

Modbus Server

Quick Start Manual
[For WinCon8000]

(Supports 8000, 87000 series modules)



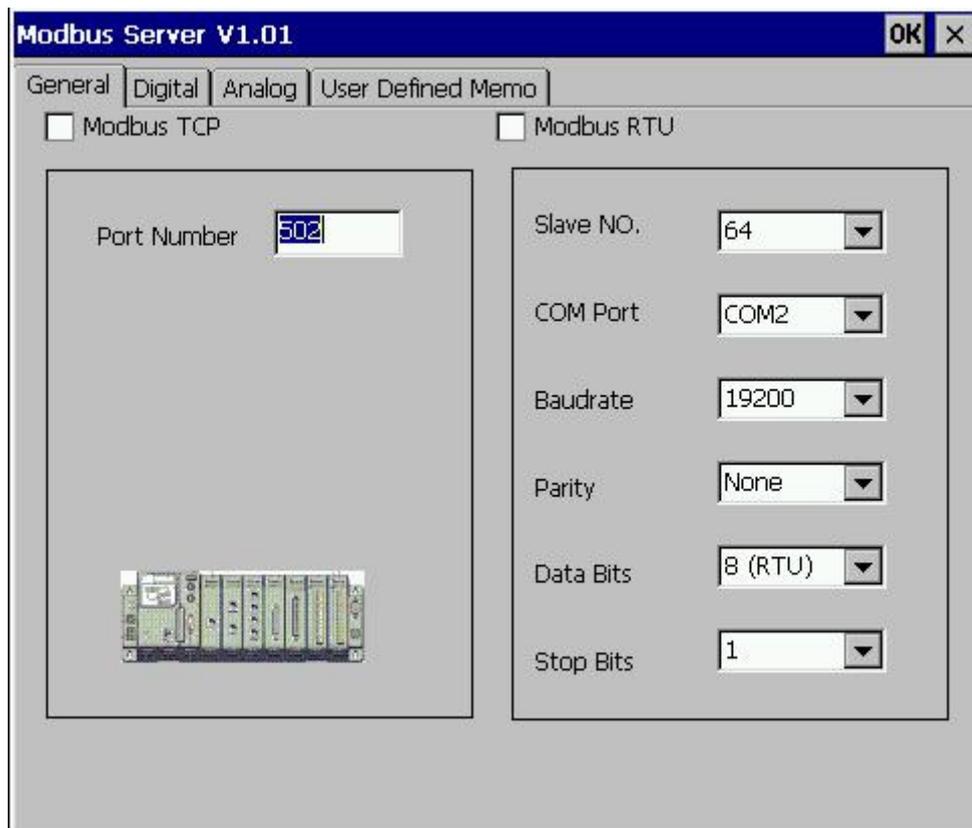
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1 Modbus Server

The Modbus Server supports modbus RTU and modbus TCP protocol which based on the ScanKernel on the WinCon8000. The Modbus Server not only can map the physical I/O automatically to a specific modbus address, but also allows users to define their own variables into it. Therefore users can develop their own application program with eVC++, VB.NET, and C#.NET programming language via the modbus RTU and modbus TCP protocol to share their specific data with modbus client. Moreover, users also can operate the Modbus Server and NAPOPC in coordination to create a fantastic solution which combines SCADA software with on-line data.

The main program of Modbus Server is "[MBServer.exe](#)". It automatically calls the "[MBTool.DLL](#)" and "[ScanKernel.DLL](#)" functions on demand.

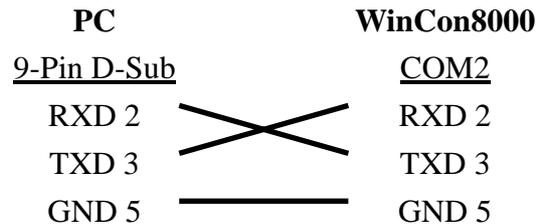


1.1 Software & Hardware Installation

1.1.1 Hardware Installation

1.1.1.1 Connecting Your PC To The WinCon8000 COM2 Port

If you want to connect the Modbus client on the PC to the Modbus Server on the WinCon8000 via COM2 port (RS-232) directly, please notice the wiring assignments as bellows.

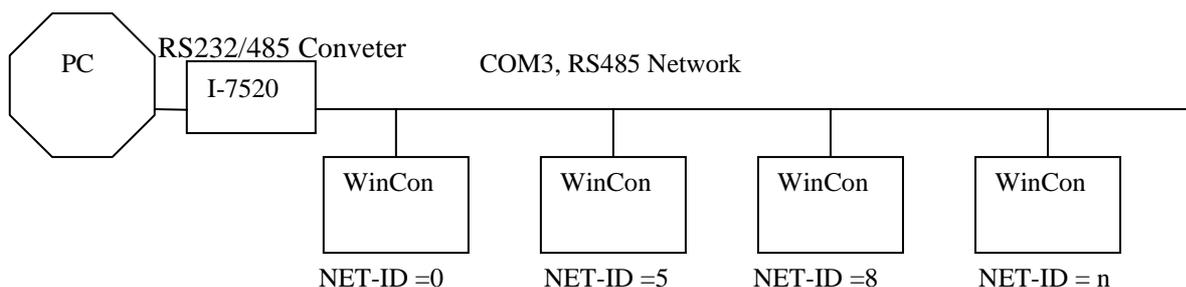


1.1.1.2 Connecting Your PC To The WinCon8000 COM3 Port

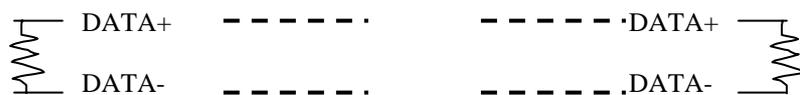
If you want to connect the Modbus Client on the PC to the Modbus Server on the WinCon8000 via COM3 port (RS-485), the maximum distance between the I-7520 (the RS-232/RS-485 converter) and an WinCon8000 is up to 1,200 meters (4,000 feet). The distance between the two is dependent on the baud rate; the rule to follow is the lower you set the baud rate, the longer the distance can be.

1.1.1.3 Connecting Your PC To Several WinCon8000 controllers

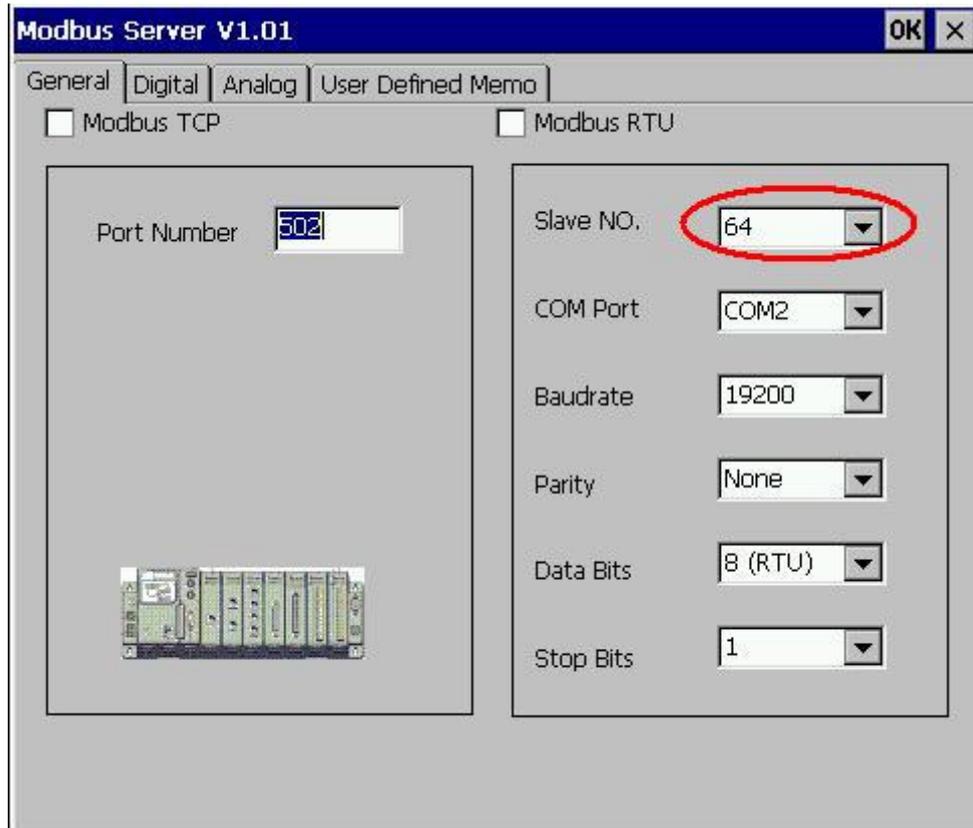
An additional feature of using the COM3 port of the WinCon8000 is that you can configure an RS-485 network from one PC to link to numerous WinCon8000 controllers. The maximum number of WinCon8000 controllers that can be networked via the RS-485 network is 255.



We recommend add two terminal resistors (try 220Ω, then 110Ω, and then 330Ω) on the nearest WinCon8000 and the farthest WinCon8000 for long distance RS485 network.



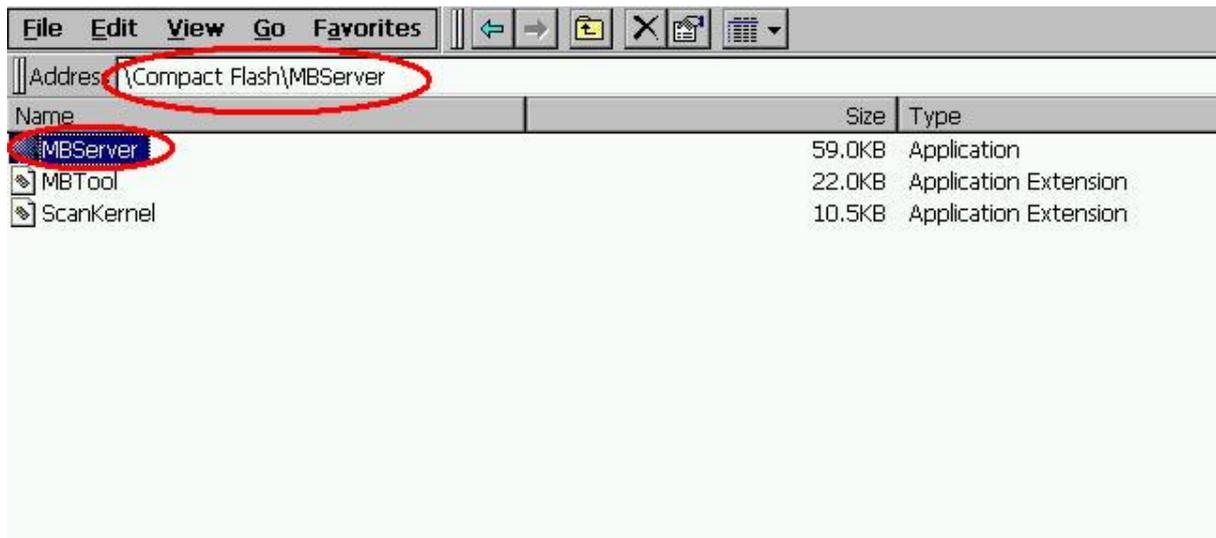
To create an RS-485 network you must first insure that each WinCon8000 has an unique slave number, and each of the WinCon8000s link the "DATA+" to the "DATA+" signal, and the "DATA-" to the "DATA-" signals.



1.1.2 Software Installation

You can find out the Modbus Server at the “\Compact Flash\MBServer\” of WinCon8000.

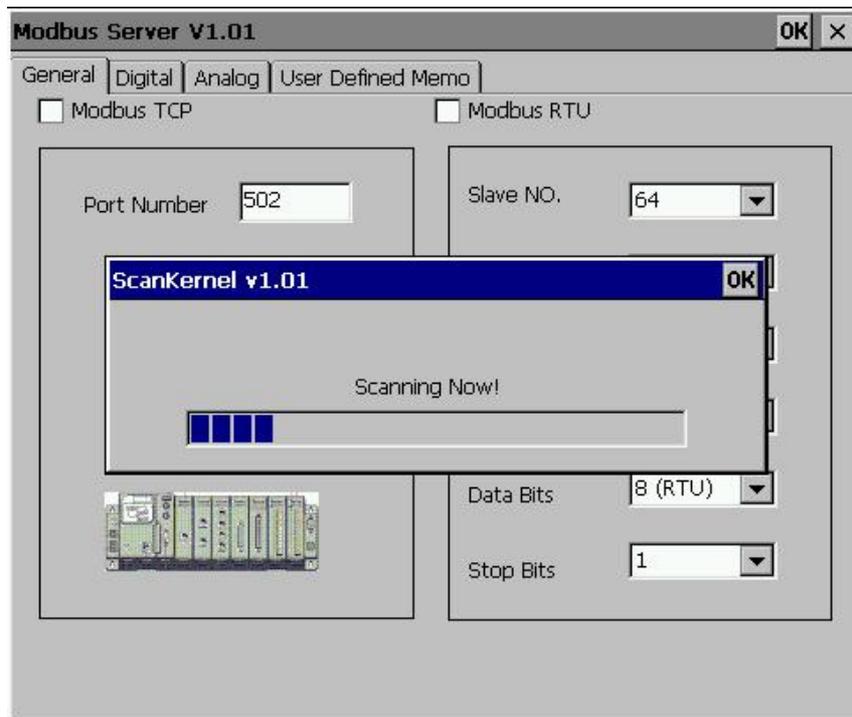
You can start the Modbus Server by double clicking the “MBServer.exe” as belows.



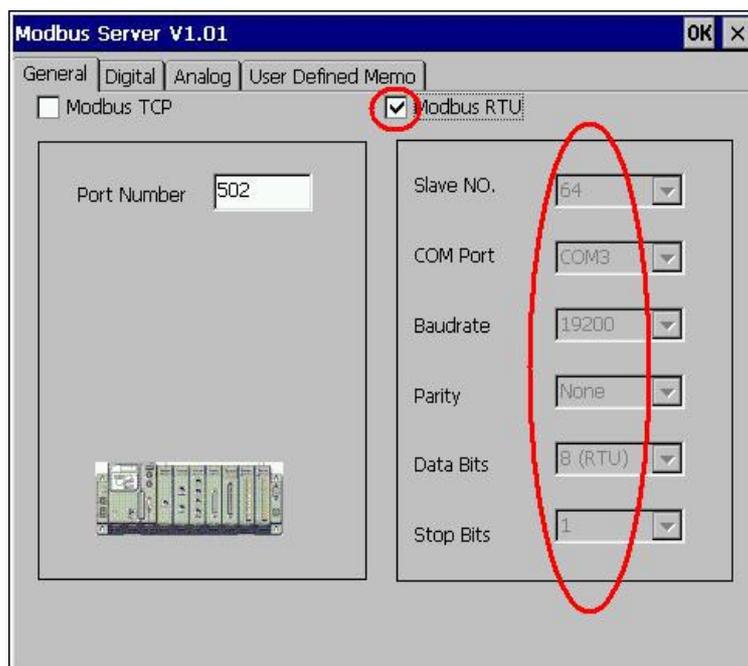
1.2 How To Start The Modbus Server

Step 1: Double click the “\Compact Flash\MBServer\MBServer.exe”.

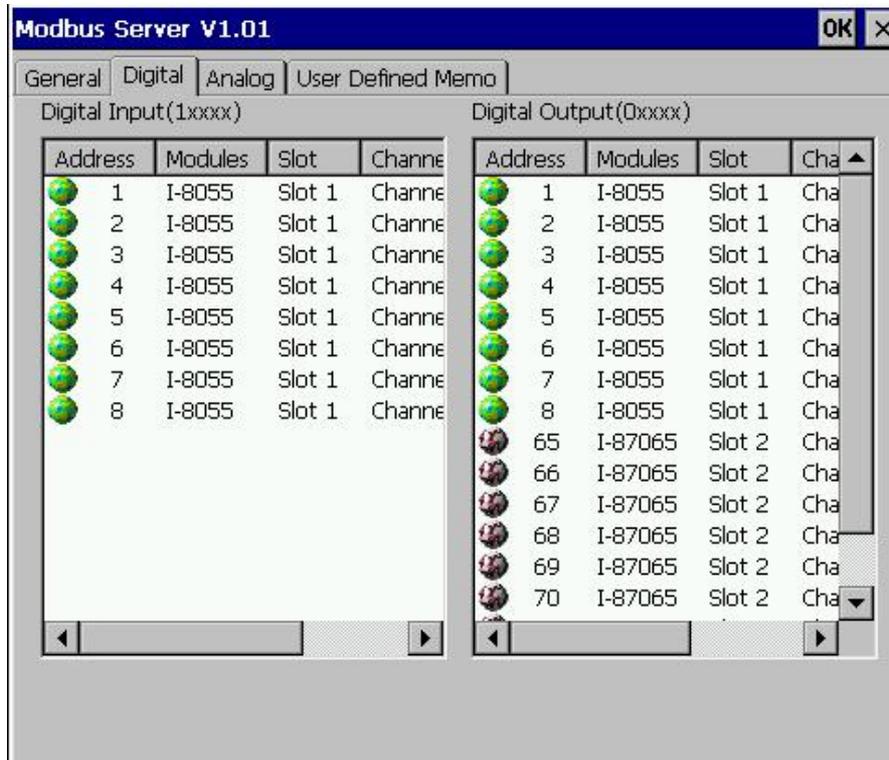
Step 2: The "ScanKernel" window will pop up automatically and minimize after 3 seconds.



Step 3: In the “General” page, you can choose which protocol you wish the Modbus Server supports. After you check the “Modbus TCP” or “Modbus RTU”, the related parameters will become gray color which means disable.



Step 4: You can click the “Digital” and “Analog” page to see the modbus address of physical I/O. Modbus Server will automatically map the physical I/O to specific modbus addresses. The report shows “Address”, “Modules”, “Slot”, and “Channel” four fields.



Port Number:

You have to set up the port number for TCP/IP communication. We suggest port number "502" to the default value. You also can adjust the port number to suit with your application.

Slave No:

Specifies a slave number for the Modbus Server.

COM Port:

Specifies which "COM Port" number for the Modbus RTU. The default value is 1 and the valid range is from 1 to 255. Please verify the "COM Port" number that the Modbus RTU want to receive from.

Baudrate :

Specifies which "Baud Rate" will be looked for. The default setting is "9600".

Parity:

Specifies the parity scheme to be used. It is one of the following values.

Value	Description
0	No parity
1	Even
2	Mark
3	Odd
4	Space

Data Bits:

Specifies the number of bits in the bytes transmitted and received.

Stop Bits:

Specifies the number of stop bits to be used. It is one of the following values.

Value	Description
1	1 stop bit
2	2 stop bits
3	1.5 stop bits