User Manual

Product Name: Modbus RTU/TCP-IP Gateway

Model: 1801 & M1851

Content

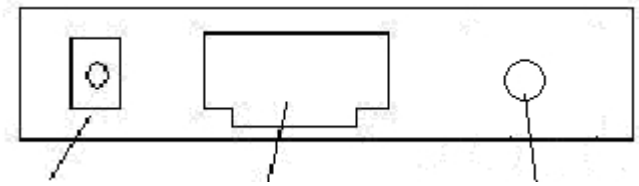
Product List

	Description	Specs	Qty	Unit
1	Modbus/TCP Converter		1	Piece
2	Power Supply	DC 9V/350mA	1	Piece

(2)Hardware Instruction

2.1 Hardware Description

2.1.1 Switchn Configure Instruction



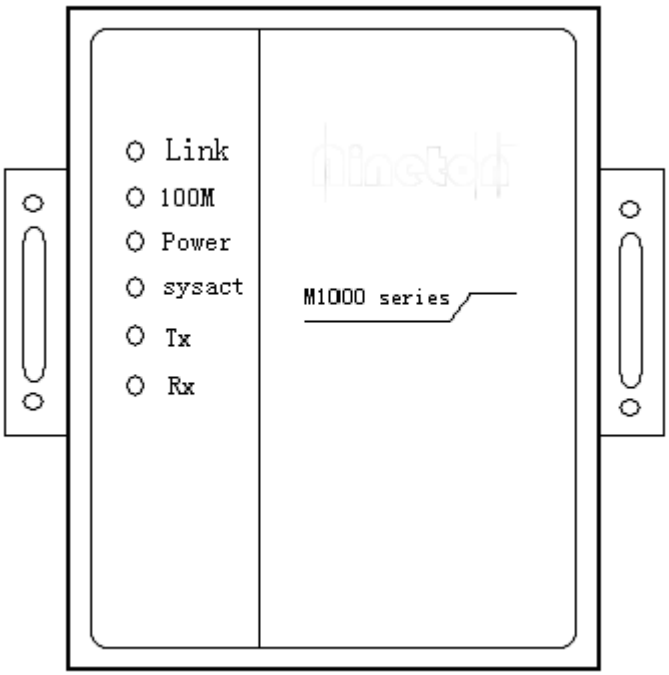
DC input Ethernet Reset Button

Press restore button and connect power supply,the device enters BIOS upgrade status. When the device is on work,press restore button for 2 seconds,the device will recover to the initial value.

The Power input: DC7-35V DC

Ethernet port: 10-100M auto sensing,both cross and straight cables OK.

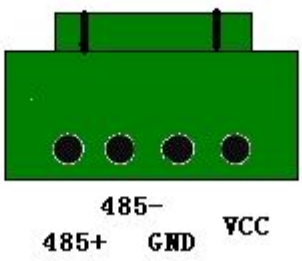
2.1.2 Inducation LED:



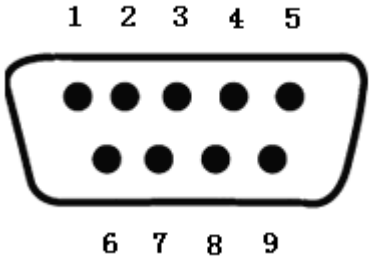
1. Link： Successful link of device and computer，LED on.
2. 100M： Rate 100M，LED on
3. Power: Power LED
4. Sysact: LED falshes when the device is on normal work.
5. TX: Serial data transmit
6. RX: Serial data receive.

2.1.3 Connectors

RS-485 Interface(M1851):



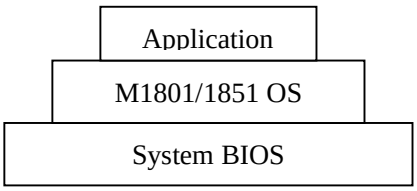
RS-232 Interface(M1801):



1	CD	15kv ESD、Surge(Optional)
2	RX	15kv ESD、Surge
3	TX	15kv ESD、Surge
4	DTR	15kv ESD、Surge(Optional)
5	GND	
6	DSR	15kv ESD、Surge(Optional)
7	RTS	15kv ESD、Surge(Optional)
8	CTS	15kv ESD、Surge(Optional)
9	None	

（3）Software

3.1 Software Structure



BIOS： BIOSis the bottom layer of the system OS：OS is the data processing system

3.2 Configure of serial device server

3.2.1 Marsinstaller configure

Use Marsinstaller to configure the device。

3.2.2 Web configure and surveillance

Use IE to see the status or set up the device.

Name： root Password: 12345

3.3 Restore to original value

When the device is on work,press RESET button for 2 seconds.
IP: 192.168.123.8，name：root, password: 12345

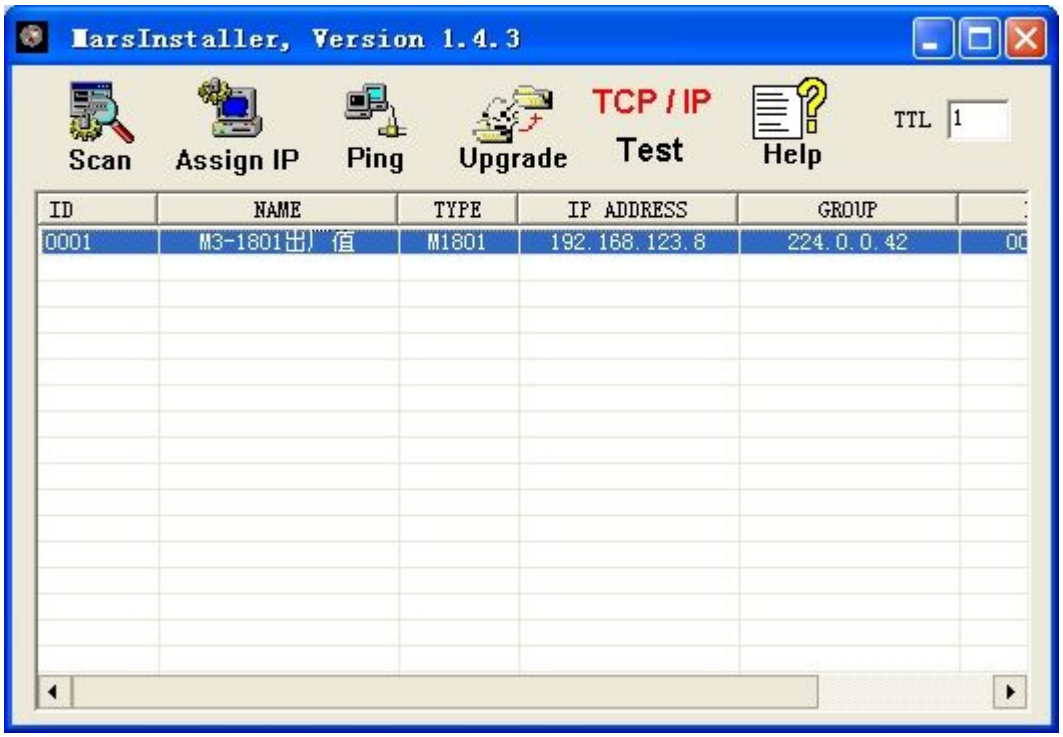
3.4 BIOS upgraded to OS

When the network remote upgrade was unable to complete, the user can be done through the BIOS upgrade OS.

Connect the network cable for before you upgrade, and a serial port is connected to the computer standard serial port. Run BIOS upgrade software, and then to the serial port server electricity, start to upgrade the software

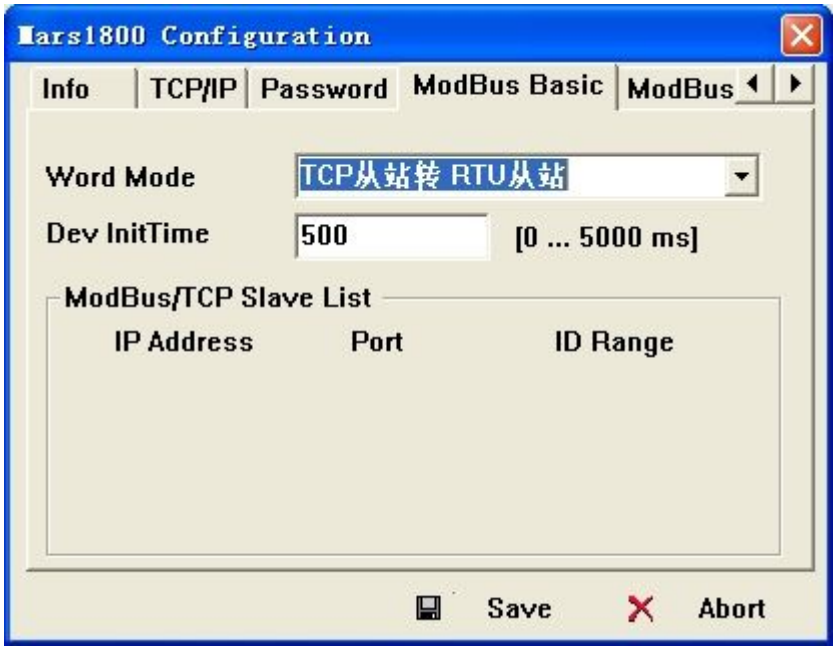
3.5 Paramaters Configuration:

When first run the marsinstaller ,it will be the follwing:



Double Click,M1801/M1851 and insert the password:12345,Enter parameter congfig page

3.5.1 MODBUS Configuration：



Note: 1.ASCII master to TCP master. 2.RTU master to TCP master
3. TCP slave to RTU salve 4.TCP slave to ASCII slave

（Ⅰ）Work Mode:

Modbus protocol between a serial port and Ethernet operation is very difficult, which requires a communication gateway as the bridge to help integrate them, here has a total of four work modes to choose from.

1. ASCII master station to TCP station

Through this setting, M1801 / M1851 MODBUS/TCP converter,,MODBUS/ASCII master station is converted to the MODBUS/TCP master station, so the MODBUS/TCP from station can be accessed through the Ethernet MODBUS/ASCII master station.

2. RTU master station to TCP master station

Through this setting, M1801 / M1851 MODBUS/TCP converter,the MODBUS/RTU master station is converted to the MODBUS/TCP, the MODBUS/TCP slave can visit MODBUS/RTU master via Ethernet.

3. TCP slave station to RTU slave station

Through this setting, M1801 / M1851 MODBUS/TCP converter,the MODBUS/TCP salve station is converted to the MODBUS/RTU slave, the MODBUS/TCP master can visit MODBUS/RTU slave via Ethernet.

4. **TCP slave station to ASCII slave station**

Through this setting, M1801 / M1851 MODBUS/TCP converter, the from station, and the MODBUS/ASCII slave IS CONVERTED to the MODBUS/TCP slave, so the MODBUS/TCP master can visit MODBUS/ASCII slave via Ethernet.

（Ⅱ）Device initializing time：

M1801 / M1851 MODBUS/TCP converter, set the basic information provided and it is connected to the MODBUS device, these MODBUS devices need longer time to initialize the configuration information. Here is used to set the initial length.

（Ⅲ）MODBUS/TCP slave station list:

When set to TCP and M1801 / M1851 master model, you need to set up the MODBUS/TCP slave addresses from the station.

（Ⅳ）IP address：

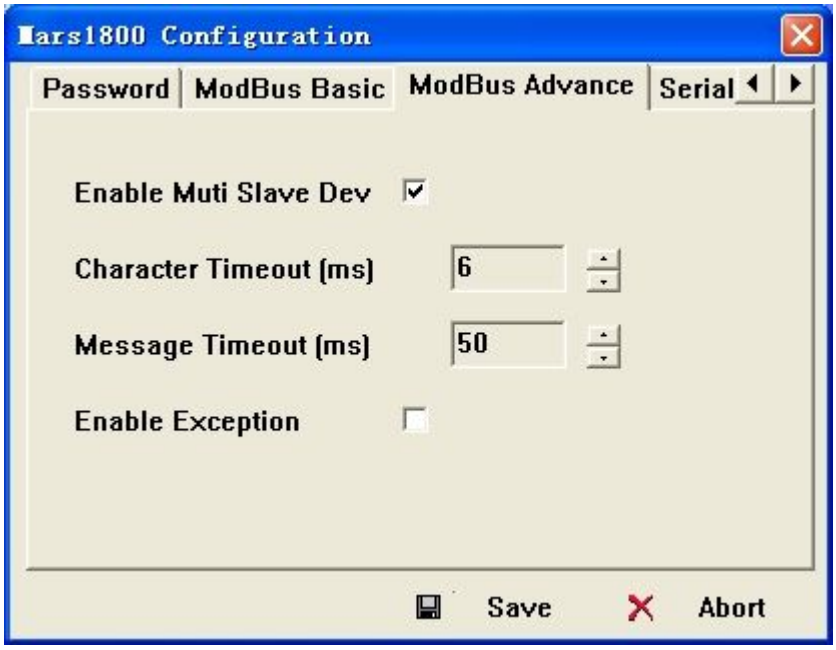
Fill in the IP address of MODBUS/TCP slave that is ready to be connected to MODBUS/TCP master.

（Ⅴ）Port Number：

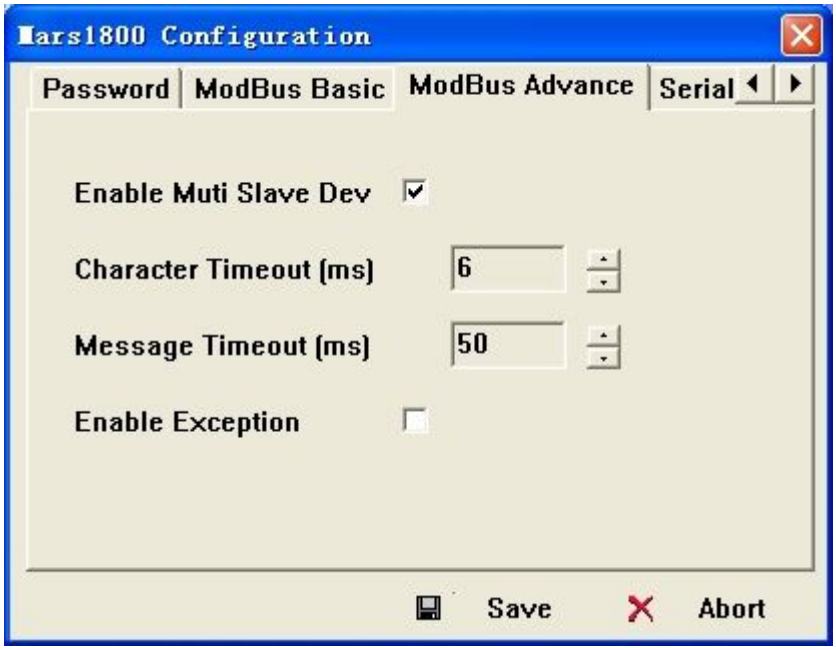
Set up the port number that slave communicates with master,it adopts 502 port.

（Ⅵ）ID Range：

When M1801 / M1851 MODBUS/TCP converter communicates with the MODBUS/TCP slave, the ID number is used to make the MODBUS/TCP converter identifiy which MODBUS/TCP slave equipment communicates with it. Set the range from 0 to 247.



3.5.2 MODBUS and other specs:



（Ⅰ）Allow multi slave device ID

Applicable:

ODBUS/TCP control command contains an ID number, used to distinguish the MODBUS share an IP address from the device, after it is set to “Applicable”, when the MODBUS/TCP converter receives the MODBUS master device with ID control command, forward control command to the MODBUS below directly from the device, after this setting, a M1801 MODBUS/TCP converter can connect more than one MODBUS serial port devices.

N/A:

Some MODBUS master device allows only one slave device to use an IP, namely: a MODBUS/TCP converter can only connect a MODBUS slave device, and the ID number that the MODBUS/TCP master device sends may not be the ID of the salve device that is connected to the MODBUS/TCP, so you need to the MODBUS/TCP converter and it connects the ID can be converted to the MODBUS from the ID number of the equipment. So the setting must be”N/A”, then fill in the ID number of the slave device which is connected to the MODBUS/TCP converter.

This setting will be effective when the MODBUS/TCP connects MODBUS/RTU slave station or MODBUS/ASCII slave.

（Ⅱ）Character timeout:

When the MODBUS serial device is to use the MODBUS/RTU, by determining the spacing between characters to distinguish each packet, if setting the wrong character timeout, it may lead to CRC checksum error. (only when the MODBUS device adopts the MODBUS/RTU mode, this setting is effective)

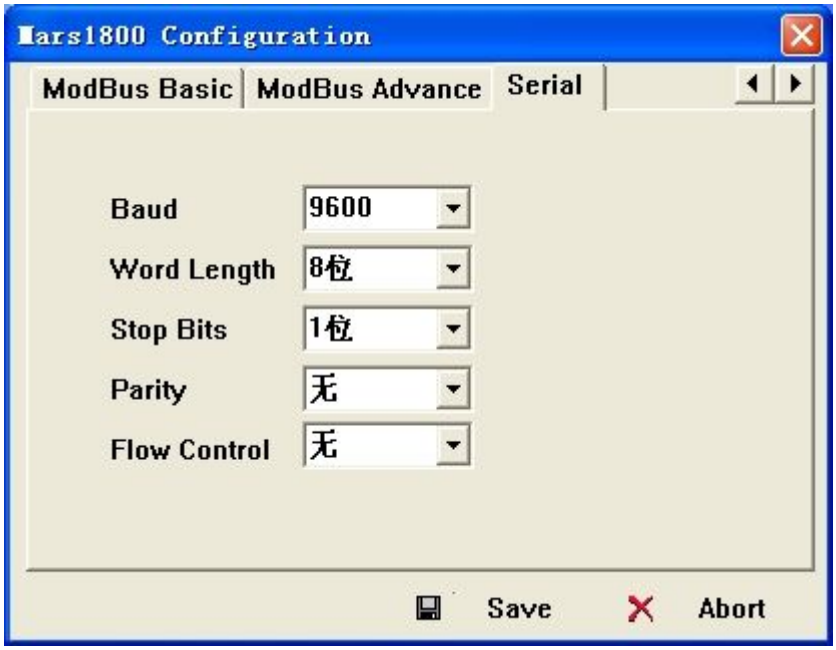
（Ⅲ）Packet timeout

Used to set the MODBUS communication between equipment, allows the biggest gap between packets. If the time is more than this ,it is judged to be connection timeout.

（Ⅳ）Error correction that is allowed:

When the MODBUS/TCP converter is connected with many sets of MODBUS slave devices, if the MODBUS/TCP converter didn't receive the response from the Modbus slave device, it will not answer the query of Modbus master device, which can cause the MODBUS master’s waiting time too long. After the use of exception handling, and if the MODBUS/TCP converter didn't receive the response from the Modbus slave device, will send the MODBUS master device an error code to avoid the waiting.

3.5.3 Serial Parameters：



Baud rate:
The optional baud rate is:110,300,600,1200,2400,4800,9600,19200,38400, 57600,115200,28800

Bit L：5,6,7,8

Hault Bit: 1 or 2

Veryfy Bit:none,odd,even,mark,space

Flow Control:
NONE,XONXOFF,RTS/CTS