds to incoming line ends | |
| Force incoming data to 7-bit ASCII | |
| Wrap lines that exceed terminal width | |
| Conr OK Cancel | |

Step9. Input "AT" and press "Enter", then you will receive "AT OK"

| 🏶 TEST - HyperTerminal |
|-----------------------------------|
| File Edit View Call Transfer Help |
| C 🖨 🍘 🖧 🐵 🏝 🖨 |
| AATT OK |

Chapter 6 GPRS connection

6.1 XPAC – 8000 (Microsoft Windows XP)

6.1.1.1 GTM-201-RS232 Hardware requirement

- 1) GTM-201-RS232
- 2) XPAC-8000
- 3) RS-232 Cable



XP-8000

0111-201-1(5252

6.1.1.2 GTM-201-USB Hardware requirement

- 1) GTM-201-USB (Please install USB driver first)
- 2) XPAC-8000
- 3) USB Cable



GTM-201-USB

6.1.2.1 Create a new modem connection

Step1. Control Panel → Double-click "Phone and Modem Options"



Step2. Set the area code for the first time \rightarrow Click "OK"

| Location Information | 2 🔀 |
|----------------------|--|
| | Before you can make any phone or modem connections, Windows needs the following information about your current location. What country/region are you in now? |
| | United States |
| | If you dial a number to access an outside line, what is it? |
| | The phone system at this location uses: |
| | © Tone dialing C Pulse dialing |

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Step3. Control Panel → Double-click "Phone and Modern Options" → Modern → Click "Add"

| none and Modem Opt | ons ? |
|--------------------|----------------------|
| The following m | odems are installed: |
| Modem | Attached To |
| | |
| | |
| | |
| | 2. |
| (| Add Properties |
| | OK Cancel Apply |

Step4. Select "Don't detect my modem; I will select it from a list." → Click "Next"



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Step5. Select "Standard Modem Types" → Select "Standard 19200 bps Modem"

→ Click "Next"



Step6. Select your COM Port to connect to the modem \rightarrow Click "Next"

| Add Hardware Wizard Install New Modem Select the port(s) yo | u want to install the modem on. |
|---|---|
| | You have selected the following modem: |
| | On which ports do you want to install it? |
| | C All ports |
| | |
| | |
| | |
| | 2. |
| | <pre></pre> |

Step7. Click "Finish" to finish the install new modem.

| Add Hardware Wizard | |
|---|---|
| Install New Modem Modem installation is fini | ished! |
| | Your modem has been set up successfully. If you want to change these settings, double-click the Phone and Modem Options icon in Control Panel, click the Modems tab, select this modem, and then click Properties. |
| | < Back Finish Cancel |

Step8. Control Panel \rightarrow Double-click "Phone and Modern Options" \rightarrow Modern \rightarrow Select "Standard 19200 bps Modern" \rightarrow Click "Properties"

| Phone and Modem Options | ? 🗙 |
|--|--------------------|
| Dialing Rules Modems Advanced Image: The following modems are installed: Image: The following modems are installed: Image: The following modems are installed: | 1 |
| Modem A Standard 19200 bps Modem Cu | Ittaches To DM1 |
| | |
| | |
| | 2. |
| Add Remov | e Properties |
| OK Car | ncel Apply |

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Step9. Control Panel → Double-click "Phone and Modern Options" → Modern → Select "Standard 19200 bps Modern" → Click "Properties" → Modern → Maximum Port Speed → 115200

| tandar (19200 bps Mode Geleral Modem Dignostics | m Properties |
|--|------------------|
| Port: COM1 Speaker volume Low | High |
| Maximum Bet Speed | 1 |
| Dial Control | 2. |
| Wait for dial ton | e before dialing |
| | 0K Cancel |

Step10. Advanced \rightarrow 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"

| Standard 19200 bps Modem Properties ? | X |
|--|----|
| General Modem Diagnos.cs Advanced Driver Extra Settings Extra initialization commands: | |
| 2. | |
| | |
| Change Default Preferences | |
| OK Cance | el |

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Step11. Diagnostics \rightarrow Query Modem \rightarrow Click "OK"

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

| andard 19 General Mo | 200 bps Mode | em Proper 8 Ad anged | ties | ? |
|-------------------------|--------------|-------------------------|--------------|----|
| Modem Inforr | nation | -1 | | |
| Field | Value | | | |
| Hardware ID | • mdmgen192 | | | |
| Command | Response | | | |
| | | | | |
| | | 1 | | 2. |
| | | | Query Mod | |
| 1 Contractor | | | - | |
| Logging | | | 1 Manual and | |
| Append t | o Log | | View log | |
| Append t | o Log | | | 3. |

Step12. Click "OK"



6.1.2.2 Create a new dial-up and networking connection

Step1. Control Panel → Network Connections → Click "Create a new connection"



Step2. Click "Next"



Step3. Select "Connect to the Internet" → Click "Next"

| New Connection Wizard |
|---|
| Network Connection Type What do you want to do? |
| Onnect to the Internet Connect to the Internet so you can prowse the Web and read email. |
| O Connect to the network at my workplace |
| Connect to a business network (using dial-up or VPN) so you can work from home, a field office, or another location. |
| ○ Set up a home or small office network |
| Connect to an existing home or small office network or set up a new one. |
| ○ Set up an advanced connection |
| Connect directly to another computer using your serial, parallel, or infrared port, or set up this computer so that other computers can connect to it. |
| < Back Next > Cancel |

Step4. Select "Connect using a dial-up modem" \rightarrow Click "Next"



Step5. ISP Name \rightarrow Your GPRS's name \rightarrow Click "Next"

| New Connection Wizard |
|--|
| Connection Name What is the name of the service that provides your Internet connection? |
| Type the name of your ISP in the following box. ISP trame |
| The name you type here will be the name of the connection you are creating. |
| |
| 2 |
| < Back Next > Cancel |

Step6. Phone Number: → Click "Next"

Note: Phone Number must be provided from your Telecom. CO., LTD. For example in Taiwan: *99***1#



Step7. 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.) Viser name: Password: Confirm password: Ose this account name and password when anyone connects to the Intervention this compute. Image: Image: |
| <pre></pre> |

Step8. 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. — |
| L V ABB A | Add a shortcut to this connection to my desktop |
| | To create the connection and close this wizard, click Finish. |
| | < Back Finish Cancel |

Step9. Contral Panel \rightarrow Network Connections \rightarrow Click "Your GPRS's name" \rightarrow

File \rightarrow Properties



Step10. General → Select"Standard 19200 bps Modem" → Click "Configure"

|)ial-up Conne | ction Properties | ? |
|------------------|-------------------------|---------------|
| eneral Options | Security Networking | g Advanced |
| connect using: | | · |
| 🎯 Modem - Stan | dard 19200 bps Mode | em (COM1) |
| | | Configure |
| Phone number | | |
| Area code: | Phone number: | |
| × | | Alternates |
| Country/region | code: | |
| 1 | | ~ |
| 🔲 Use dialing i | rules | Dialing Rules |
| | | |
| | | |
| | | |
| 🖉 Show icon in n | otification area when o | connected |
| | | |
| | | OK Cance |

Step11. Maximum speed(bps) → Select "115200" → "Enable hardware flow control "(Note) → Click "OK"

Note1 : SW 1 on GTM-201-RS232 is "RTS/CTS" mode → Please select "Enable hardware flow control"

| Modem Configuration | ? 🔀 |
|---|------|
| Standard 19200 bps Modem (COM1) Maximum speed (bps): 1 Modem protocol | |
| Hardware features Enable hardware flow control Enable modem error control Enable modem compression | |
| Show terminal window Enable modem speaker 3. OK Car | ncel |

Note2 : GTM-201-USB → Please don't select "Enable hardware flow control"

| Modem Configuration | ? 🛛 |
|--|--------|
| Standard 19200 bps Modem (COM1) | |
| Maximum speed (bps): 115200 Modem protocol 2. | ~ |
| Enable hardware flow control | |
| Show terminal window Enable modem speaker | Cancel |
| | |

| g Advanced |
|---------------|
| |
| |
| m (COM1) |
| Configure |
| |
| |
| Alternates |
| |
| |
| |
| Dialing Rules |
| |
| |
| |
| connected |
| |
| |
| OK Cancel |
| |

Step13. Contral Panel \rightarrow Network Connections \rightarrow Double-Click "Your GPRS's name"



Step14. Click "Dial"

| Connect Dial | -up Connection | ? × |
|--------------------------|---|--------|
| 0 | | N |
| User name: | guest | |
| Password: | ••••• | |
| Save this of Me only One | iser name and password for the following u , who uses this computer | isers: |
| Dial: | *99***1# | ~ |
| Dial | Cancel Properties | Help |

Step15. If you connect to internet successfully, your toolbar have new logo



Step16. You can Double-Click the new logo \rightarrow Click "Details" \rightarrow Get your IP address

| Device Type n | |
|--|----------------|
| Server tune E | nodem PPP |
| Fransports T | CP/IP |
| Authentication F Compression (1 | none) |
| PPP multilink framing 🛛 🕻 Server IP address 🚽 🦽 | 0ff 0.0.0.1 |
| Client IP address | 14.137.175.2 |
| - | |
| | |

6.2 WinPAC-8000 (WinCE)

6.2.1.1 GTM-201-RS232 Hardware requirement

- 1) GTM-201-RS232
- 2) WinPAC-8000
- 3) RS-232 Cable



WinPAC

GTM-201-RS232

6.2.1.2 GTM-201-USB Hardware requirement

- 1) GTM-201-USB (About install USB driver, please refer to the GTM-201-USB_Install_driver_manual. After finishing installing the driver, it will add a com port on WinPAC.)
- 2) WinPAC-8000
- 3) USB Cable



6.2.2.1 Create a new modem connection

Step1. Copy "ICPDAS GTM-201-RS232_COM4_winpac.cab" to your WinPAC → Double-Click " ICPDAS GTM-201-RS232_COM4_winpac.cab" to install → Select "OK"



Step2. Execute "WinPAC_Utility" \rightarrow File \rightarrow Save and Reboot

| WinPAC Utility [2.0.0.5] | | | | × |
|--|----------------------|---------------------------------|----------------|--------------------------------------|
| File Help Configuratio | n | | | |
| Save And Reboot | etting FTP Setting | System Information | Auto Execution | Multi-serial port wiz |
| Reboot <u>W</u> ithout Save Restore Default Settings E <u>x</u> it | | Welcome to This tool will he | use WinPac | e Utility e WinPac - 8000. |
| Industrial Control Products | VinPAC | Display: Resolution : | 800 * 600 | |
| CBM® Data Acquisition Systems | | | Set | ting |
| Battery1 : OK | | Task Bar Settin | g: | |
| Battery2 : OK | } | 📃 Auto Hid | e 🛛 🔽 Alway: | s On Top |
| Change HTTP document r | oot directory \windc | ws\www\wwwsub to: | | |
| \windows\www\wwwpub | V | | | Setting |
| | | | | |

6.2.2.2 Create a new dial-up and newworking connection

Step1. Control Panel → Double-Click "Network and Dial-up Connections"

| <u>File</u> | View | | | | | | | / | | ~ | №? × |
|-------------|------------|-----------|---------|----------|-------------|---------------------|----------|--------|------------------------|------------|-------------|
| 0 | } | P | I | - | | 9 | 1 | C | | 22 | |
| Certifica | ates Da | ite/Time | Dialing | Display | Input Panel | Internet Options | Keyboard | Mouse | Network and Dial-up | Dwner | |
| °P | 1 | | 4 | - | 2 | 0 | | | Connections | J 2. | |
| Passwo | ord Cor | PC | Power | Regional | Remove | Storage Manager | Stylus | System | Volume & | | |
| | CU | rinection | | Securiys | Programs | Manayer | | | Sourius | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 6 | | | 1. | | | | | | | | I |
| A P | Control P | anel | | | | | | | ŵ. | L) 11:27 A | м 🏴 🖶 |

Step2. Double-Click "Make New Connection"



| | \frown | 1. | |
|---|---------------------|----|--------------------|
| 2 | Network Connections | | 🕹 🕹 🕨 11:28 AM 🏓 🖷 |

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Step3. Keyin your name for the connection \rightarrow Select "Dial-Up Connection" \rightarrow Click "Next"

| Make New Connect | ion | |
|------------------------|----------------|-----------------|
| Type a name for the | connection: | |
| My Connecti | <u>1.</u> | |
| Select the connection | n tyne: | - |
| 🔵 Dial-Up Co | onnection) | 2. |
| O Direct Co | nnection | |
| 🔵 <u>V</u> irtual Pri | ivate Network | (PPTP) |
| 🚫 Vi <u>r</u> tual Pri | ivate Network | (L2TP) 2 |
| O PPP over | Ethernet [PP] | POE] |
| | < <u>B</u> ack | <u>N</u> ext > |

Step4. Select "ICPDAS GTM-201-RS232 COM4:" → Click "Configure…"

Note: If your device is GTM-201-USB, please select "ICPDAS GTM-201-USB COM5:"

| Modem | | |
|-------------------------|------------------|--------------------|
| My Connectio | ^{,n} 1. | |
| <u>Belect a modern.</u> | | |
| ICPDAS GTM-201-RS | 232 COM4: | 2. |
| | (| <u>C</u> onfigure) |
| TCP/IP Settings | . Security | Settings |
| - | | |
| | | |
| 1 | < <u>B</u> ack | <u>N</u> ext > |

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Step5. Select Baud Rate "115200", Data Bits "8", Parity "None", Stop Bits "1" Note→ Click "Call Options"

Note:

| GTM-201-RS232 "RTS/CTS" mode | Please select "Hardware" |
|------------------------------|--------------------------|
| GTM-201-RS232 "None" mode | Please select "None" |
| GTM-201-USB | Please select "None" |

| Device Properties | | 🥐 ОК 📔 |
|--|-------------------|-----------|
| Port Settings Call Options 2 | | 1 |
| | Connection Pre | eferences |
| Manual Dial (user supplies dial strings) | Baud Rate | 115200 💌 |
| Terminals | <u>D</u> ata Bits | 8 |
| Use terminal window | <u>P</u> arity | None 💽 |
| before dialing | Stop Bits | 1 |
| dialing | Elow Control | None 💌 |

Step6. Extra Settings → Click "OK"

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

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

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

| Device Prope | rties | ? ОК 🛛 |
|--|--|--------------------------|
| Port Settings | Call Options | <u> </u> |
| Call Setup ✓ <u>C</u> ancel ✓ <u>W</u> ait fo Wai | the call if not connected within 120 se or dial tone before dialing t for credit card <u>t</u> one 0 seconds | econds |
| E <u>x</u> tra Setting | s (special modem commands may be inserte | ed into the dial string) |

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Step7. Click "TCP/IP Settings..."

| 4odem | | | | × |
|----------------|-------------|-----------------|-----------------|------|
| 27 | My Connect | ion | | |
| <u>S</u> elect | a modem: | | | |
| ICPDAS | 5 GTM-201-R | S232 COM4: | | ~ |
| | | | <u>C</u> onfigu | re |
| <u>1</u> CP/ | IP Settings | S <u>e</u> curi | ty Settin | ıgs) |
| | | < <u>B</u> ack | <u>N</u> ex | t> |

Step8. TCP/IP Settings: Dependant on the requirement of each ISP.

| TCP/IP Settings | | ок 🔀 |
|---|---|----------|
| General Name Se | ervers | |
| My Conn | ection 2 | |
| Use server-ass | igned IP addres | |
| Use Slip Vse software Vse IP header | compression ^r compression | |
| TCP/IP Settings | | OK 🔀 |
| General Name Se | ervers | |
| My Conn | ection 2 | |
| Use server-ass | signed addresses | |
| DNS: | | |
| Alt D <u>N</u> S: | | <u> </u> |
| 2012 C 100 C 2010 | | |
| <u>W</u> INS: | | |

Step9. Click "Security Settings..."

| loden | 1 | | |
|----------------|---------------|-----------------|-------------|
| 27 | My Connecti | ion | |
| <u>S</u> elect | a modem: | | |
| ICPDA | S GTM-201-R9 | 6232 COM4: | ~ |
| | | | Configure |
| <u>т</u> ср/ | 'IP Settings. | S <u>e</u> curi | ty Settings |
| | | < <u>B</u> ack | Next > |

Step10. Security Settings: Dependant on the requirement of ISP ! (Below picture is the setting for HINET).

| Security Settings | ок 🔀 |
|--|------|
| Advanced Security Settings | |
| Use Data encryption | |
| Logon security: | |
| Use Extensible Authentication Protocol (EAP) | |
| MD5-Challenge | ~ |
| Properties | |
| Unencrypted password (PAP) | |
| Challenge Handshake Authentication Protocol (CHAP) | |
| Microsoft CHAP (MS-CHAP) | |
| Microsoft CHAP Version 2 (MS-CHAP v2) | |
| | |
| Preview user name and password | |
| | |

Step11. Click "Next"

| Modem | |
|-------------------------|-------------------|
| My Connection | |
| <u>S</u> elect a modem: | |
| ICPDAS GTM-201-RS23 | 2 COM4: 🗾 🛃 |
| | Configure |
| TCP/IP Settings | Security Settings |
| | |
| | < Back |

Step12. Phone Number: \rightarrow Click "Finish"

Note: Phone Number must be provided from your Telecom. CO., LTD. For example in Taiwan: *99***1#

| Phone Number | | |
|------------------------------|----------------|--------|
| My Connection | | |
| <u>C</u> ountry/region code: | 1 | |
| <u>A</u> rea code: | 425 | |
| Phone number: | | |
| Eorce long distance | - | |
| Force local | | |
| | | |
| | < <u>B</u> ack | Finish |

Step13. Double-Click you make new connection name



| 🐉 🗞 Network Connections | 💼 🕹 + 11:31 AM 🏓 🖷 |
|-------------------------|--------------------|

Step14. Click "Dial Properties..."

| al-Up Connection | |
|------------------|-----------------|
| My Connection | |
| User Name: | Phone: *99***1# |
| Password: | Work |
| Domain: | Dial Properties |
| Save password | Connect Cancel |

Step15. Click "Dialing Patterns..."

| Dialing Properties | | | 🥐 🕅 |
|--|----------------|--------------|--------|
| When dialing from: Work | | <u>N</u> ew | Remove |
| Local settings are: The local <u>a</u> rea code is: | 425 | Dialing Patt | erns |
| The local <u>c</u> ountry/region code is: | <u></u> | | |
| Dial using: Disable call <u>w</u> aiting by dialing: | O <u>T</u> one | | |

Step16. Keyin 'G' to all blocks \rightarrow Click "OK"

| Dialing Patterns |
|---|
| Edit the dialing pattern for each type of call to charge be the phone is dialed. |
| For Local calls dial: |
| g 1. |
| Distance calls dial: |
| G 2. |
| por genernational calls dial: |
| G 3. |
| (E,e = Country/Region Code; F,f = Area Code; G,g = Number) |

Step17. GPRS's User name and GPRS's Password → Click "Connect"

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

| al-Up Connection | |
|------------------|----------------------|
| User Name | 1 Phone: *99***1# |
| Bassword: | Dial from: |
| Domain: | Dial Properties |

Step18. If you connect to internet successfully, they will show "Connected"

| My Conn | ection Status | × |
|---------|--------------------|------------|
| 27 | Connected | |
| | Hide this message: | Hide |
| | | Disconnect |

Step19. Execute "WinPAC_Utility" \rightarrow File \rightarrow Save and Reboot

| WinPAC Utility [2.0.0.5] | | | | |
|---|----------------------|---|--|-----------------------|
| File Help Configuratio | ņ | | | |
| Save and Reboot 3. Reboot <u>W</u> ithout Save Restore Default Settings | etting FTP Setting | System Information Welcome to | Auto Execution | Multi-serial port wiz |
| Exit | VinPAC | This tool will he Display: Resolution : | lp you easy to us 800 * 600 Sett | ting |
| Battery1 : OK | | Task Bar Settin | ig: | |
| Battery2 : OK | | 🔲 Auto Hid | e 🔽 Alway: | s On Top |
| Change HTTP document r | oot directory \windo | ws\www\wwwsub to: | | |
| \windows\www\wwwpub | ۱. | | | Setting |
| | | | | |

6.3 LinPAC - 8000 (Linux)

6.3.1.1 GTM-201-RS232 Hardware requirement

- 1) GTM-201-RS232
- 2) LinPAC-8000
- 3) RS-232 Cable



LinPAC

GTM-201-RS232

6.3.1.2 GTM-201-USB Hardware requirement

- 1) GTM-201-USB (Please install USB driver first)
- 2) LinPAC-8000
- 3) USB Cable



GTM-201-USB

6.3.2.1 GTM-201-RS232

If users want to connect the gprs modem to the **COM4** of LinPAC-8000, users should modify **/etc/ppp/peers/wavecom** to define COM port first. Please follow the steps as below :

- (1) Type " vi /etc/ppp/peers/wavecom "
- (2) To find the "Serial device to which the GPRS phone is connected:" statement, and add device name of COM port.

Modify "/etc/ppp/peers/wavecom"

•••••

••••

- # Serial device to which the GPRS phone is connected:
- # /dev/ttyS0 for serial port (COM1 in Windows),
- # /dev/ircomm0 for IrDA,
- # /dev/ttyUB0 for Bluetooth (Bluez with rfcomm running) and

/dev/ttyUSB0 #for USB

/dev/ttyS34 # serial port one

/dev/ttyS0 # serial port one

/dev/ttyS1 # serial port two

•••••

.



ttyS0



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(3) Type "**:wq** " to save and quit the script.

The default GPRS baudrate is "**115200**" in the LinPAC, so if users finish the setting of gprs modem and connect the gprs modem to the COM port of LinPAC-8000, just type in "**pppd call wavecom**" and then LinPAC-8000 will be connected to the internet automatically. Remember that the network interface card of LinPAC should stop first, just type in "**ifdown eth0**" to stop it. If users type in "**ifconfig**" will see the "**ppp0**" option.

6.3.2.2 GTM-201-USB

If users want to connect the gprs modem to the USB of LinPAC-8000, users should modify /etc/ppp/peers/wavecom to defineUSB first. Please follow the steps as below :

- (1) Type " vi /etc/ppp/peers/wavecom "
- (2) To find the "Serial device to which the GPRS phone is connected:" statement, and add device name of USB.

Modify "/etc/ppp/peers/wavecom"

•••••

•••••

Serial device to which the GPRS phone is connected:

/dev/ttyS0 for serial port (COM1 in Windows),

/dev/ircomm0 for IrDA,

/dev/ttyUB0 for Bluetooth (Bluez with rfcomm running) and

/dev/ttyUSB0 #for USB

#/dev/ttyS34 # serial port one

/dev/ttyS0 # serial port one

/dev/ttyS1 # serial port two

•••••

•••••

(3) Type ":wq " to save and quit the script.

| # Serial device t | o which the GPRS phone is connected: |
|------------------------------|---|
| # /dev/ttySO for | serial port (COM1 in Windows), |
| # /dev/ircommO fo | r IrDA, |
| <pre># /dev/ttyUBO for</pre> | Bluetooth (Bluez with rfcomm running) and |
| /dev/ttyUSBO #for | USB Connect the GPRS to the USB |
| #/dev/tty534 # | serial port one |
| #/dev/ttyS0 # | serial port one |
| #/dev/ttyS1 # | serial port two |
| #/dev/ircomm0 # | IrDA serial port one |
| #/dev/rfcomm0 # | Bluetooth serial port one |
| #/dev/ttyUSB0 # | USB serial device, for example Orange SPV |

The default GPRS baudrate is "115200 " in the LinPAC, so if users finish the setting

of gprs modem and connect the gprs modem to the USB of LinPAC-8000, just type in " **pppd call wavecom**" and then LinPAC-8000 will be connected to the internet automatically. Remember that the network interface card of LinPAC should stop first, just type in " **ifdown eth0**" to stop it. If users type in " **ifconfig**" will see the " **ppp0**" option.

Remark: Please check O.S version. We have supported the GTM-201-USB module after O.S version 1.2.

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Chapter 7 USB driver installation

7.1 XPAC – 8000 (Microsoft Windows XP)

- 7.1.1 Automatically install usb driver
- Step1. Connect the GTM-201-USB and XPAC hardware with the USB cable, then power on.
- Step2. If pop up a new window that "Found New Hardware Wizard", please select "Cancel"



Step3. Double-click GTM-201-USB driver that "GTM-201-USB_v1.xx.exe".

Step4. Select "Next"



Step5. Select install folder → Select "Next"

| Setup - GTM-201-USB | |
|---|-----------------------------|
| Select Destination Location Where should GTM-201-USB be installed? | |
| Setup will install GTM-201-USB into the following folder. | |
| To continue, click Next If you would like to select a different folde | er, click Browse. Browse |
| | |
| | |
| At least 6.9 MB of free disk space is required. | 2 |
| < Back | Next > Cancel |

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Step6. Select "Install"

| alling GTM-201-USB on your computer. | M 7 |
|---|---|
| installation, or click Back if you want to review | v or |
| | × |
| | |
| | |
| | |
| | Ľ |
| < Back Install | Cancel |
| | alling GTM-201-USB on your computer. Installation, or click Back if you want to review |

Step7. If the installation process has popped up new window that "Software Installation", please select "Continue Anyway"

| <u>.</u> | The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why</u> <u>this testing is important.</u>) |
|----------|--|
| | Continuing your installation of this software may impai or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing. |
| | |

Step8. Select "Finish"



Step9. Please open "Device Mansger" \rightarrow check com port



7.1.2 Manually install usb driver

Step1. Please install "GTM-201-USB_v1.xx.exe" first.

- Step2. Connect the GTM-201-USB and XPAC hardward with usb cable , then power on them.
- Step3. Select "No, not this time" \rightarrow Select "Next"

| Found New Hardware Wizard | |
|---------------------------|--|
| | Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Read our privacy policy |
| | Can Windows connect to Windows Update to search for software? Yes, this time only Yes, now and every time I connect a device No, not this time No, not this time |
| | Click Next to continue. 2. |
| | < Back Next > Cancel |

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Step4. Select "Install from a list or specific location (Advanced)" → Select "Next"



Step5. Select "Include this location in the search:" \rightarrow Select "Browse" \rightarrow Select "C:\ICPDAS\GTM-201-USB" \rightarrow Select "OK"

| | IL THEORY | | |
|-------------------------------|---|---|------|
| Please choose | your search and installation options. | | 1000 |
| Search fr | or the best driver in these locations. | | |
| Use the c paths and | heck boxes below to limit or expand the defau I removable media. The best driver found will b | ult search, which includes loc be installed. | al |
| 🗖 Se | arch removable media (floppy, CD-ROM) | | |
| 🔽 Inc | slude this location in the search: | \frown | - |
| C:* | WINDOWS\system32\drivers | Browse | |
| | | | / |
| 🔿 Don't <mark>Br</mark> | owse For Folder | ? × | |
| the dri | Select the folder that contains drivers for yo | our hardware. | .ee |
| | | | |
| | 🖂 🥯 SystemDisk (C:) | | |
| | □ SystemDisk (C:) □ Documents and Settings | | 201 |
| | ➡ SystemDisk (C:) ➡ ➡ Documents and Settings ➡ ➡ ICPDAS | 2. Can | cel |
| | SystemDisk (C:) Documents and Settings □ □ ICPDAS □ □ DCON_Utility □ □ GTM-201-U58 | 2. Can | cel |
| | SystemDisk (C:) SystemDisk (C:) Documents and Settings CPDAS CON_Utility STM-201-USB amd64 | 2. | cel |
| | SystemDisk (C:) Gruents and Settings | 2. Can | cel |
| | SystemDisk (C:) SystemDisk (C:) Concurrents and Settings CPDAS CON_Utility STM-201-USB amd64 State Release_Notes | 2. Can | cel |
| | SystemDisk (C:) SystemDisk (C:) To view any subfolders, click a plus sign above | 2. ve. 3. | cel |
| | SystemDisk (C:) SystemDisk (C:) Solution S | 2. ve. 3. | cel |

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Step6. Select "Next"

| and the second |
|--|
| installation options. |
| ese locations. |
| limit or expand the default search, which includes local he best driver found will be installed. |
| a (floppy, CD-ROM) |
| ne search: |
| SB Browse |
| driver to install |
| e device driver from a list. Windows does not guarantee that e best match for your hardware. |
| 2 |
| < Back Next > Cancel |
| |

Step7. If it is pop-up a new windows that "Hardware Installation", please select "Continue Anyway"



Step8. Select "Finish" to finish the usb driver installation.



Step9. Please open "Device Mansger" \rightarrow check com port



7.2 WinPAC - 8000 (WinCE)

Step1. Copy "ICPDAS GTM-201-USB_COM5_WinPac.cab" to your WinPAC → Double-Click " ICPDAS GTM-201-USB_COM5_WinPac.cab" to install → Select "OK"



Step2. Execute "WinPAC_Utility" \rightarrow File \rightarrow Save and Reboot

| WinPAC Utility [2.0.0.5] | | | | | | |
|--|---|---|--|--|--|--|
| File Help Configuration | | | | | | |
| Save Save and Reboot Reboot Without Save Restore Default Settings Exit | etting FTP Setting System Information Auto Execution Multi-serial port wiz Welcome to use WinPac Utility This tool will help you easy to use WinPac - 8000. Display: Resolution : 800 * 600 | Þ | | | | |
| Battery1 : OK Battery2 : OK | Task Bar Setting: | | | | | |
| windows/www/wwwnub | | | | | | |
| | | | | | | |

7.3 LinPAC – 8000 (Linux)

Please install usb driver first and follow the command as below:

Type "insmod ftdi_sio"



Remark: Please check O.S version. We have supported the GTM-201-USB module after O.S version 1.2.

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Chapter 8 Software Reset

8.1 Software Reset

8.1.1 We Provide a Software Reset command for the user to reset the modem.

Step1. Please open Hyper Terminal, and open the COM Port of the GTM-201.

Step2. type the command "@ICPDASRESET", and then don't send any data to GSM modem in 100ms. The modem will be reset.

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Revised Note:

| Version | Ву | Date | Description |
|---------|------|------------|----------------|
| 1.00 | Yide | 2009/06/02 | Release |
| 1.01 | Yide | 2009/07/28 | Release |
| 1.0.2 | Yide | 2009/11/17 | Modify |
| 1.0.3 | Yide | 2009/12/31 | Modify |
| 1.04 | Yide | 2010/05/19 | Modify |
| 1.05 | Malo | 2012/3/27 | Add chapter 8 |
| 1.06 | Malo | 2013/07/25 | Add Soft Reset |
| | | | Command for |
| | | | GTM-201-USB |

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