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Infosystem Technology Corporation, Ltd.

No. 45, Lane 167, Dongnan St.

Hsinchu, Taiwan 300, R.O.C.

TEL: +886-3-562-7187

FAX: +886-3-561-1435

Service E-mail: services@infosystem.com.tw

Web page URL: <http://www.infosystem.com.tw>

WS-100B

Serial to Ethernet Converter with 3 sockets

User Manual

Version 1.0

Infosystem Technology Corporation, Ltd.

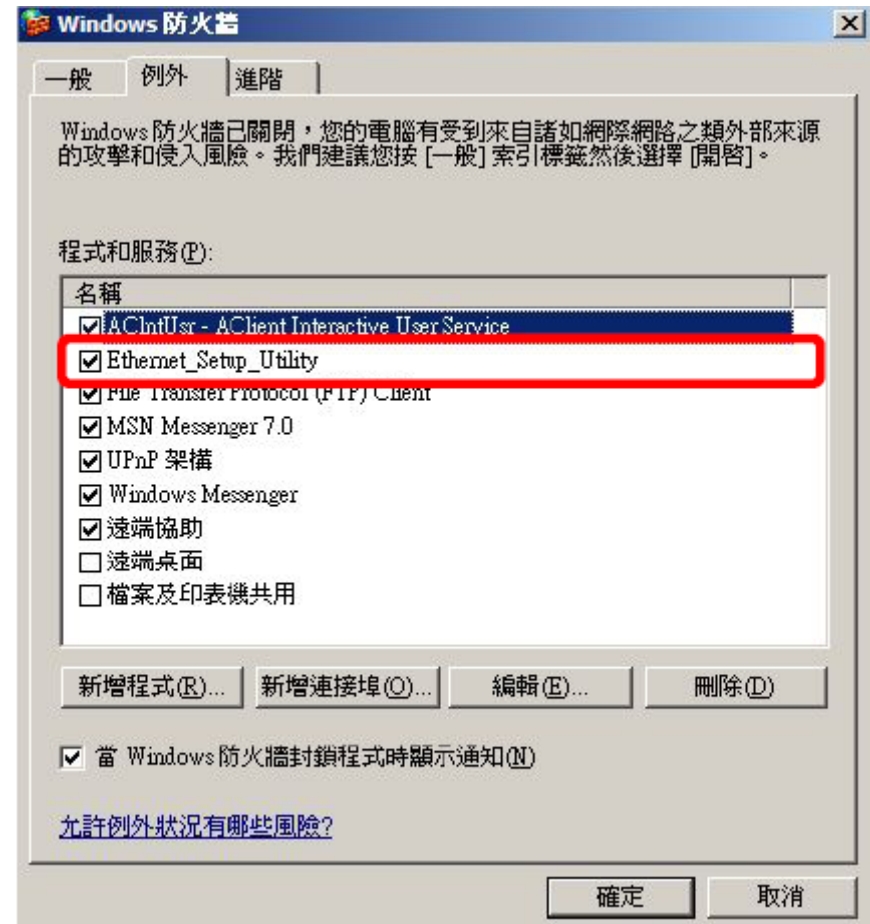
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Application Notes

C. Make Program exception for Firewall

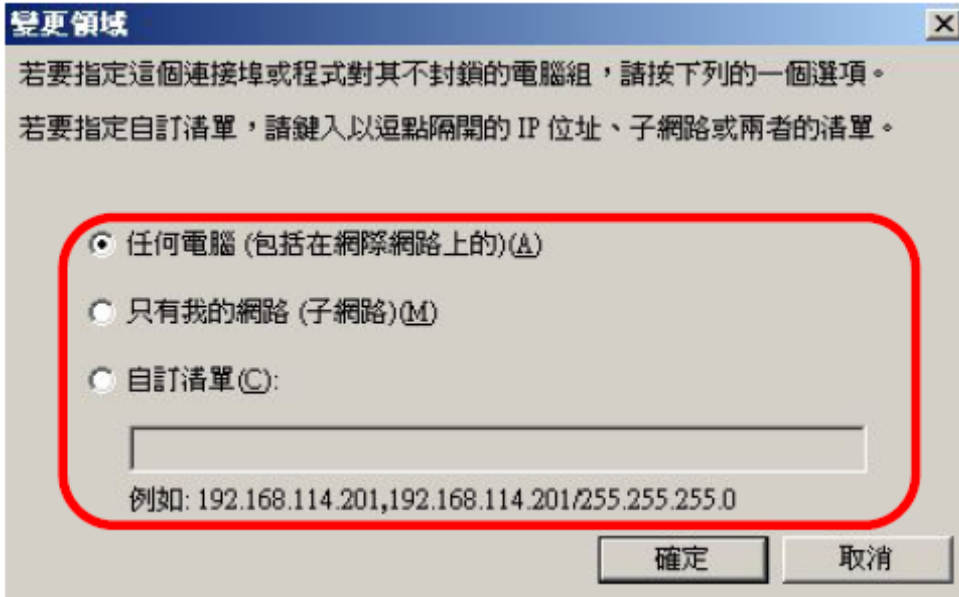
Step 4: Finished Finish Exception.



Application Notes

C. Make Program exception for Firewall

Step 3: Allow "Accept Any Computer"
Allow "Accept Any Computer" to finish exception.



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Application Notes

C. Make Program exception for Firewall

Step 2: Add on New Program and Selection
Choose “Setup Tools” to make it as an exception.

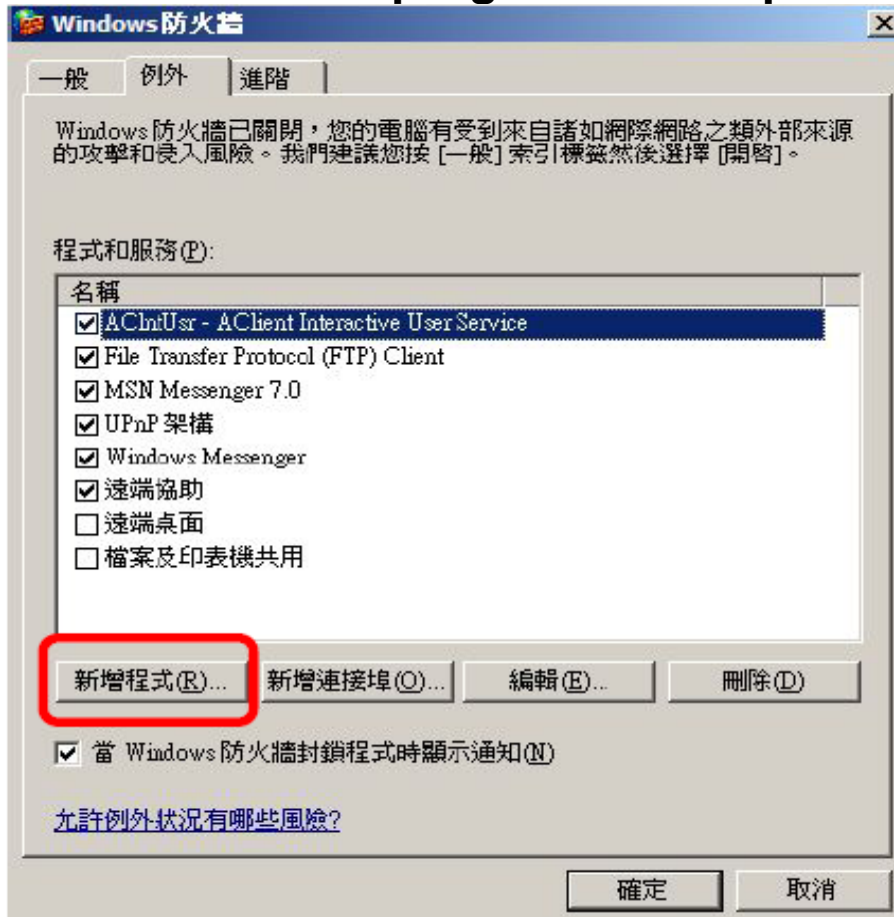


Application Notes

C. Make Program exception for Firewall

Step 1: Choose "Exception"

Choose "Exception" in Firewall Program.
And add on new program of Setup Tools.



Warranty

All products manufactured by Infosystem are warranted against defective materials for a period of one year from the date of delivery to the original purchaser.

Trademark

The names used for identification only maybe registered trademark of their respective companies.

Product Information

A. Introduction

WS is Web-Server product and it can provide an ideal solution to customized embedded system. By using WS Products into your systems, you can easily achieve any Serial to Ethernet Converting affairs.

WS-110B-9 uses 8051's family microprocessor for implementing RS232 to Ethernet functions. It uses the state machine to handle TCP/IP stack and brings the user a lower cost TCP/IP stack with limited functions because of the limited resources.

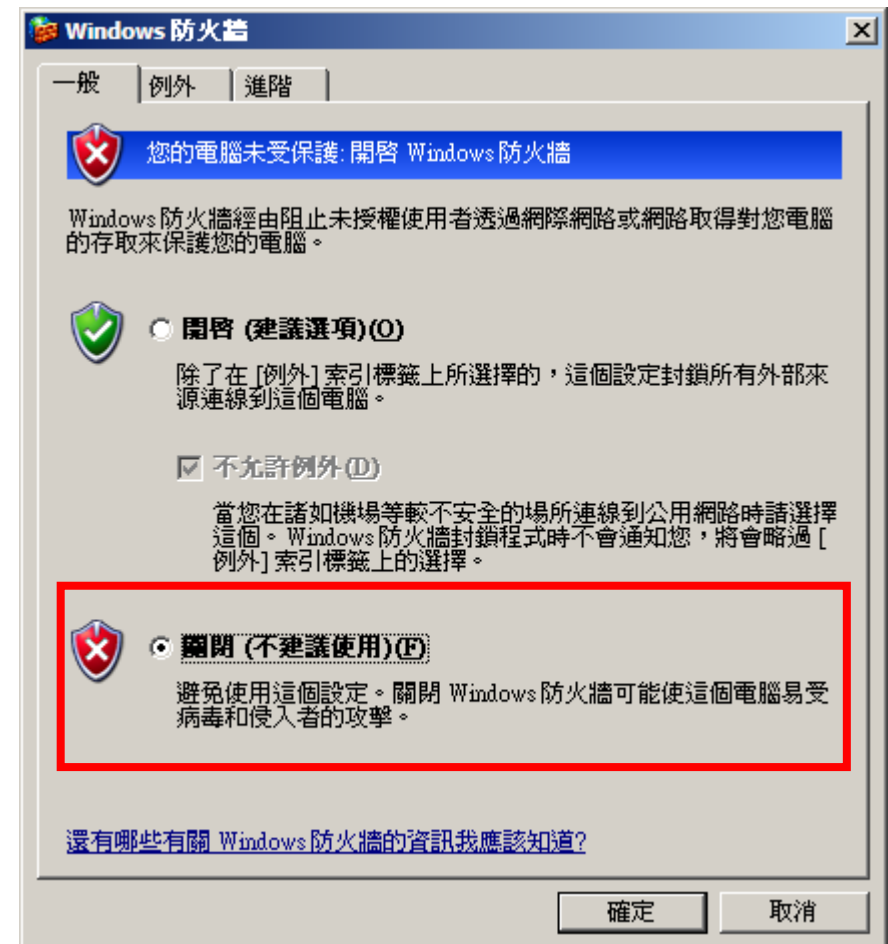
WS-110B-9 is a small size and low cost solution. It is easy to convert serial port data to Ethernet in IA, Factory Automation, Security or any other low data rate data transmission by using it as the intermediate converter. It supports ARP, ICMP, TCP, UDP, IP, DHCP-Client and even HTTP protocols. You can use any browsers to set the parameters, or just use the commands in console mode. With no doubt, WS-110B-9 will bring you the easiest management in your applications.

Application Notes

B. Disable Firewall of Windows XP SP2.

Step 2: Close the Firewall

Choose "Close" to close firewall.



Application Notes

A. Description:

Firewall will make the program off normal, so one might choose the following solutions to Firewall program, "Disable" or "Exception".

B. Disable Firewall of Windows XP SP2.

Step 1: Execute "Windows Firewall"

Execute "Windows Firewall" in Control Panel.



B. Features

- Easy Configuration Setting
 - ✓ Use HTTP, IE/Netscape Browser for Setting
- Good Security Concerned
 - ✓ Setup Login in Password Protect
 - ✓ Access Password Protect
 - ✓ Firmware Upgradeable
 - ✓ Support New Version Firmware Upgradeable
- Low cost and High Reliability
 - ✓ Cheap and stable
 - ✓ Working 24Hours per day
- Low Power Consumption
 - ✓ Less than 1W Power Consumption
- Support Necessary Network Protocols
 - ✓ ARP, ICMP, TCP, UDP, IP, DHCP Client, HTTP
- Support Various Interfaces
 - ✓ RJ-45 x1
 - ✧ 10Mbps, 3KV
 - ✓ RS-232 x1
 - ✧ Up to 115.2Kbps, RTS/CTS H/W flow control
 - ✓ RS-485/RS-422 x1
 - ✧ Half Duplex for RS485
 - ✧ Full Duplex for RS-422
 - ✧ 5 Bits Digital I/O
- Three Independent Sockets
 - ✓ Support at most three independent sockets for SIO, Digital I/O and HTTP
 - ✓ All protocol working independent and concurrently

C. Applications

- Data collection & security terminals:
- Access Control Terminals
- Security Devices
- Time Recorders
- Warehouse Terminals
- Shop floor automation Terminals
- Remote Sensors & Meters:
- Power monitors
- Power meters
- Environmental monitors
- Temperature monitors
- Data loggers
- Auto-ID Scanners:
- Barcode Scanners
- Magnetic Card Readers

Configuration

C. By Direct Broadcast Commands

User Level: For General Users

Admin Level: For Factory Default Setting

- Command List C - Admin Level -

Command	Description	Notes
M	Purpose	Set MAC address of WM-110 then reboot automatically
	Syntax	M <Old MAC>/<New MAC>/<Factory Password>
	Return	AM for accept
		CM for cancel
Example	Send	S 0.128.200.255.251.242/0.128.200.255.251.243/123
	Back	'A' or 'C'
I	Purpose	Set IP for Factory settings
	Syntax	I <MAC>/<New IP>/<Factory Password>
	Return	AI for accept
		CI for cancel
Example	Send	I 0.128.200.255.251.242/192.168.1.1/123'
	Back	AR or CR

Configuration

C. By Direct Broadcast Commands

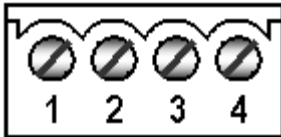
User Level: For General Users
Admin Level: For Factory Default Setting

- Command List B - User Level -

Command	Description	Notes	
S	Purpose	Set the parameters of WM-110	
	Syntax	S <MAC>/<IP>/<Password>/<Parameter>/<Value>	
	Return	A for accept	
		C for cancel	
	Example	Send	S 0.128.200.255.251.242/192.168.1.1/123/IP/192.168.1.2
Back		A or C	
R	Purpose	Reboot WM-110	
	Syntax	R <MAC>/<IP>/<Setup Password>	
	Return	AR for accept	
		CR for cancel	
	Example	Send	R 0.128.200.255.251.242/192.168.1.1/123
Back		AR or CR	

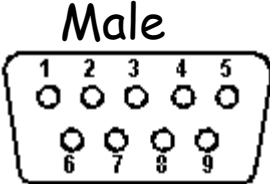
Connection Diagram

A. Terminal Block PIN Definition

	PIN	RS-422	RS-485
	P1	TX+	NC
	P2	TX-	NC
	P3	RX+	D+
	P4	RX-	D-

Connection Diagram

B.RS-232 PIN Definition

	PIN	RS-232
 <p>Male</p>	1	
	2	RXD
	3	TXD
	4	DTR
	5	GND
	6	DSR
	7	RTS
	8	CTS
	9	

Configuration

C. By Direct Broadcast Commands

It needs broadcasting to handle all the configurations and it allows users to code their own application software.

- Command List A - User Level -

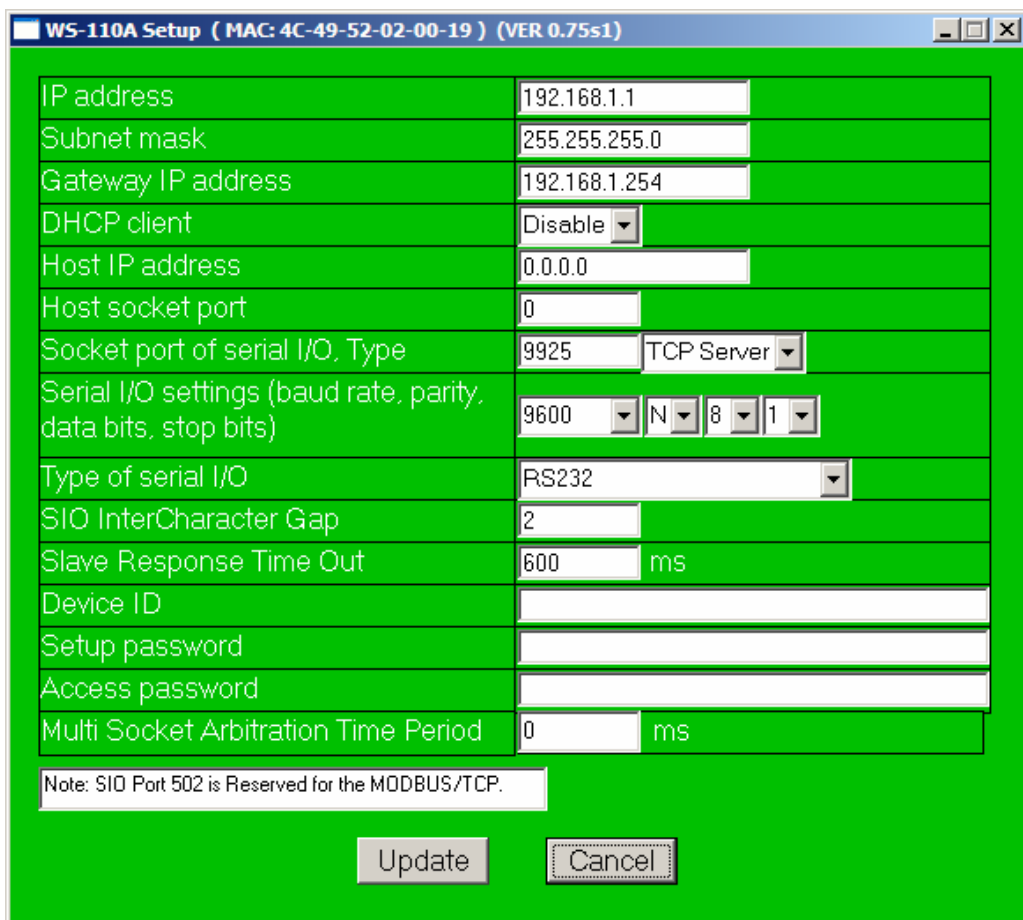
Command	Description	Notes	
X or x	Purpose	For Broadcast search	
	Syntax	X <magic code>	
	Magic code	99.130.83.99	
	Return	AX <MAC>/<IP>/<Device ID>	
	Example	Send	X 99.130.83.99
Back		AX 0.128.200.255.251.242/192.168.1.1/1	
G or g	Purpose	Get all the parameters of the WM-110	
	Syntax	G <MAC>/<IP>/<Setup Password>	
	Return	All the parameters of the WM-110	
	Example	Send	G 0.128.200.255.251.242/192.168.1.1/123
		Back	CG for cancel
AG<All Messages>			

Configuration

B. By Setup Tools

Step 3:

Configure and update your parameters.



Parameter	Value
IP address	192.168.1.1
Subnet mask	255.255.255.0
Gateway IP address	192.168.1.254
DHCP client	Disable
Host IP address	0.0.0.0
Host socket port	0
Socket port of serial I/O, Type	9925 TCP Server
Serial I/O settings (baud rate, parity, data bits, stop bits)	9600 N 8 1
Type of serial I/O	RS232
SIO InterCharacter Gap	2
Slave Response Time Out	600 ms
Device ID	
Setup password	
Access password	
Multi Socket Arbitration Time Period	0 ms

Note: SIO Port 502 is Reserved for the MODBUS/TCP.

Update Cancel

Specifications

- General list -

LED indication:

SYS: Red high bright round LED

RX: Green high bright round LED

TX: Green high bright round LED

- Power -

Power Supply:

DC 09~12V

- Environment -

Operating temperature:

0~55 °C, non-condensing

Operating relative humidity:

20~95 %RH

Storage temperature:

-10~70 °C

- Mechanics -

Case Materiel:

ABS fire-protection

Mounting:

Surface mount, wall mount

Terminal block:

Plastic NYLON 66

Weight:

150g

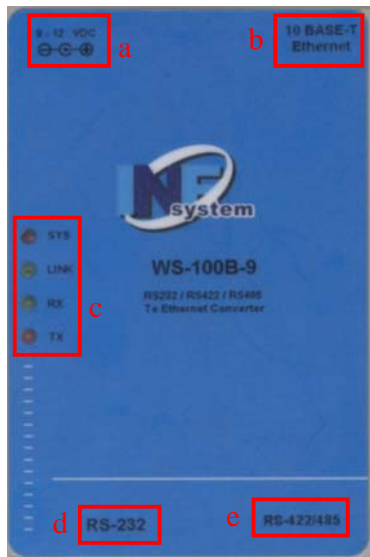
- Multi Sockets -

Socket:

At most 3 sockets concurrently

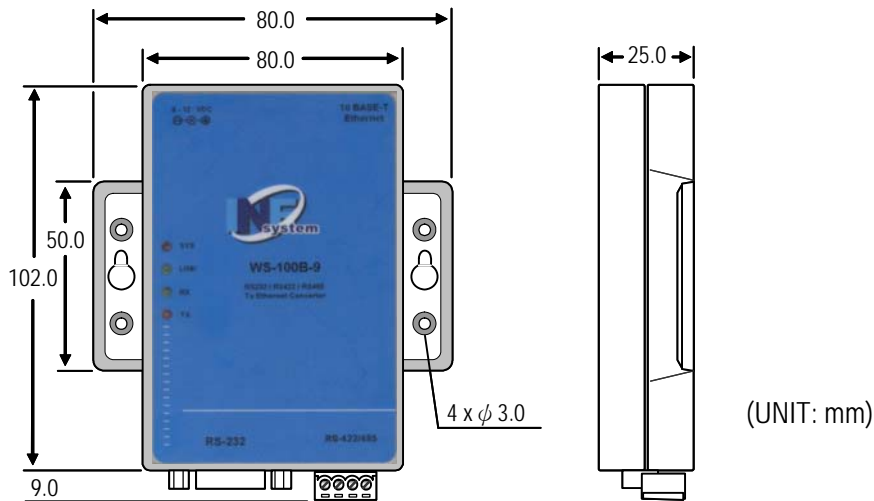
Exterior

A. Front Panel



- a. 9-12 VDC
- b. 10 BASE-T Ethernet
- c. LED Indication
- d. RS-232 Port
- e. RS-422/485 Port

B. Dimension

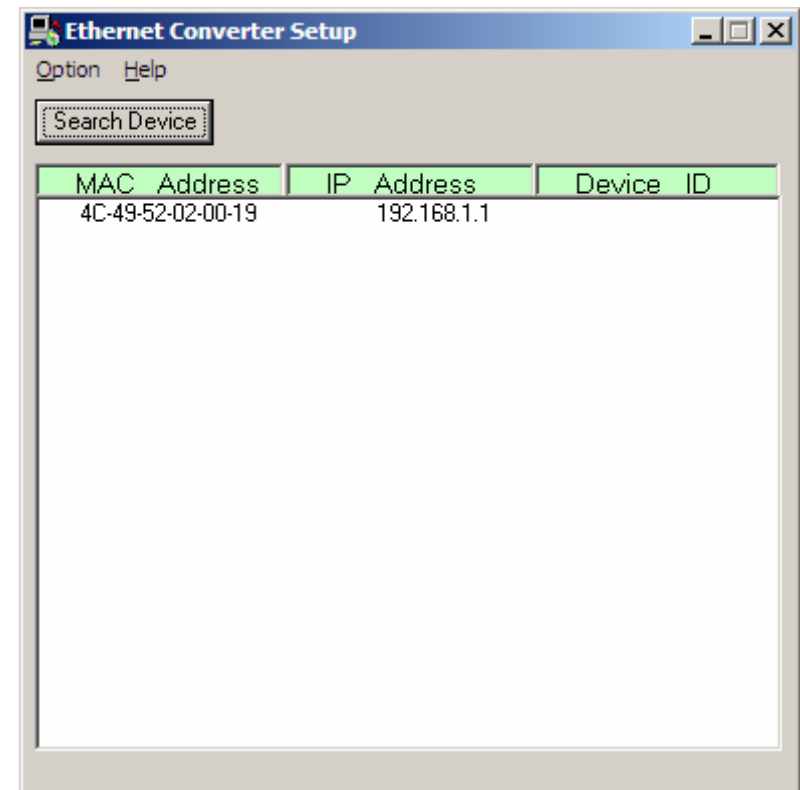


Configuration

B. By Setup Tools

Step 1: Searching the devices.

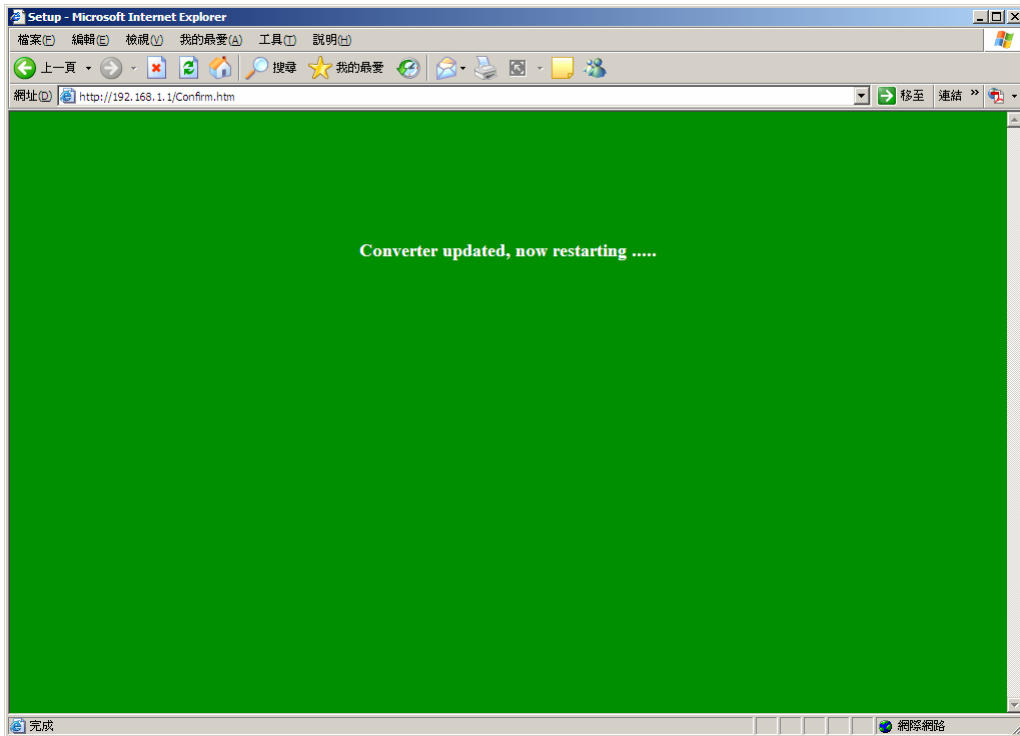
Step 2: Double click the selected item.



Configuration

A. By Browser

Step 3: Finish and reboot.



Install and Uninstall

A. Install

Step 1: Execute the Setup.exe file
Execute the Setup.exe file and you will get the following screen.



Install and Uninstall

A. Install

Step 2: Welcome Messages

Wait until the Welcome Message shows.
Select OK Button to continue installation.

Ethernet Converter Setup Tools Setup



Configuration

A. By Browser

Step 2: Configure your parameters.

Setup - Microsoft Internet Explorer

網址: http://192.168.1.1/Setup.htm

Converter Setup

Local IP	192.168.1.1
Subnet mask	255.255.255.0
Gateway IP	192.168.1.254
DHCP client	Disable
Remote Host IP	0.0.0.0
Remote Host port	0
SIO Port, Type	9925 TCP Server
SIO BaudRate	9600 N 8 1
SIO Type	RS232
SIO Packets Gap	2 ms
Slave Response Time out	600 ms
Device ID	
Setup password	
Access password	
Multi Sockets Arbitration Time	0 ms

Note: SIO Port 502 is Reserved for the MODBUS/TCP.

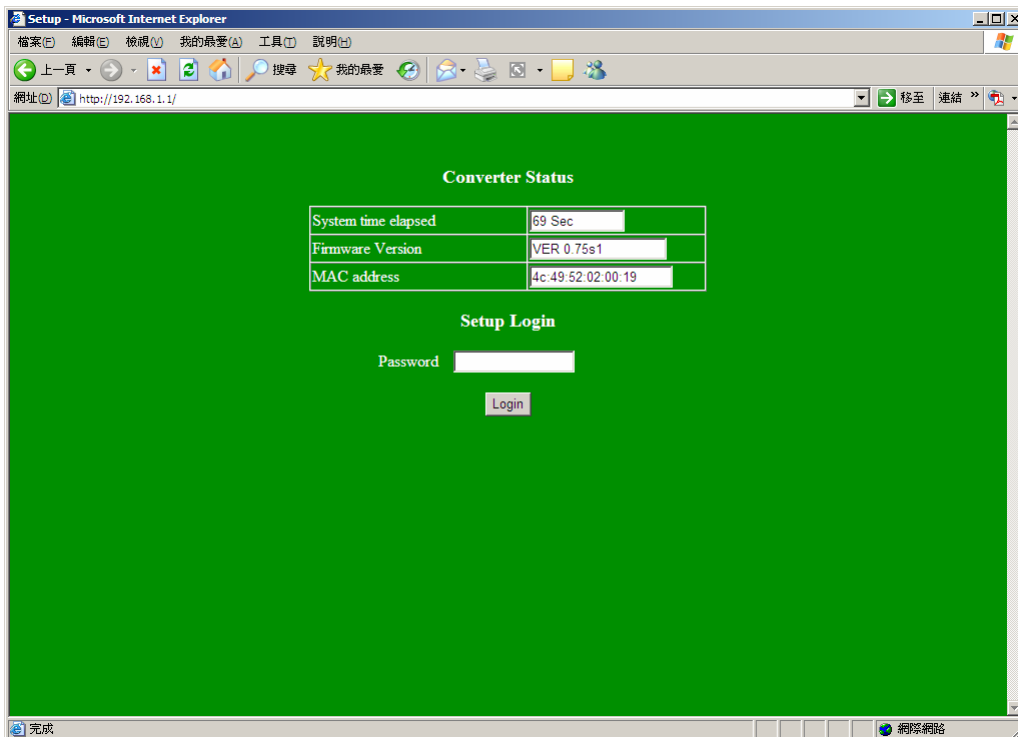
Update

完成 網際網路

Configuration

A.By Browser

Step 1: Ready to login.

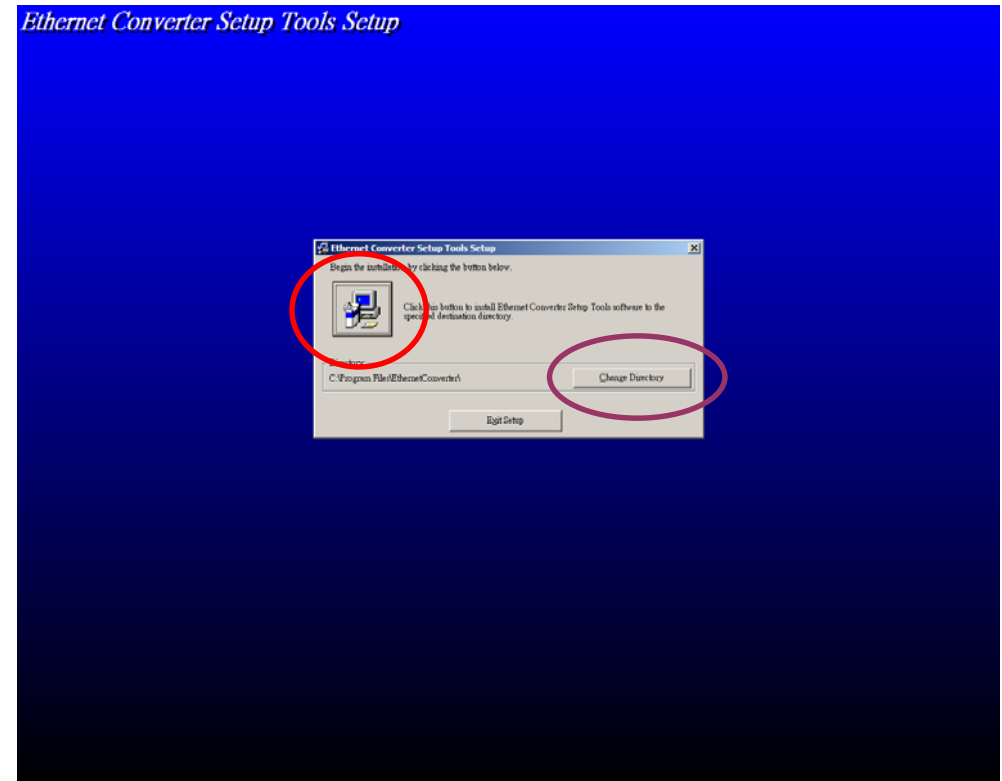


Install and Uninstall

A. Install

Step 3: Decide Directory

Choose "Change Directory" to change which directory you want to put files in if needed. And press red circle button to start installation.

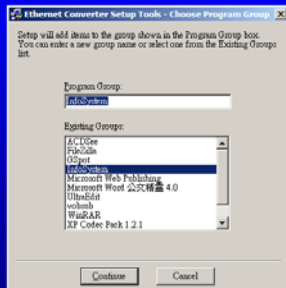


Install and Uninstall

A. Install

Step 4: Decide Program Group Name
 Input the “Program Group Name” you want, by just left it by default.

Ethernet Converter Setup Tools Setup



Install and Uninstall

B. Uninstall

Step 3: Finished
 Choose “OK” button to finish uninstall Ethernet Converter Setup Tools.

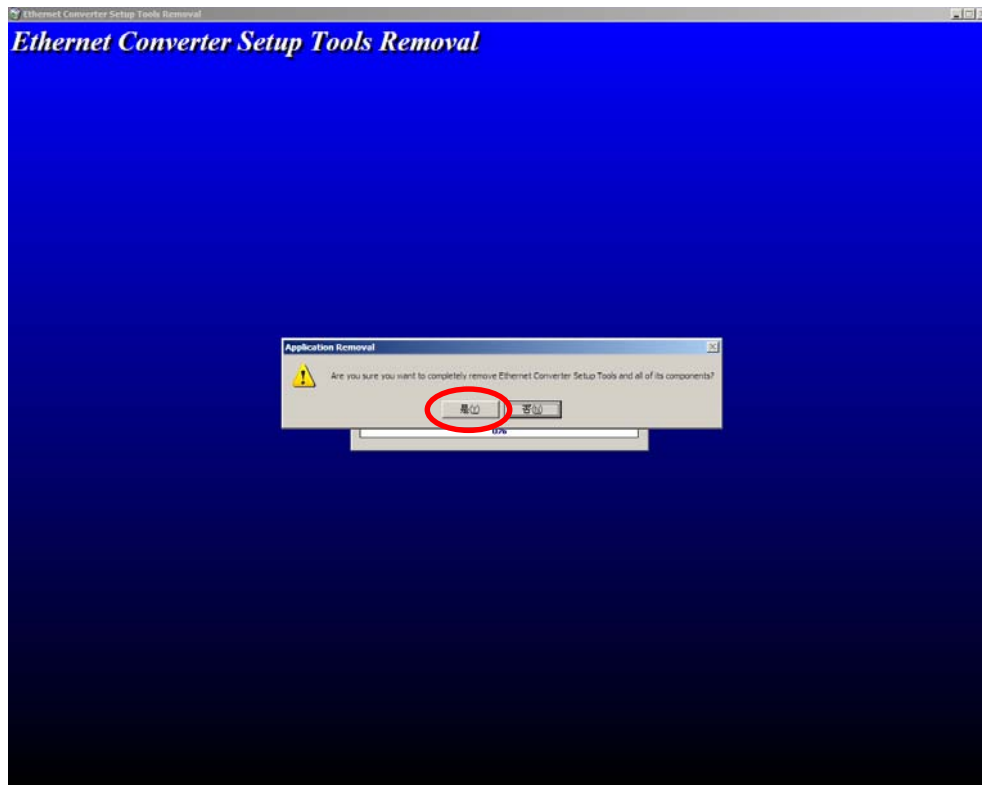


Install and Uninstall

B. Uninstall

Step 2: Processing

Choose “YES” only when you are sure to uninstall the Ethernet Converter Setup Tools.

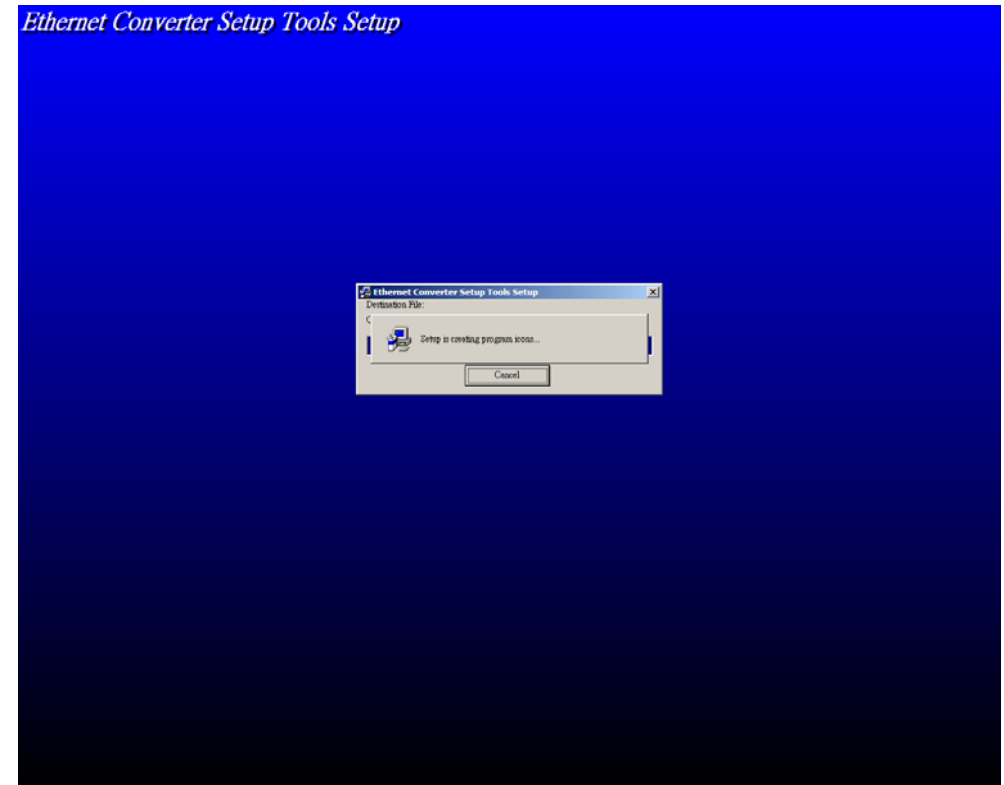


Install and Uninstall

A. Install

Step 5: Processing

Start installation process.

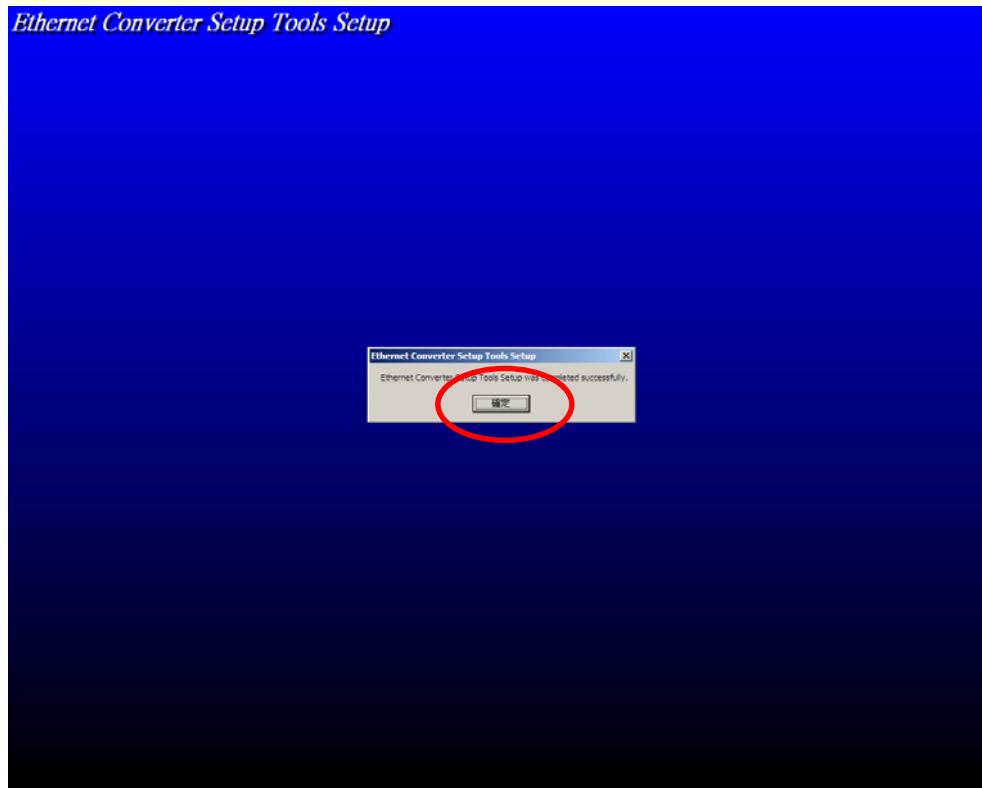


Install and Uninstall

A. Install

Step 6: Finished

Press Button to finish installation.



Install and Uninstall

B. Uninstall

Step 1: Add New or Remove Manager

Use “Add New or Remove manager” program. Select the Change/Uninstall button to uninstall.

