MD-609G APPLICATION GUIDE

INTRODUCTION

MD-609G is a high performance, cost-effective and flexible wireless GPRS terminal. This guide will introduce two methods of connections using MD-609G.

- **Method 1** multipoint to center connection
- **Method 2** point-to-point (COM to COM) Connection

PREPARATION AND CONNECTION

(1) Insert a SIM card with GPRS support into the card slot

(2) Connect MD-609G to the serial port of PC.

Pin Definition:

Type	RS232					RS485		
Pin	2	3	5	7	8	2	3	5
Definition	RXD(out)	TXD(in)	GND	RTS(in)	CTS(out)	A	B	GND

Note: Only TXD, RXD, GND is needed normally

DEVICE CONFIGURATION

Method 1: Using Configuration Software

Step 1 Download configuration software

http://www.etungtech.com.cn/download/MD609/MD-609G%20Configer.rar

Step 2 Run MD-609G configuration software, select the number of COM port, and click “start config”.

Step 3 Turn on the power of MD-609G (connector: inner+ outer-)

Step 4 The device information will be displayed in the configuration window. Press “enter” to continue

Note： Turn on the power of DTU within 30 seconds after you have clicked “start config”

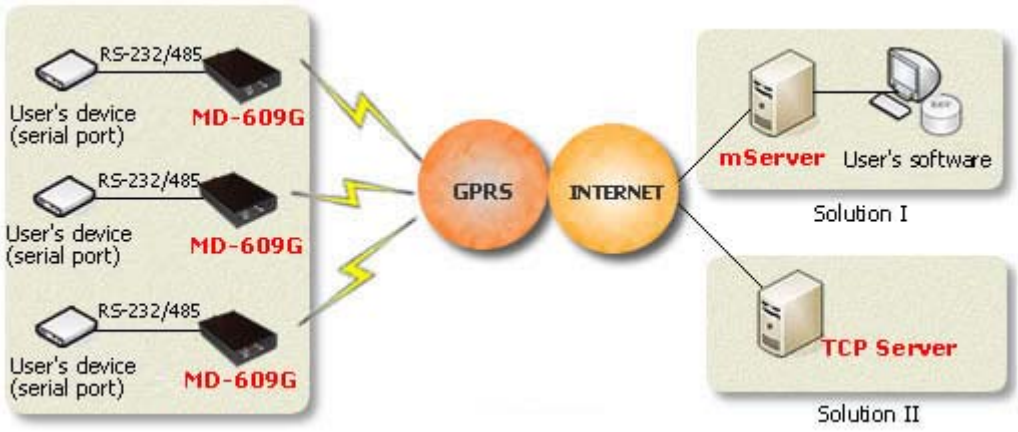
Method 2: Using Windows Hyper Terminal

Step 1 Click “ ”Start”-> “Program” -> “Accessories” -> “Communication” -> “Hyper terminal”, and select the COM port which the device is connected to. Also, set baud rate to 115200, data bits to 8, parity check to NONE, stop bit to 1, and flow-control to NONE.

Step 2 Turn on the power of MD-609G, and at the same time press hold the “space” key on your keyboard in the hyper terminal window until the configuration information comes out, then press “enter” to continue.

Note: If MD-609G does not receive enough number of “space” characters within 10 seconds after the power is switched on, it will enter data mode automatically.

METHOD 1 - MULTIPOINT TO CENTER



Configure MD-609G

Step 1 Input the data center domain name or the IP address and press enter to continue.

Step 2 Configure the data center port (for example 9000).

Step 3 Configure “APN” (It is decided of your SIM CARD).

Step 4 From step 4 to 23, configure according to your need.

Step 5 Restart MD-609G to save the configuration.

Note：

1 How to obtain data center IP address and port?

- Go to website http://www.ip138.com to check current public IP address
- The default listening port number for mServer is 9000

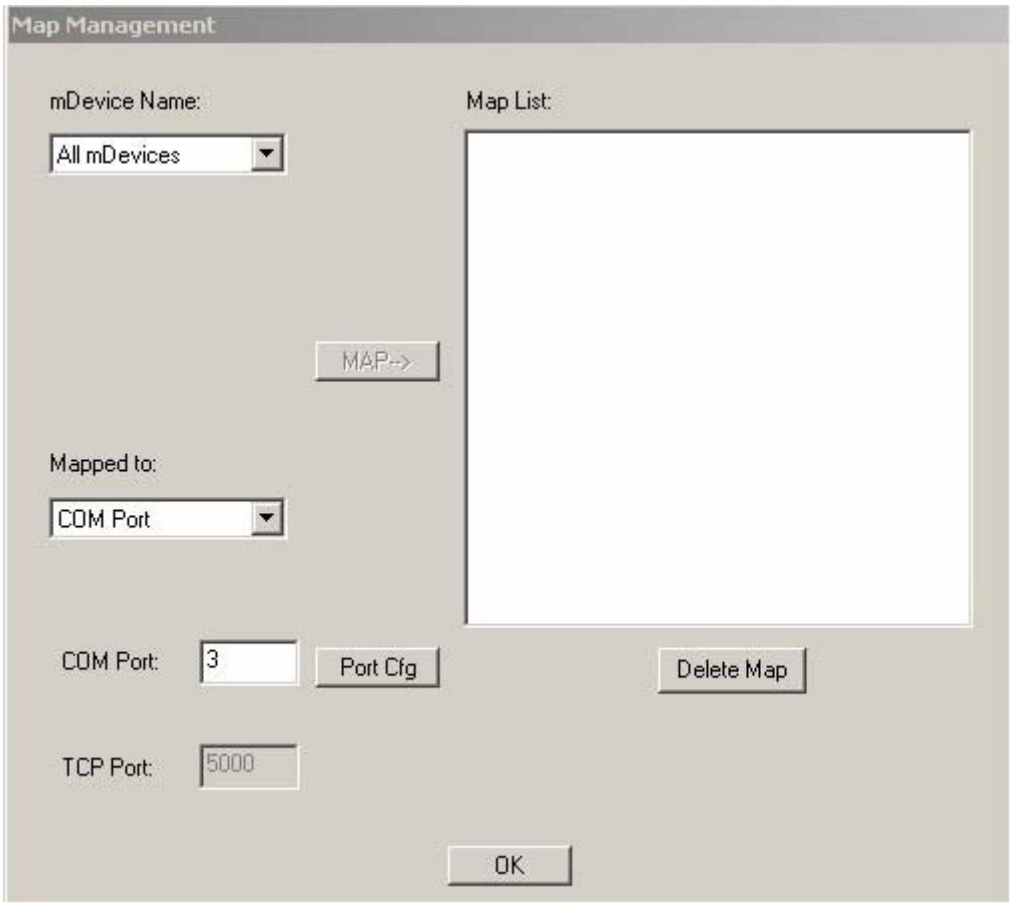
2 If mServer is located in the LAN network that uses NAT to access the Internet, port mapping or address mapping must be implemented on the router or the firewall.

Configure mServer

Step 1 Run"mServer Install.exe" to install mServer. Get it from the following address: http://www.etungtech.com.cn/download/mServer/mServer%20v2.0B.rar

Step 2 Start "mServer". Click "Settings" -> "System Settings" and set the port number (as same as the port number which you configure in MD-609G).

Step 3 When the terminal is online, click "Settings" -> "Mapping Management" and configure serial port mapping for the terminal.



Note:

1. How to obtain IMEI number?

The IMEI number can be obtained by following ways.

a) Check the white sticker at the back of the device.

b) If the IP Address/domain name and port number of MD-609G and mServer is correctly configured, there will be message like “unknown device connected” displayed in the mServer, and the device IMEI number is included in this message.

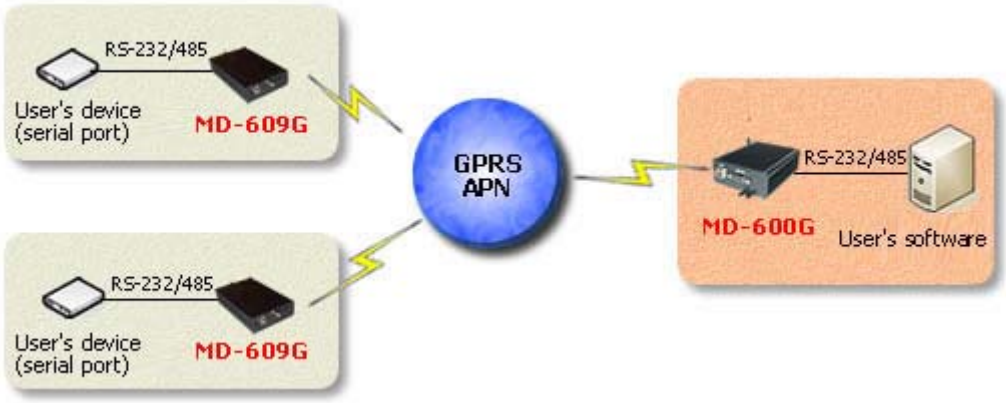
2. How to set device alias name.

Alias name is an alternative name for the device, which might be an easier name to remember or a special name according to user ’ s requirements. For example, a device alias name can be DTU1, Chaoyang and etc.

3. For MD-609G menu and configuration, please refer to appendix I.

If MD-609G and mServer is configured properly, the device status will be "online" in the interface in mServer.

METHOD 2 – POINT TO POINT CONNECTION



Configure MD-600G

Step 1 Enter MD-600G configuration interface

a) Turn on the power of MD-600G

b) "Start" -> "Program" -> "Accessories" -> "Communication" -> "Hyper terminal", and select the COM port which the device is connected to. Also, set baud rate to 38400, data bits to 8, parity check to NONE, stop bit to 1, and flow-control to NONE.

c) Enter username "root" and password "1234"

Step 2 Select "Advance Config" -> "Wireless Network" -> "APN", and enter the name of APN.

Step 3 Return to main menu, and select "Advance Config" -> "Embedded Data Center"

Step 4 Select "Start/shutdown Data Center, and enter "y" to start it.

Step 5 Enter the port number, for example, 9000.

Step 6 Press "q" several times to exit from the menu and the device will prompt you

to restart. Enter “y” to confirm.

Step 7 Enter the main menu again. Select “Device Management”->”Status”, and remember the device IP address.

Configure MD-609G

Step 1 Enter the MD-609G configuration interface.

Step 2 Configure the domain name or IP address for the data center, which is the IP address of MD-600G obtained in step 7.

Step 3 Configure listening port number, which is the port number of MD-600G set in step 5.

Step 4 Enter **the name of APN.**

Step 5 For the rest, press “enter” to use the default value.

> **Note:**
>
> **1. What is APN?**
>
> APN is the short for Access Point Name, which is used to classify the type of GPRS application. Devices under the same APN name can communicate with each other.
>
> **2. Why using MD-600G?**
>
> MD-609G does not support embedded data center.

· MD609G STATUS INDICATORS

RED INDICATOR: FOR DATA

Blinking: data is sending or the device is in standby mode.

GREEN INDICATOR: FOR STATUS

Blinking (SLOW): MD-609G is connecting to GPRS network.

Blinking (FAST):MD-609G is connecting to mServer.

Steady Green: MD-609G is connected to mServer, and the terminal is in working status.

Dark: Not online or no power.

NOTE: 1. In configuration mode, both red and green indicators are on (steady).

2. When the first time MD-609G connects to the mServer, the IMEI number will be written to mServer. Then, the connection will be reset.

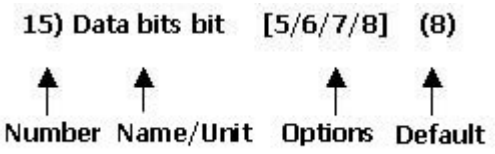
This special procedure will only happen once.

APPENDIX I - CONFIGURATION MEUN

The menu of MD-609G consists of the following terms.

- **Number**
- **Name / Unit**
- **Options**
- **Default**

  Example:



Menu	Explanations
1) Data center domain name or IP	IP or domain name or data center
2) Data center port (9000)	Data center port
3) Protocol [UDP/TCP](TCP)	Communication protocol (UDP or TCP)
4) Transparent Tunnel [Y/N] (N)	Whether to use transparent transmission
5) APN name (CMNET)	Network APN name
6) User ()	User name
7) Password ()	Password
8) Tel (13901234567)	The telephone number of the device
9) Connection Mode [1:Permenant 2:Wake-on-line 3:On demand] (1)	1:The connection is always on. If the connection is terminated, the device will try to reconnect. 2:The device will be online whether it receives the call from a predefine number or a SMS message with correct wake up password. 3:When data is detected on the serial port, the device will be online. If no data received within 5 mins, the device will go offline.
10) Wake up number ()	A predefined telephone number to wake up the device. ALL means all the number,

	and there must be a comma between multiple numbers.
11) SMS wake up password (1234)	The SMS wake up password. The content of SMS must be this password.
12) Heartbeat sec (100)	Heartbeat interval (second).
13) Heartbeat timeout sec (300)	Heartbeat timeout (second).
14) Bit rate bps (9600)	Bit rate for serial port
15) Data bits bit [5/6/7/8](8)	Data bit for serial port
16) Parity Check [N/E/O/M/S](N)	Parity check type: N: none, E: even, O: odd M: mark, S: space
17) Stop bit bit [1/1.5/2](1)	Stop bit for serial port
18) Flow control [N/H/S](N)	Flow control for serial port N: none, H: hardware, S: software

APPENDIX II - UPDATE MD-609G

Step 1 Connect MD-609G to the serial port of a PC

Step 2 Click “Start” -> “Program” -> “Communication” -> “Hyper Terminal”, and enter a name for the connection. Select COM port number (normally COM1), set baud rate 115200, data bits 8, parity check none, stop bit none and flow control none.

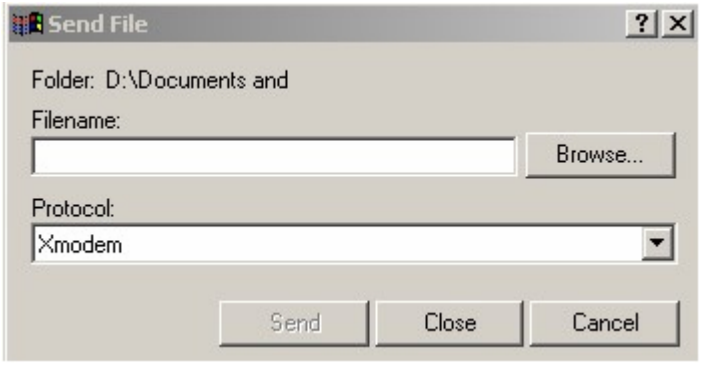
Step 3 In the hyper terminal window, press and hold the lower case “u” on the keyboard

Step 4 Turn on the power of MD-609G, and the firmware update interface will show up.

Step 5 Choose whether to reset the configuration.

Step 6 The device will prompt you to use Xmodem transmission protocol. Then, press “enter” again.

Step 7 Click “”Send” -> “Send File” in the hyper terminal



Click “Browse” and select the firmware file to upload. And for the protocol, use Xmodem.

When the update is completed, the system will restart automatically.

Note 609 firmware download

APPENDIX III - MD-609G TROUBLE SHOOTING

If the device is not online, you may follow these procedures:

Step 1: Check whether the SIM card support Internet

- Make sure the account associated with the SIM card support Internet and GPRS.
- Make sure the SIM card is installed properly into the card slot.
- Make sure the antenna is connected and the device is located in the area where your mobile network provider covers.

Step 2: Check data center network connection

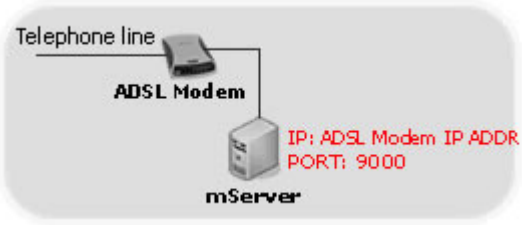
- Make sure data center server is connected to the Internet.
- If the connection type is leased line + LAN, make sure port mapping or address mapping is done properly on the router or firewall.
- If the computer running mServer has firewall installed, please turn it off or enable the relevant protocol and port.

Step 3: Check the configuration of MD-609G and mServer

- Make sure the IP address configured in MD-609G is the IP address of mServer .
- Make sure the port number is correctly configured in MD-609G, and on the PC running mServer, the corresponding port is not used by other program.
- Make sure MD-609G and mServer uses the same protocol.
- Make sure the IMEI number entered in mServer is correct.

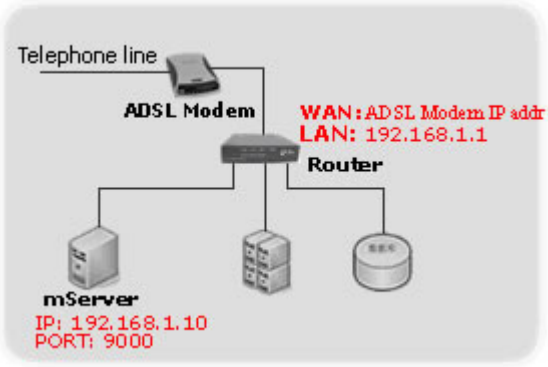
APPENDIX IV – ACCESSING DATA CENTER

1. Direct ADSL



The IP address to be configured in MD-609G is the IP address of the computer. The IP address can be obtained by using "ipconfig" command or through the website http://www.ip138.com.

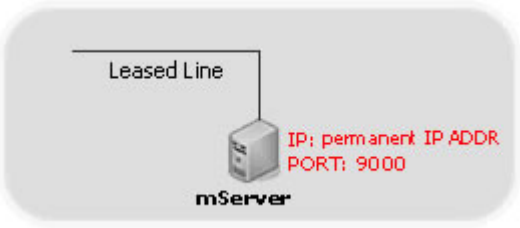
2. ADSL + LAN



The IP address to be configured in MD-609G is the same as the IP address of the router's WAN interface. The IP address can be obtained through the website http://www.ip138.com or by checking the status information on the router.

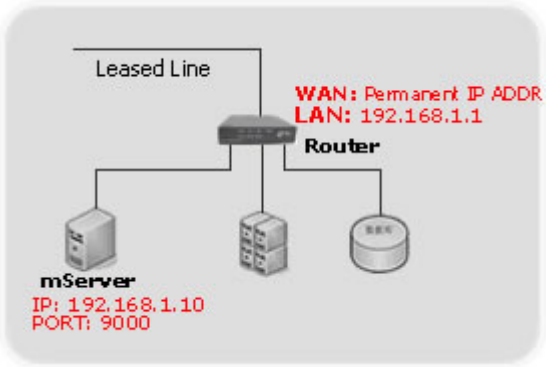
In this scenario, port mapping is configured to map TCP 9000 port to the host with IP address 192.168.1.10. In this way, the MD-609G can have the access to mServer inside the LAN network.

3. Leased Line



The IP address of mServer is a public address, and it can be checked by using the "IPconfig" command or going to the website http://www.ip138.com.

4. Leased Line + LAN



The mServer's IP address for the remote MD-609G is the IP address of the router's WAN interface. Please check the status information on the router of go to http://www.ip138.com.

In this scenario, port mapping is configured to map TCP 9000 port to the host with IP address 192.168.1.10. In this way, the LED-200 can have the access to mServer inside the LAN network.