

# **Install and Operation Instructions MDNET Module**

**Ethernet to RS-232/RS-485 Converter  
Auto-detecting 10/100Mbps Ethernet  
Baud rate 4,800-115,200 bps**



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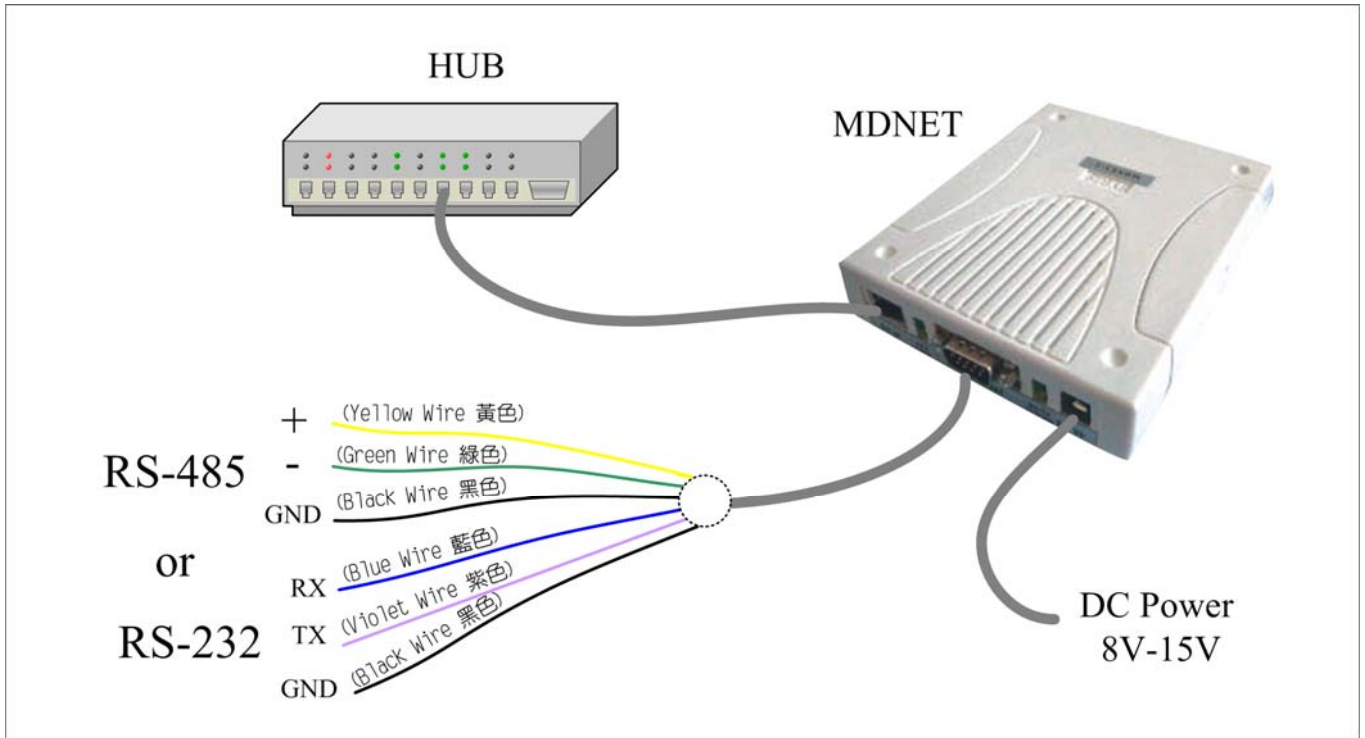
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# MDNET WIRING DIAGRAM



## DB9 Connect PIN define

PIN	Function	Note
1		No Connect
2	RS-232 RX	Blue (藍)
3	RS-232 TX	Violet (紫)
4	RS-232 DTR	Orange (橙) No Function
5	GND	Black (黑)
6	RS-232 DSR	Brown (棕) No Function
7	RS-485 +	Yellow (黃)
8	RS-485 -	Green (綠)
9	GND	Black (黑)

Set to Factory Default (SW1 Hold 5 Second)

IP = 192.168.1.101  
 Gateway = 192.168.1.254  
 Netmask = 255.255.255.0  
 Baud Rate = 19200,E,8,1  
 ID = 0001  
 Start Delay Time = 1500  
 End Delay Time = 500

## MDNET Specification

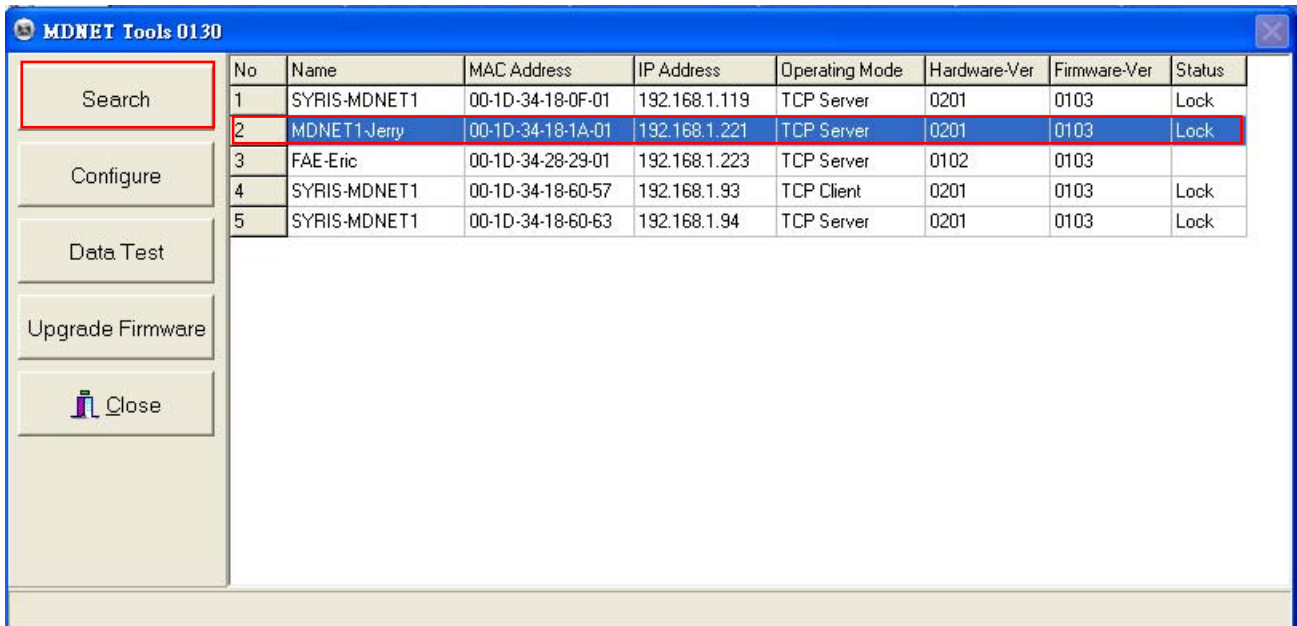
Items / Specs	MDNET-1	MDNET-95A	MDNET-1-A
LAN	10BASE-T/100BASE-TX port, 10/100Mbps auto-sensing		
TP port	RJ-45 phone jack		
Protocol	TCP Server/Client, UDP		
Interface	RS-232 / RS-485 (Auto-detecting)		
Connector port	9 PIN D-SUB (RS-232 / RS-485)		
Baud rate	19,200 bps (4,800、9,600、19,200、38,400、57,600、115,200)		
Parity	None, Even, Odd		
Data bits / Stop bits	8 / 1		
Software dongle	None	SYW95A-NET	SYSOFT-95A-260
Indicator	4 LED ( Power, RX/TX, Link, Active )		
Color	Beige		
Humidity	10% to 95% (Non-condensing)		
Operating temperature	-20°C to 70°C		
Storage temperature	-30°C to 80°C		
Magnetic isolation	1.5KV for Ethernet		
Power supply input	8V to 15V DC		
Power over Ethernet module	POE module(option)		
Dimensions (mm)	110W x 136H x 32.5D		

This specification is preliminary and is subject to change without prior notice.

## MDNET Tools Operation Manual (English)

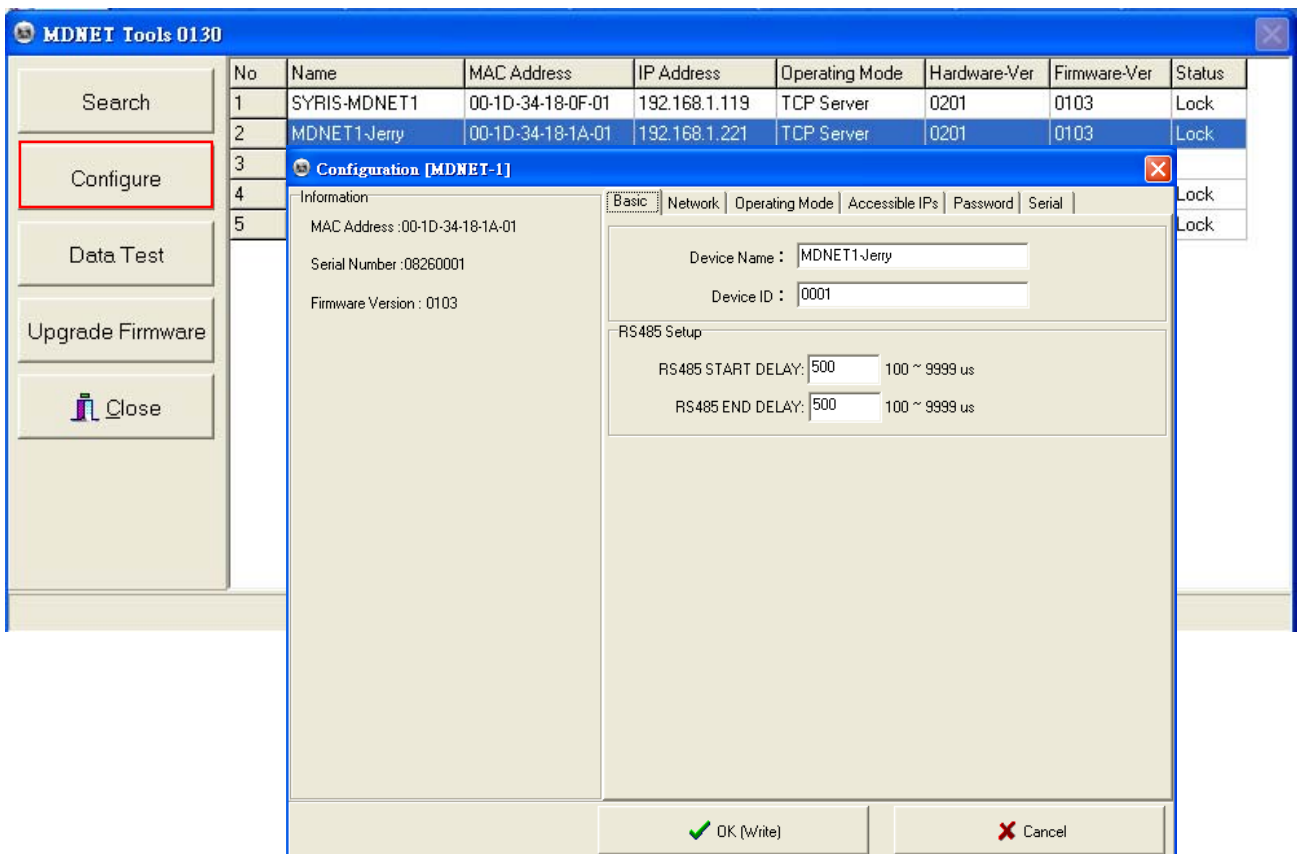
## ■ Search Device

Run MDNET\_Tools then click **Search** to search device.



## ■ Configure

Double click device in dbgrid or select device then click **Configure** to switch into Configuration mode.



## ■ Configuration-Basic

1. Enter the device caption into the field of **Device Name**.
2. Enter the ID into the field of **Device ID**.
3. Enter the delay time into the field of **RS485 START DELAY**.
4. Enter the delay time into the field of **RS485 END DELAY**.
5. Check all the setting then click **OK(Write)** to write data into the device.

The screenshot shows the 'Configuration [MDNET-1]' dialog box with the 'Basic' tab selected. The 'Device Name' field contains 'MDNET1-Jerry' and the 'Device ID' field contains '0001'. Under the 'RS485 Setup' section, both 'RS485 START DELAY' and 'RS485 END DELAY' fields are set to '500', with a range of '100 ~ 9999 us' indicated next to each. At the bottom, the 'OK (Write)' button has a green checkmark and the 'Cancel' button has a red X.

## ■ Configuration-Network

Choose **DHCP** or setup the IP information.

The screenshot shows the 'Configuration [MDNET-1]' dialog box with the 'Network' tab selected. The 'DHCP' checkbox is unchecked. Under the 'Static IP' section, the following values are entered: IP Address: 192, 168, 1, 221; Netmask Address: 255, 255, 255, 0; Gateway Address: 192, 168, 1, 254; DNS Server1: 0, 0, 0, 0; DNS Server2: 0, 0, 0, 0. At the bottom, the 'OK (Write)' button has a green checkmark and the 'Cancel' button has a red X.

## ■ Configuration-Operating Mode

- 1. TCP Server Mode** : Setup Local Port. The number of Max Connection is up to 4.
- 2. TCP Client Mode** : The modes can be set as Any Character or Star up. The number of IP setting is up to 4.
- 3. UDP Mod** : Setup Local Port. The number of IP setting is up to 4.
- 4. Data Packing** : Setup data packing (The device will send the message while receiving specified character). Force Tx Timeout : The device will send the message after the setting time while without getting specified character.
- 5. Miscellaneous** : TCP Alive Check Timeout—The device will break the connection while the time of connection equal the setting of Timeout.  
Inactivity Timeout—The device will break the connection while no data transmitted in the setting period.

Configuration [MDNET-1]

Information

MAC Address : 00-1D-34-18-30-02

Serial Number : 08480002

Firmware Version : 0104

Hardware Version : 0201

Basic | Network | **Operating Mode** | Accessible IPs | Password | Serial

1.  TCP Server Mode  
Local Port: 5001 Max Connection: 1

2.  TCP Client Mode  
Connect Mode: Startup

Destination IP 01: 0 0 0 0 Port: 5001

Destination IP 02: 0 0 0 0 Port: 5001

Destination IP 03: 0 0 0 0 Port: 5001

Destination IP 04: 0 0 0 0 Port: 5001

3.  UDP Mode  
Local Port: 5001

Destination IP 01: 0 0 0 0 Port: 5001

Destination IP 02: 0 0 0 0 Port: 5001

Destination IP 03: 0 0 0 0 Port: 5001

Destination IP 04: 0 0 0 0 Port: 5001

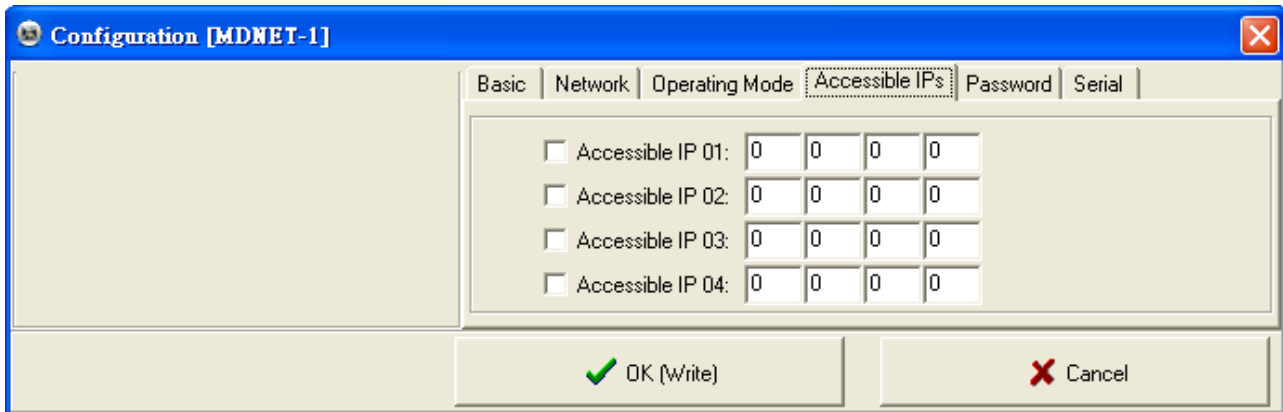
4. Data Packing(Optional)  
 Delimiter 1: 0D (0 - ff,Hex)  
 Delimiter 2: 00 (0 - ff,Hex)  
Force Tx Timeout: 0 (0 - 65535 ms)

5. Miscellaneous(Optional)  
TCP Alive Check Timeout: 0 (0 - 255 min)  
Inactivity Timeout: 0 (0 - 65535 ms)

OK (Write) Cancel

## ■ Configuration-Accessible IPs

The number of IP setting that can be used to access is up to 4.



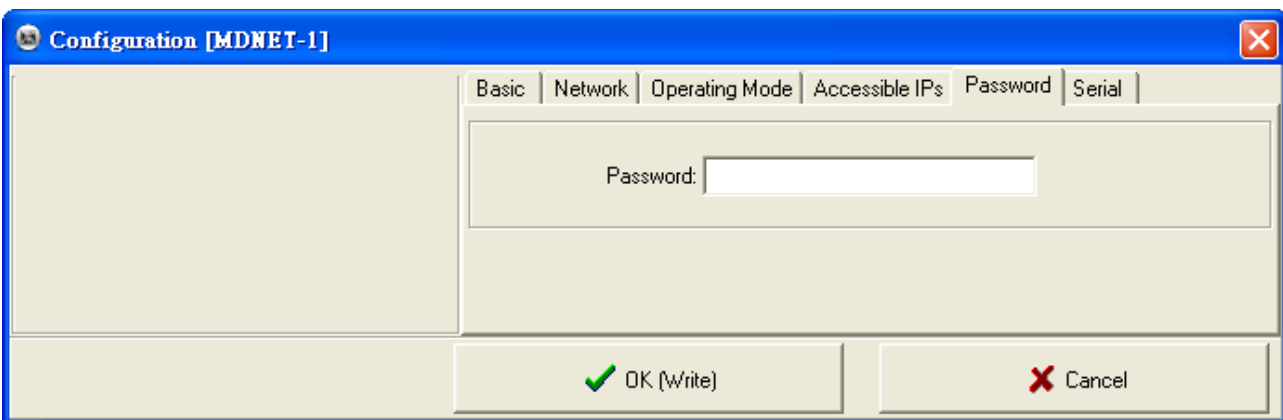
The screenshot shows the 'Configuration [MDNET-1]' dialog box with the 'Accessible IPs' tab selected. The dialog has a title bar with a close button (X) in the top right corner. Below the title bar are tabs for 'Basic', 'Network', 'Operating Mode', 'Accessible IPs', 'Password', and 'Serial'. The 'Accessible IPs' tab contains four rows of checkboxes and IP address input fields:

<input type="checkbox"/>	Accessible IP 01:	0	0	0	0
<input type="checkbox"/>	Accessible IP 02:	0	0	0	0
<input type="checkbox"/>	Accessible IP 03:	0	0	0	0
<input type="checkbox"/>	Accessible IP 04:	0	0	0	0

At the bottom of the dialog are two buttons: 'OK (Write)' with a green checkmark icon and 'Cancel' with a red X icon.

## ■ Configuration-Password

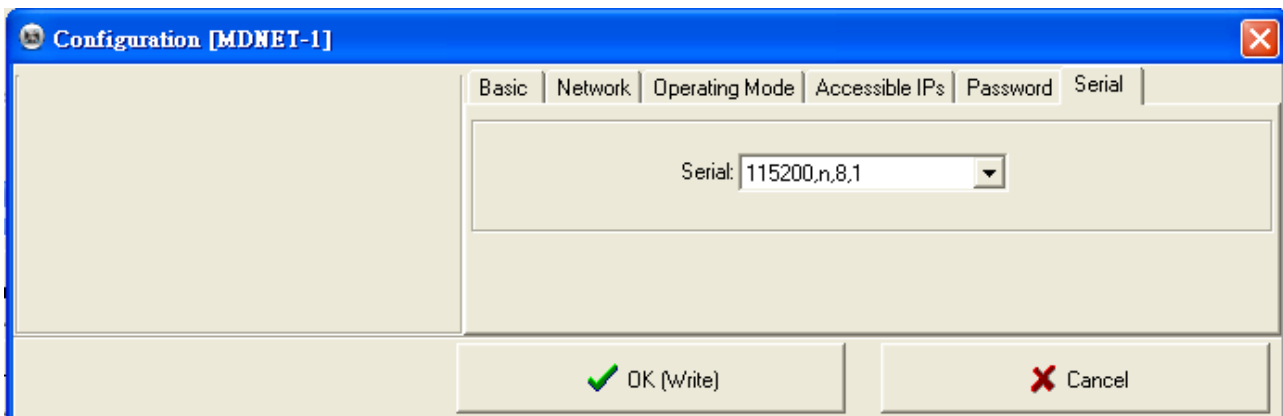
Setup the password that will be used when the user access into control mode.



The screenshot shows the 'Configuration [MDNET-1]' dialog box with the 'Password' tab selected. The dialog has a title bar with a close button (X) in the top right corner. Below the title bar are tabs for 'Basic', 'Network', 'Operating Mode', 'Accessible IPs', 'Password', and 'Serial'. The 'Password' tab contains a single text input field labeled 'Password:'. At the bottom of the dialog are two buttons: 'OK (Write)' with a green checkmark icon and 'Cancel' with a red X icon.

## ■ Configuration-Serial

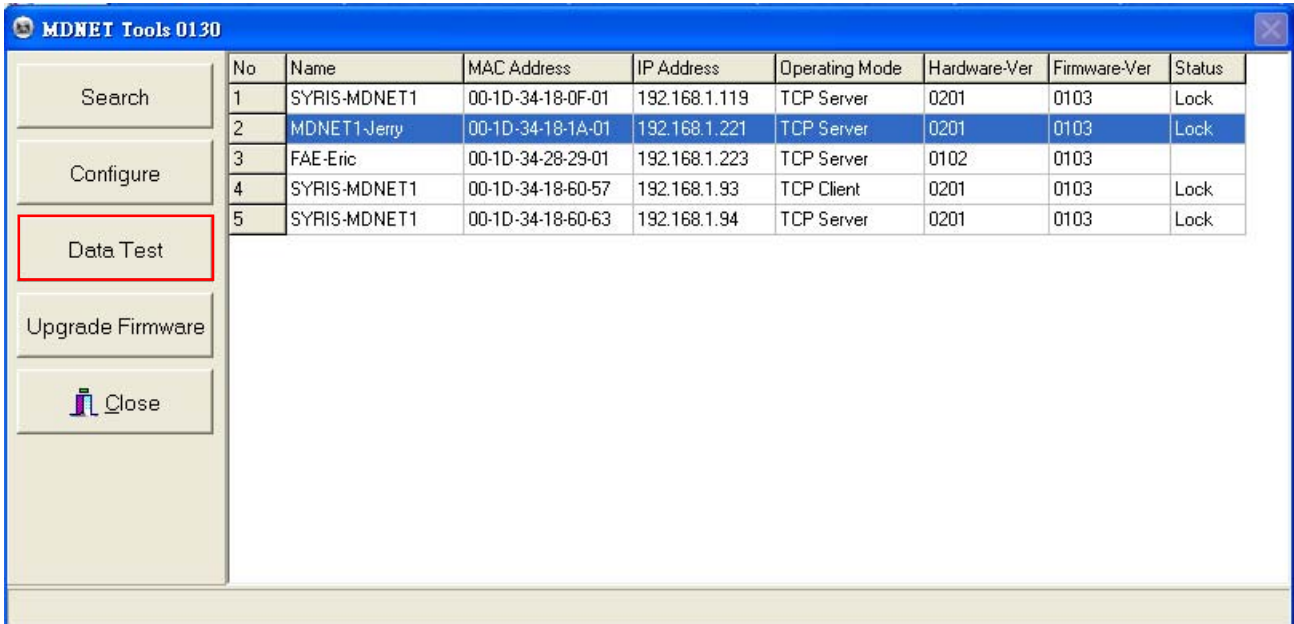
Setup baud rate.



The screenshot shows the 'Configuration [MDNET-1]' dialog box with the 'Serial' tab selected. The dialog has a title bar with a close button (X) in the top right corner. Below the title bar are tabs for 'Basic', 'Network', 'Operating Mode', 'Accessible IPs', 'Password', and 'Serial'. The 'Serial' tab contains a dropdown menu labeled 'Serial:' with the value '115200,n,8,1' selected. At the bottom of the dialog are two buttons: 'OK (Write)' with a green checkmark icon and 'Cancel' with a red X icon.

## ■ Data Test

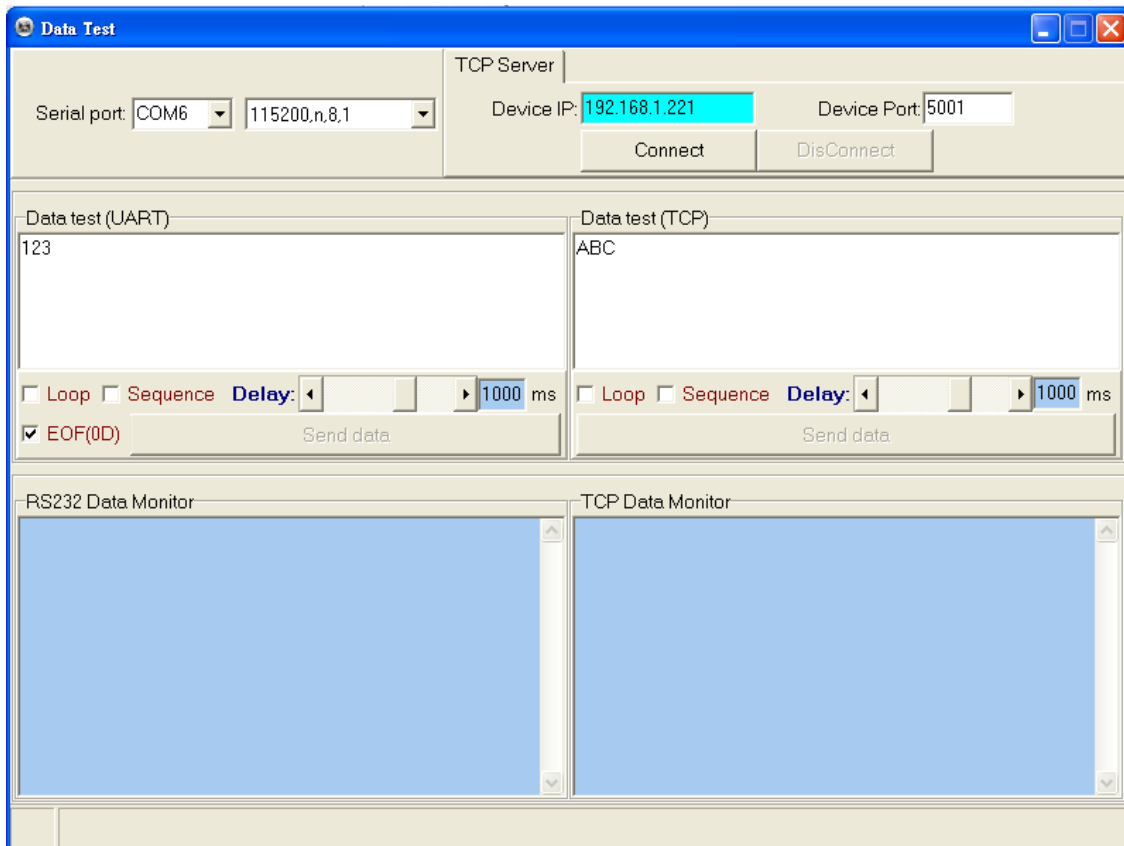
Click **Data Test** to test data transmission.



Setup the Port and Baud rate, then click Connect to connect device.

Check the option of **Loop** to continue transmit message. The bar of Delay can set delay time.

Check the option of **Sequence** to add serial number to message.



## ■ Upgrade Firmware

