

# Z-Com NPort WS-120M User's Manual

V3.0

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#### Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For product available in the USA market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

#### **IMPORTANT NOTE:**

This module is intended for OEM integrator. The OEM integrator is still responsible for the FCC compliance requirement of the end product, which integrates this module.

20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

#### **USERS MANUAL OF THE END PRODUCT:**

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX FCC ID: M4Y-WS120MV10 ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.



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# **Chapter 1 Introduction**

Z-Com.s NPort WS-120M Series of wireless serial device servers give you an easy way to connect your RS-232 serial devices to a WLAN. The 1-port NPort WS-120M is ideal for environments where a LAN is not available, or where serial devices are moved frequently.

The following topics are covered in this chapter:

- Overview
- Package Checklist
- Product Features
- Product Specifications

# Overview

Z-Com's NPort WS-120M wireless device servers are the ideal choice for connecting your RS-232 serial devices. Such as PLCs, meters, and sensors to a Wireless LAN. Your communications software will be able to access the serial devices from anywhere over a local WLAN. Moreover, the WLAN environment offers an excellent solution for applications in which the serial devices are moved frequently from place to place.

NPort WS-120M wireless serial device servers support automatic IP configuration protocols (DHCP) and manual configuration via **HyperTerminal** or a handy web browser console. IP configuration methods ensure quick and effective installation.

An external antenna increases the range of the wireless connection. Users can position the adjustable antenna for maximum signal strength or even replace the antenna with their own for additional flexibility and scalability. This feature is particularly useful when a serial device is connected in a high interference area. As an added feature, a signal strength indicator is located on the front panel to make it easier to troubleshoot connection problems.

Such as password authentication, IP filter, WEP support for 64-bit and 128-bit encryption.

# Package Checklist

NPort WS-120M is shipped with the following items:

Standard Accessories

- NPort WS-120M x 1
- Documentation & Software CD
- Power adaptor
- Warranty Booklet



Notify your sales representative if any of the above items is missing or damaged.

# **Product Features**

- Connect serial device to Wireless LAN network
- 802.11g Wireless LAN, compatible with 802.11b
- WEP support for 64-bit and 128-bit encryption
- Password authentication and IP filter
- RS-232 ports, at up to 230.4 Kbps
- Easy-to-use Windows Utility for mass installation
- LEDs for link power, and wireless signal strength

# **Product Specifications**

Product Description	
IEEE 802.11b/g Wireles	ss RF Module
Operating Voltage	
DC 3.3V ± 5%	
Chipset	
Single chip	Atheros AR6101VG ROCm Single-Chip MAC/BB/Radio
Memory	
Stacked multi-chip	8M Flash
package	2M SDRAM
Interface	
Connector I1	JTAG、 GPIO
Connector 31	UART、Key Pad、LCD
Connector IP1	GPIO
	UART
Header J5	SD



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Power Consumption					
11b	TX: $\leq$ 550 mA		RX: $\leq$ 450 m	RX: $\leq$ 450 mA	
11g	TX: $\leq$ 550 mA		RX: $\leq$ 450 m	Ą	
UART	ļ.				
Baud Rate	1,200~230,400bps				
Parity Check	None/Odd/Even/Ma	ark/Space			
Data Length	7/8 Bit				
Stop Bit	1/2				
Watchdog	Hardware watchdog	g reset			
Flow Control	None/ Software / H	ardware			
Protocols	ICMP, IP, TCP, UD Configuration with	OP, DHCP Client, Te Telnet Protocol	lnet, HTTP		
Radio					
Antenna connector	only one U. FL co	nnector			
	IEEE802.11g				
Output Power					
	IEEE802.11b				
	IEEE 802.11g		IEEE 802.11b		
	Sensitivity @ Packet Error Rate:		Sensitivity @ Packet Error Rate:		
	10%		8%		
Sensitivity	◆ 54 Mbps:≦-74dBm				
,	<ul> <li>48 Mbps:≦-75dBm</li> <li>36 Mbps:≦-79dBm</li> </ul>		↓ 11Mbps:≦-87dBm		
	<ul> <li>18 Mbps:≦-86dBm</li> <li>12 Mbps:≤-88dBm</li> </ul>		<ul> <li>IMbps: ≦</li> <li>1Mbps: ≦</li> </ul>	≦-95dBm	
	• 9 Mbps:	≦-90dBm ≲ 01dBm	-F		
		≥-910DIII			

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	IEEE802.11g (OFDM/DSSS)	IFFF 802 11h (DSSS)		
Modulation	<ul> <li>48/54 Mbps (QAM64)</li> <li>24/36 Mbps (QAM16)</li> <li>12/18 Mbps (QPSK)</li> <li>6/9 Mbps (BPSK)</li> </ul>	<ul> <li>5.5/11 Mbps (CCK)</li> <li>2 Mbps (DQPSK)</li> <li>1 Mbps (DBPSK)</li> </ul>		
Range Coverage (Typical range in open environment with 0 dBi Antenna)	<ul> <li>IEEE 802.11g</li> <li>54Mbps: ≥ 60 meter</li> <li>48Mbps: ≥ 70 meter</li> <li>36Mbps: ≥ 80 meter</li> <li>24/18Mbps: ≥ 120 meter</li> <li>12/9/6Mbps: ≥ 120 meter</li> <li>11Mbps: ≥ 80 meter</li> </ul>	<ul> <li>IEEE 802.11b</li> <li>11Mbps: ≥80 meter</li> <li>5.5Mbps: ≥120 meter</li> <li>2Mbps: ≥200 meter</li> <li>1Mbps: ≥300 meter</li> </ul>		
Operating Frequency	<ul> <li>IEEE 802.11b/g ISM Band</li> <li>USA(FCC): 2.412GHz ~ 2.4</li> <li>Europe(ETSI): 2.412 GHz ~</li> </ul>	462 GHz (CH1 ~ CH11) - 2.472 GHz (CH1 ~ CH13)		
Software Specification	n			
Supported OS	eCOS			
Security	WEP 64-bit/128-bit data encryption WPA-PSK WPA2-PSK			
Physical Specification	1			
Dimension	36mm(L) * 42mm(W)			
Weight	15g			
Environment Specific	ation			
	Temperature (Ambient)	Humidity (non-condensing)		
Operating	-20 ~ 75 ℃	10 ~ 90%		
Storage	<b>-40 ~ 85</b> ℃	5 ~ 95%		
Warranty				
12 months				
Green Policy				
RoHS Compliant				



# **Chapter 2 Getting Started**

The following topics are covered in this chapter:

• Connecting the Hardware

# **Connecting the Hardware**

This section describes how to connect NPort WS-120M to serial devices for first time testing purposes. We cover Wiring Requirements, Connecting the Power, Connecting to the Network, Connecting to a Serial Device, and LED Indicators.

## Wiring Requirements



#### Safety First!

Be sure to disconnect the power cord before installing and/or wiring your device. **Wiring Caution!** 

Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size. If the current goes above the maximum ratings, the wiring could overheat, causing serious damage to your equipment.

#### **Temperature Caution!**

Be careful when handling the device. When plugged in, the device.s internal components generate heat, and consequently the casing may feel hot to the touch.

You should also pay attention to the following items:

• Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the intersection point.

## 💊 Note:

Do not run signal or communication wiring and power wiring in the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.

- Use the type of signal transmitted through a wire to determine which wires should be kept separate. The rule of thumb is that wiring that shares similar electrical characteristics can be bundled together.
- Keep input wiring and output wiring separate.
- Where necessary, it is advisable to label the wiring to all devices in the system.

#### **Connecting the Power**

Connect the 5-10 VDC power line with NPort WS-120.s power jack. When the power is properly supplied, the .Run. LED will show until the system is ready.





#### **Connecting to a Serial Device**

Connect the serial data cable between NPort WS-120M and the serial device. Serial data cables are optional accessories for NPort WS-120M.



# **Chapter 3 Configure Nport WS-120M**

When setting up your NPort WS-120M for the first time, the first thing you should do is configure Nport WS-120M.

This chapter covers the following topics:

- Installation Procedure for First-time Users
- Serial Console (115200, n, 8, 1)
- LAN Setting
- Wireless Setting
- COM PORT Setting

# **Installation Procedure for First-time Users**

STEP 1: After removing NPort from the box, use a serial interface cable to connect directly

to your computer.s serial port.

STEP 2: Attach the power adaptor to the NPort and then plug the adaptor into an electrical outlet.

STEP 3: Use the HyperTerminal to configure the NPort WS-120M via the serial port.

# Serial Console (115200, n, 8, 1)

Before configuring the NPort WS-120M via the serial console, turn off the power and use a serial cable to connect the NPort WS-120M to your computer's serial port.

We suggest using Hyper Terminal to carry out the configuration procedure.

1. Connect NPort WS-120M.s serial port 1 directly to your computer's male RS-232 serial port.

2. From the Windows desktop, click on Start ->Programs ->Accessories

#### ->Communications->HyperTerminal.

3. When the HyperTerminal window opens, first click on the Port Manager menu item and select

Open, or click on the Open icon.



4. The **Property** window opens automatically. From the **Communication Parameter** page, select the appropriate COM port for the connection, **COM1** in this example, and **115200** for **Baud Rate**, **8** for **Data Bits**, **None** for **Parity**, and **1** for **Stop Bits**.

连接到 ? 🔀	COTI属性	? 🗙
Staff	端口设置	
	毎秒位数 (B): 115200 🗸	
输入待拨电话的详细信息:	数据位 @): 8 💌	
国家(地区)(C): 中华人民共和国(86) 💌	奇偶校验 (2): 无 💌	
区号(图): 025	停止位 (5): 1 💌	
电话号码 @):	数据流控制 (፻): 元 ▼	
连接时使用 (M): COM1 🗸		
	[还原为默认值 @	
确定 取消	确定 取消 <u></u>	用(4)

5. From the **Property window's Terminal** page, select **ANSI** or **VT100** for Terminal Type, and click on **OK**.



6. Press **Reset** button on the Nport WS-120M for 10 second, **HyperTerminal** will display the message

of Nport WS-120M, Shown in the following figure:



# LAN Setting

When the **HyperTerminal** display the message of Nport WS-120M as above image. You can input **1** and then press **Enter** that will display the **LAN Setting** message as follows:



● TS-120 - 超级终端       □ ▷         文件 ② 編輯 ② 查看 ② 呼叫 ② 传送 ① 帮助 ④         □ ▷       ③ ③ •□ □         □ ▷       ③ ③ •□ □         □ □       ○         □       □ <t< th=""><th>zcom</th><th>Z-COM,Inc.</th><th>7F-2,No.9.Prosperity RD. I SBIP Hsinchu,300 Taiwan</th><th><b>Tel</b>∶886-3-5777364 <b>Fax</b>∶886-3-5773359</th></t<>	zcom	Z-COM,Inc.	7F-2,No.9.Prosperity RD. I SBIP Hsinchu,300 Taiwan	<b>Tel</b> ∶886-3-5777364 <b>Fax</b> ∶886-3-5773359
文件 @) 編輯 @) 查看 (Y) 呼叫 @) 传送 ① 帮助 @) [S]:Save : +	🎨 WS-120 - 超级终端			
Image: Solution of the second state	文件(2) 编辑(2) 查看(2) 呼叫(2) 传送(	[) 帮助(出)		
[S]:Save : 	요즘 🖉 🕉 🕫			
	[S]:Save : 	).050.100 5.000.000 0.000.254 2.135.001 3.012.001		
		700TT LCARC L 1#		

### IP Mode

Input 6, you can set the IP Mode, Shown in the following figure:

🌯 TS-120 - 超级终端	
文件 (2) 编辑 (2) 查看 (Y) 呼叫 (2) 传送 (2) 帮助 (H)	
D 🖆 🏐 💲 🗈 🖰 🗳	
LAN Setting   +	~
<pre>[12]:Netmask&gt; 255.255.000.000 [3]:Gateway&gt; 010.000.000.254 [4]:DNS1&gt; 218.002.135.001 [5]:DNS2&gt; 192.168.012.001 [6]:IP Mode&gt; Static [7]:Host Name -&gt; WS120 [8]:Password&gt; password [S]:Save :6 Set New IP mode (0) [0]:Static [1]:DHCP :</pre>	
	-~
	2
已连接 0:54:0% 自动检测 115200 8-N-1 SCROLL CAPS NOM 捕 打印	:

Method	Function Definition
Static	User defined IP address, Netmask , Gateway.
DHCP	DHCP Server assigned IP address, Netmask, Gateway, DNS, and Time Server.







If you select Static method, that you should set IP address, Netmask, Gateway manually.

#### **IP** Address

Input 1, you can set the new IP address, Shown in the following figure:



An IP address is a number assigned to a network device (such as a computer) as a permanent address on the network. Computers use the IP address to identify and talk to each other over the network. Choose a proper IP address that is unique and valid in your network environment.

#### Netmask

Input 2, you can set the new Netmask, Shown in the following figure:



[zcom_	Z-COM,Inc.	7F-2,No.9.Prosperity RD. I SBIP Hsinchu,300 Taiwan	<b>Tel</b> :886-3-5777364 <b>Fax</b> :886-3-5773359
文件 (2)编辑 (2)查看 (2)呼叫 (2)传送 ( □ 😅 📨 🏂 💷 🎦 😭	1) 帮助(H)		
LAN Setting	+   +		
<pre>[0]:Exit [1]:IP&gt; 010.000 [2]:Netmask&gt; 255.255 [3]:Gateway&gt; 010.000 [4]:DNS1&gt; 218.002 [5]:DNS2&gt; 192.168 [6]:IP Mode&gt; Static [7]:Host Name -&gt; WS120 [8]:Password&gt; passwor [S]:Save :2</pre>	0.050.100> 5.000.000 0.000.254 2.135.001 8.012.001	192.16	
Set New Netmask (255.255) :255.255.255.0	5.000.000)		
< ■ Ciz接 0:39:34 自动检测 115200 8-14-1 State	CROLL CAPS NUM 捕	打印	
Setting	Factory Default	Necessity	

A netmask is used to group network hosts into subnets. When a packet is sent out over the network, the NPort WS-120M will use the netmask to check whether the desired TCP/IP host specified in the packet is on the same subnet as the NPort. If the address is on the same subnet, a connection is established directly between the NPort WS-120M and the host. If the host is not on the same subnet, the packet is sent to the Gateway address.

Required

255.255.0.0

## Gateway

E.g., 255.255.255.0

Input **3**, you can set the new Gateway, Shown in the following figure:

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♥ TS-120 - 超级终端 文件(E) 编辑(E) 查看(E) 呼叫(C) 传送(E)	 )帮助低		
+	+   +		
[1]:IP> 010.000 [2]:Netmask> 255.255 [3]:Gateway> 010.000 [4]:DNS1> 218.002 [5]:DNS2> 192.168 [6]:IP Mode> Static [7]:Host Name -> WS120 [8]:Password> password [S]:Save :3	.050.100> 192 .000.000> 255 .000.254 .135.001 .012.001	2.16	
Set New Gateway (010.000 :192.168.18.254_	.000.254)		
< ☐ 200 8-14 SCF	NOLL CAPS NM 描 打印	Necessity	

Setting	Factory Default	Necessity
E.g., 192.168.18.254	010.000.000.254	Optional

A gateway is a network gateway that acts as an entrance to another network. Usually, the computers that control traffic within the network or at the local Internet service provider are gateway nodes.

NPort WS-120M needs to know the IP address of your network's default gateway computer in order to communicate with the hosts outside the local network environment.

For correct gateway IP address information, consult your network administrator.

## DNS

Input **4**, you can set the new DNS, and input 5 you can set the Secondary DNS, Shown in the following figure:

[zcom	Z-COM,Inc.	7F-2,No.9.Prosperity RD. I SBIP Hsinchu,300 Taiwan	Tel:886-3-5777364 Fax:886-3-5773359
<ul> <li> <b>dddddddd - 超级终端</b>         文件(配) 編輯(配) 查看(V) 呼叫(C) 传送(C)         </li> <li> <b>ご</b> 一 一 (2) (2)         (2)</li></ul>	_ □ × I) 帮助(I)		
LAN Setting 	 3.001.079 5.255.000 3.001.075 3.001.075 3.001.075		
Set New DNS1 (192.168.00 : ····································	01.075) CROLL CAPS RUM 捕:		

C

## Host Name

Input 7, you can set the new Host Name, Shown in the following figure:

🌯 dddddddd - 超级终端		×
文件(2)编辑(2)查看(2)呼叫(2)传送(2)帮助(2)		
└☞ @ ў ▫└凸 ≌'		_
LAN Setting LAN Setting [0]:Exit [1]:IP> 192.168.001.079 [2]:Netmask> 255.255.255.000 [3]:Gateway> 192.168.001.075 [4]:DNS1> 192.168.001.075 [5]:DNS2> 192.168.001.075 [5]:DNS2> 192.168.001.075 [6]:IP Mode> Static [7]:Host Name -> WS120 [8]:Password> password [S]:Save :7 Set New Host Name (WS120)	A	<
		>
▲ CAPS NUT NUT とごを:01 自动检测 115200 8-N-1 SCROLL CAPS NUT CAPS NUT CA	<u>Р</u>	捕;



### Password

Input 8, you can set the new Password, Shown in the following figure:

🍫 dddddddd - 超级终端		X
文件(E) 编辑(E) 查看(Y) 呼叫(C) 传送(T) 帮助(H)		
🗅 🖆 🏐 🔏 💷 🎦 😭		
+	+	<
	>	捕
出進援 0:33:03 目初检测 115200 8-N-1 SCRULL CARS	NUM	ЭĦĮ

### Save

When you changed all the setting you want to change, you should input S to save all the settings, Shown in the following figure:

zcom	Z-COM,Inc	7F-2,No.9.Prosperity RD. I SBIP Hsinchu,300 Taiwan
🗞 ddddddd - 超级终端		
文件 (E) 编辑 (E) 查看 (V) 呼叫 (C) 传送 (E) C) 😅 🍘 🌋 💷 🎦 😭	帮助(出)	
[S]:Save :	~	
+   LAN Setting	+   +	
[0]:Exit [1]:IP> 192.168. [2]:Netmask> 255.255.	001.079 255.000	
[3]:Gateway> 192.168. [4]:DNS1> 192.168. [5]:DNS2> 192.168.	001.075 001.075 001.075	
[7]:Host Name -> WS120 [8]:Password> password [8]:Save	I	
<u> :s_</u>		
□ 上注接 0:36:18 日初位則 115200 8-N-1 SCAU	ILL CALS NOM I	

## Exit

You can input "0" to leave LAN Setting page.

# **Wireless Setting**

When you turn into the WS-120M through **HyperTerminal** You can input **2** and then press **Enter** that will display the **Wireless Setting** message as follows:

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zcom	Z-COM,Inc.	7F-2,No.9.Prosperity RD. I SBIP Hsinchu,300 Taiwan	<b>Tel</b> :886-3-5777364 <b>Fax</b> :886-3-5773359
🌯 ddddddd - 超级终端			
文件(12)编辑(12)查看(12)呼叫(12)传 □ 😅 📨 🍒 💷 🎦 😭	送(12) 帮助(12)		
Wireless Settin +	ng   > TI205 > Infrastruc > Any de -> Open > HEX > 2 > 3030303030 > 3030303030 > 3030303030 > 303030303030 > 3031323334	c1 t	
■ 115200 8-N-1	SCROLL CAPS NUM	▲ 捕:	

# Network Type

Input **2**, you can set the Network Type of the Wireless,0 for Infrastructure mode,1 for Ad-hoc mode, Shown in the following figure:



## SSID

Input 1, you can set the SSID of the AP or Ad-hoc that you want to connect, Shown in the following figure:



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<ul> <li>◆ dddddddd - 超级终端</li> <li>文件(E) 編輯(E) 查看(V) 呼叫(E) 传送</li> <li>□ ☞ ◎ ③ 部口 凸 10</li> </ul>	■ ■ ▼ E ① 帮助 例		
[0]:Exit [1]:SSID [2]:Network Type [3]:Ad-Hoc Channel [4]:Authentication Mod [5]:Key Type [6]:Key Length [6]:Key Length [7]:Default WEP Key [7]:Default WEP Key [8]:WEP Key 1 (HEX) [9]:WEP Key 2 (HEX) [9]:WEP Key 2 (HEX) [A]:WEP Key 3 (HEX) [B]:WEP Key 4 (HEX) [C]:WPA-PSK (HEX) [S]:Save :1 Set New SSID (TI205):	> TI205 > Infrastruc1 > Any e -> Open > HEX > 2 > 3030303030 > 3030303030 > 3030303030 > 3030303030 > 3031323334		
▲ 1:03:41 自动检测 115200 8-N-1	SCROLL CAPS NUM 捕;		

### **Ah-Hoc Channel**

Input **3**, you can set the Ad-hoc Channel from of the AP or Ad-hoc that you want to connect, Shown in the following figure:



zcom_	Z-COM,Inc.	7F-2,No.9.Prosperity SBIP Hsinchu,300 Ta	RD.I <b>Tel</b> :886-3-5777364 iwan <b>Fax</b> :886-3-5773359
※ dddddddd - 超级终端 文件 (P) 编辑 (B) 查看 (V) 呼叫 (C) 传述 □ □ □ □ □ □ □ □ □	<b>—</b> 送① 帮助①		
<pre>+ [0]:Exit [1]:SSID [2]:Network Type [3]:Ad-Hoc Channel [4]:Authentication Mod [5]:Key Type [6]:Key Length [6]:Key Length [6]:Key Length [7]:Default WEP Key [8]:WEP Key 1 (HEX) [9]:WEP Key 2 (HEX) [9]:WEP Key 3 (HEX) [A]:WEP Key 3 (HEX) [B]:WEP Key 4 (HEX) [C]:WPA-PSK (HEX) [S]:Save :3 Set new Ad-Hoc Channel</pre>	+ > II205 > Infrastructu > Any e -> Open > HEX > 40 bits64 bi > 2 >303030303030 >303030303030 >303030303030 >3031323334 (011):_	ure its	
✓ ✓	SCROLL CAPS NUM 指	▶   打印	

### **Authentication Mode**

Input **4**, you can set the **Authentication Mode**:[0]Open,[1]WEP,[2]WPA-PSK,[3]WPA2-PSK, Shown in the following figure:

[zcom	Z-COM,Inc.	7F-2,No.9.Prosperity RD. I SBIP Hsinchu,300 Taiwan	<b>Tel</b> ∶886-3-5777364 <b>Fax</b> ∶886-3-5773359
dddddddd - 超级终端             文件              ()             編録              ()             査看              ()             デー             「	(街送 ① 帮助 ④) (街送 ① 帮助 ④) (市)		
▲ 1:49:01 自动检测 115200 8-1	N-1 SCROLL CAPS	2	

# Кеу Туре

Input **5**, you can set the key type of WEP or PSK encryption,0 for ASC type,1 for HEX type, Shown in the following figure:





### Key Length

Input **6**, you can set the Key Length of WEP encryption:[1]64 Bits,[2]128 Bits,[3]152 Bits, Shown in the following figure:

zcom_	Z-COM,Inc.	7F-2,No.9.Prosperity RD. I SBIP Hsinchu,300 Taiwan	<b>Tel</b> :886-3-5777364 <b>Fax</b> :886-3-5773359
◆ addadadad - 超级终端 文件で 編辑で 査希で 呼叫 □ ☞ ◎ ③ ■ □ □ □ □	 (c) 传送 (c) 帮助 (c)		
[7]:Default WEP Ke [8]:WEP Key 1 (HE [9]:WEP Key 2 (HE [A]:WEP Key 3 (HE [B]:WEP Key 4 (HE [C]:WPA-PSK (HE [S]:Save :6 Set new Key Length [1]: 64 Bits [2]: 128 Bits [3]: 152 Bits :	y> 2 X)> 303030 X)> 303030 X)> 303030 X)> 303030 X)> 303132	130 130 130 130 133	
Ci连接 1:55:42 自动检测 115200	8-N-1 SCROLL CAPS	2	

# **Default WEP Key**

Input 7, you can select the **Default WEP Key** the Key, Shown in the following figure:

🗞 fff - 超级终端	
文件 (E) 编辑 (E) 查看 (V) 呼叫 (C) 传送 (I) 帮助 (H)	
🗅 🚔 🍘 🐉 🗈 🎦 😭	
<pre>++   Wireless Setting   ++ [0]:Exit [1]:SSID&gt; TI205 [2]:Network Type&gt; Infrastructur [3]:Ad-Hoc Channel&gt; Any [4]:Authentication Mode -&gt; Open [5]:Key Type&gt; HEX [6]:Key Length&gt; 40 bits64 bit [7]:Default WEP Key&gt; 2 [8]:WEP Key 1 (HEX)&gt; 3030303030 [9]:WEP Key 2 (HEX)&gt; 30303030300 [9]:WEP Key 3 (HEX)&gt; 30303030300 [A]:WEP Key 4 (HEX)&gt; 30303030300 [B]:WEP Key 4 (HEX)&gt; 30303030300 [C]:WPA-PSK (HEX)&gt; 3031323334 [S]:Save :7 Set new Default WEP Key(04):_</pre>	e s
已连接 0:00:31 自动检测 115200 8-N-1 SCROLL CAPS NUM 捕	打印



From 8~B you can set the WEP KEY, such as when you select the **Authentication Mode** as **WEP** and set the **Default WEP Key** as **2**,that you should input **9** to set the **WEP Key 2**. Shown in the following figure:

6	
🧙 fff - 超级终端	
「「「」「「「「」」」「「」」」「「」」「「」」「「」」「「」」「「」」「「	
D 🗃 🗇 💲 🗠 🎦 🖆	
++	^
Wireless Setting	
tol. 5. : :	
[1]:SETD TT205	
[2]:Network Type> Infrastruct	ure
[3]:Ad-Hoc Channel> Any	ui c
[4]:Authentication Mode -> WEP	
[5]:Key Type> HEX	
[10]:Key Length> 40 Ditsb4 D	115
[8]:WEP Key 1 (HEX)>3030303030	
[9]:WEP Key 2 (HEX)>1234567890	
[A]:WEP Key 3 (HEX)>3030303030	
[B]:WEP Key 4 (HEX)>303030303030	
[C]:Sauce (HEX)>3031323334	
:9	
Set new WEP Key 2 (HEX):1234567890	
<u>,                                     </u>	~
	>
已连接 0:07:46 自动检测 115200 8-X-1 SCROLL CAPS 10mm 3	啊!打印

#### WPA-PSK

Input C you can set the Key of **WPA-PSK**, such as when you select the **Authentication Mode** as **WPA-PSK** or **WPA2-PSK**, that you should input C to set the key of **WPA\WPA2-PSK**. Shown in the following figure:





🗞 fff - 超级终端
文件(rg) 编辑(rg) 查看(y) 呼叫(g) 传送(rg) 帮助(rg)
D 🚔 🍘 🌋 🗈 🎦 😭
<pre>[2]:Network Type&gt; Infrastructure [3]:Ad-Hoc Channel&gt; Any [4]:Authentication Mode -&gt; WPA-PSK [5]:Key Type&gt; HEX [6]:Key Length&gt; 40 bits64 bits [7]:Default WEP Key&gt; 2 [8]:WEP Key 1 (HEX)&gt; 30303030303030303 00EC09498201D81234567890EF003030303030303030 00EC09498201D81234567890EF0030303030300000020 [A]:WEP Key 2 (HEX)&gt; 1234567890EF003 D8001000000000303030303030303030303030303</pre>
□注接 0:13:11 日初/磁測 115200 8-N-1 5616555 6763 NUM 1用 115

### Save

When you changed all the setting you want to change, you should input S to save all the settings. Shown in the following figure:

文件 (2) 編辑 (2) 查看 (2) 呼叫 (2) 传送 (2) 帮助 (3) 〇 (2) (3) (4) (4) (5) (5) (5) (5) (5) (5) (5) (5) (5) (5	🥙 fff - 超级终端	
□ □ □ □ □ □ □ □ □ □ □         ↓          ↓         ↓         ↓         ↓         ↓         ↓         ↓         ↓         ↓         ↓         ↓         ↓         ↓         ↓ <td>文件 (E) 编辑 (E) 查看 (Y) 呼叫 (C) 传送 (E) 帮助 (H)</td> <td></td>	文件 (E) 编辑 (E) 查看 (Y) 呼叫 (C) 传送 (E) 帮助 (H)	
++         Wireless Setting         [0]:Exit         [1]:SSID         [1]:SSID         [2]:Network Type         [3]:Ad-Hoc Channel         [3]:Ad-Hoc Channel         [3]:Ad-Hoc Channel         [5]:Key Type         [5]:Key Type         [6]:Key Length         [6]:Key Length         [6]:Key Length         [6]:Key Length         [7]:Default WEP Key         [8]:WEP Key 1         [1]:WEP Key 2         [8]:WEP Key 3         [1]:WEP Key 3         [1]:WEP Key 4         [1]:WEP Key 4         [1]:WPA-PSK         [S]:Save         [S]	다 🚔 💮 💈 🗈 🎦 😭	
	<pre>++   Wireless Setting   ++   Wireless Setting   ++ [0]:Exit [1]:SSID&gt; TI205 [2]:Network Type&gt; Infrastruct [3]:Ad-Hoc Channel&gt; Any [4]:Authentication Mode -&gt; Open [5]:Key Type&gt; HEX [6]:Key Length&gt; 40 bits64 b [7]:Default WEP Key&gt; 2 [8]:WEP Key 1 (HEX)&gt; 3030303030 [9]:WEP Key 2 (HEX)&gt; 3030303030 [9]:WEP Key 3 (HEX)&gt; 3030303030 [B]:WEP Key 4 (HEX)&gt; 3031323334 [S]:Save [S]</pre>	ure oits
		入補し打印





You can input **0** to leave **Wireless Setting** page.

# **COM PORT Setting**

When you turn into the WS-120M through HyperTerminal You can input 3 and then press Enter that will

display the **COM Port Setting** message as follows:

🌯 dddddddd - 超级终端	<
文件 (2) 编辑 (2) 查看 (V) 呼叫 (C) 传送 (C) 帮助 (H)	
🗅 🚘 💿 🍒 🗈 🎦 🖆	
[3]:COM Port Setting :3	5
COM PORT Setting	
<pre> [0]:Exit [1]:Baud Rate&gt; 115200 [2]:Data Bits&gt; 8 [3]:Parity Check&gt; 8 [3]:Parity Check&gt; None [4]:Stop Bit&gt; 2 [5]:Flow Control&gt; 2 [5]:Flow Control&gt; None [6]:Link Mode&gt; TCP Server [7]:Virtual Com&gt; Enable [8]:Pair Connection&gt; Disable [9]:Local Port&gt; 4660 [*]:Destination IP&gt; 010.000.050.001 [*]:Destination Port&gt; 4660</pre>	
	ED
LATE U.II.UC HANTERN IIS2UU O-N-I DOIDH CHUD NOM IM II	1

In COM PORT Setting you can set the **Baud Rate, Data Bits, Parity Check** and so on.

## **Baud Rate**

Input 1, you can set the **Baud Rate** , Shown in the following figure:

zcom_	Z-COM,Inc.	7F-2,No.9.Prosperity RD. I SBIP Hsinchu,300 Taiwan	<b>Tel</b> :886-3-5777364 <b>Fax</b> :886-3-5773359
🌯 ddddddd - 超级终端			
文件(12)编辑(12)查看(12)呼叫(12)传送 □ 🚅 💮 🍒 💷 🎦 💼	① 帮助(£)		
+   COM PORT Settin	+ g		
[0]:Exit [1]:Baud Rate> [2]:Data Bits> [3]:Parity Check> [4]:Stop Bit> [5]:Flow Control> [6]:Link Mode> [6]:Link Mode> [7]:Virtual Com> [8]:Pair Connection> [8]:Pair Connection> [9]:Local Port> [*]:Destination IP> [*]:Destination Port> [\$]:Save :1	115200 8 None 2 None TCP Server Enable Disable 4660 010.000.050.001 4660		
Set New Baud Rate (110~	230400): 115200_		
▲ ····································	CROLL CAPS NUM 捕打兵		
Here you can	set the	Baud	Rate as

F

110,150,300,600,1200,2400,4800,9600,19200,38400,57600,115200,230400 and so on.

# **Data Bits**

Input **3**, you can set the **Baud Rate**, Shown in the following figure:

ZCOM Z-COM,Inc
◆ dddddddd - 超级终端       - □ ×         文件 ① 编辑 ② 查看 ② 呼叫 ② 传送 ① 帮助 ④         □ ☞ ◎ ③ ■ □ □ □
<pre>*+   COM PORT Setting   ++   COM PORT Setting   ++ [0]:Exit [1]:Baud Rate&gt; 115200 [2]:Data Bits&gt; 8 [3]:Parity Check&gt; None [4]:Stop Bit&gt; 2 [5]:Flow Control&gt; None [4]:Stop Bit&gt; 2 [5]:Flow Control&gt; None [6]:Link Mode&gt; TCP Server [7]:Virtual Com&gt; Enable [8]:Pair Connection&gt; Disable [9]:Local Port&gt; 4660 [*]:Destination IP&gt; 010.000.050.001 [*]:Destination Port&gt; 4660 [S]:Save :2 Set New Data Bits (7-8): 8</pre>
✓ ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

Here you can set the New Data Bits as 7 or 8.

### **Parity Check**

Input 4, you can set the Parity Check , Shown in the following figure:

🌯 dd	lddddd	- 超级	终端						$\mathbf{X}$
文件の	)编辑(E)	查看 (V 1111) (11111) (1111) (1111) (1111) (1111) (1111) (1111) (1111) (1111) (1	) 呼메(C) ()	传送 (	[) 帮助	(H)			
[2 [3 [4 [5 [6 [7 [8 [9 [* [\$ :3	:Data :Pari :Stop :Flow :Link :Virt :Loca :Dest :Dest :Save	Bits ty Ch Bit Cont Mode ual C Conn I Por inati inati	eck rol om ection- t on IP on Port	> > > > > > >	8 None 2 None TCP Enab Disal 4660 010.1	Serve le ble 000.0	r 150.0	01	•
Se [] [] [] [] [] [] []	t New   0]: Nor 1]: Od 2]: Ev 3]: Mar 1]: Sp 1]: Sp	Parit ne d en rk ace	y Check	:					
<								3	
已连接	0:15:31 自	动检测	115200 8-1	<b>-1</b> SC	ROLL	CAPS	NUM	捕	打印

Here you can set the New Parity Check, input 0 for None,1 for Odd,2 for Even,3 for Mark and 4 for





### **Stop Bit**

Input 5, you can set the **Stop Bit**, Shown in the following figure:

🌯 dddddddd - 超级终端	
文件 (2) 编辑 (2) 查看 (Y) 呼叫 (2) 传送 (2) 帮助 (H)	
D 🚔 📨 🍒 🗈 🎦 🗳	
<pre>++ ! COM PORT Setting ! ++ [0]:Exit [1]:Baud Rate&gt; 115200 [2]:Data Bits&gt; 8 [3]:Parity Check&gt; None [4]:Stop Bit&gt; 2 [5]:Flow Control&gt; None [6]:Link Mode&gt; TCP Server [7]:Virtual Com&gt; Enable [8]:Pair Connection&gt; Disable [9]:Local Port&gt; 4660 [*]:Destination IP&gt; 010.000.050.001 [*]:Destination Port&gt; 4660 [S]:Save :4</pre>	
ご注接 0:16:1(自动检测 115200 8-೫-1 SCROLL CAPS NUM 捕	打印

Here you can set the New Stop Bits as 1 or 2.

#### Flow Contro1

🌯 ddddddd - 超级终端		×
文件 (E) 编辑 (E) 查看 (V) 呼叫 (C) 传送 (E) 帮助 (H)		
D 🗳 🍘 🍒 🗈 🎦 😭		
<pre>[0]:Exit [1]:Baud Rate&gt; 115200 [2]:Data Bits&gt; 8 [3]:Parity Check&gt; None [4]:Stop Bit&gt; 1 [5]:Flow Control&gt; None [6]:Link Mode&gt; TCP Server [7]:Virtual Com&gt; TCP Server [7]:Virtual Com&gt; Enable [8]:Pair Connection&gt; Disable [9]:Local Port&gt; 4660 [*]:Destination IP&gt; 010.000.050.00 [*]:Destination Port&gt; 4660 [\$]:Save :5 </pre>	01	
[2]: RTS/CTS :1		
		-
   こには、	捕	打印

Page32



Here you can set the New Flow Control, input 0 for None, 1 for Xon/Xoff, 2 for RTS/CTS.

### Link Mode

🏶 dddddddd - 超级终端	
文件 (2)编辑 (2)查看 (2)呼叫 (2)传送 (2)帮助 (2)	
<pre>[0]:Exit [1]:Baud Rate&gt; 115200 [2]:Data Bits&gt; 8 [3]:Parity Check&gt; None [4]:Stop Bit&gt; 1 [5]:Flow Control&gt; Xon/Xoff [6]:Link Mode&gt; TCP Server [7]:Virtual Com&gt; Enable [8]:Pair Connection&gt; Disable [9]:Local Port&gt; 4660 [*]:Destination IP&gt; 010.000.050.001 [*]:Destination Port&gt; 4660 [S]:Save :6</pre>	
Set New Link Mode: [0]: TCP Server [1]: TCP Client [2]: UDP :1_	
	>
已连接 0:18:22 自动检测 115200 8-14-1 SCROLL CAPS 100 捕	打印

Here you can choose the New Link Mode , input 0 for TCP Server , 1 for TCP Client , 2 for UDP.



🌯 ddddddd - 超级终端 文件(E) 编辑(E) 查看(Y) 呼叫(C) 传送(T) 帮助(H) D 🖻 🍘 🕉 🗈 🗃 😭 ----+ [0]:Exit [1]:Baud Rate -----> 115200 [11]:Baud Rate -----> 115200
[2]:Data Bits -----> 8
[3]:Parity Check ----> None
[4]:Stop Bit -----> 1
[5]:Flow Control ----> Xon/Xoff
[6]:Link Mode -----> TCP Client
[7]:Virtual Com ----> Enable
[8]:Pair Connection--> Disable
[\*]:Local Port ----> 4660
[a]:Destination IP---> 010 000 050 [a]:Destination IP----> 010.000.050.001 [b]:Destination Port--> 4660 [S]:Save :7 Set New VCom Mode: [0]: Disable [1]: Enable :1\_ > 已连接 0:25:16 自动检测 115200 8-N-1 NUM

Here you can Disable or Enable the Virtual Com , input 0 for Disable , 1 for Enable.

#### **Pair Connection**

🦓 dddddddd - 超级终端	
文件(E)编辑(E)查看(Y) 呼叫(C) 传送(E) 帮助(H)	
D 🚔 🍘 🕉 🗈 🔁 😭	
+	. 001
Set New Pair Connection: [0]: Disable [1]: Enable :0_	
	>
已连接 0.37.15 白动检测 115200 8-X-1 SCROLL CAPS X1M	捕   打印

Here you can Disable or Enable the Pair Connection , input 0 for Disable , 1 for Enable.





Local Port

🌯 ddddddd - 超级终端	
文件 (E) 编辑 (E) 查看 (V) 呼叫 (C) 传送 (E) 帮助 (H)	
D 🚔 📨 🍒 🗈 🎦 📸	
<pre>[S]:Save :</pre>	. 001
已连接 0:54:36 自动检测 115200 8-X-1 SCROLL CAPS XVM	』   捕   打覧

Input \* you can set the Local Port.

## **Destination IP**

🌯 dddddddd - 超级终端
文件 (E) 编辑 (E) 查看 (V) 呼叫 (C) 传送 (E) 帮助 (H)
D 🚔 🍘 🍒 🗈 🎦 🖆
COM PORT Setting
[0]:Exit [1]:Baud Rate> 115200 [2]:Data Bits> 8 [3]:Parity Check> None [4]:Stop Bit> 1 [5]:Flow Control> Xon/Xoff [6]:Link Mode> TCP Client [7]:Virtual Com> Enable [8]:Pair Connection> Disable [*]:Local Port> 4660 [a]:Destination IP> 010.000.050.001 [b]:Destination Port> 4660 [S]:Save :a
Set New Destination IP Address (010.000.0 :192.168.18.254_
已连接 0:56:18 自动检测 115200 8-14-1 SCROLL CAPS NUM 捕 打算

Here you can set the new Destination IP Address.





**Destination Port** 

🌯 ddddddd - 超级终端	
文件 (2) 编辑 (2) 查看 (2) 呼叫 (2) 传送 (2) 帮助 (3)	
D 🚔 📨 🍒 🗈 🎦 📸	
++   COM PORT Setting   ++ [0]:Exit [1]:Baud Rate> 115200 [2]:Data Bits> 8 [3]:Parity Check> None [4]:Stop Bit> 1 [5]:Flow Control> Xon/Xoff [6]:Link Mode> TCP Client [7]:Virtual Com> Enable [8]:Pair Connection> Disable [8]:Pair Connection> Disable [*]:Local Port> 4660 [a]:Destination IP> 4660 [S]:Save :b 	01
	>

Here you can set the New Destination Port.

### Save

When you changed all the setting you want to change, you should input S to save all the settings. Shown in the following figure:





Tel:886-3-5777364 Fax:886-3-5773359

🍓 ddddddd - 超级终端	
文件 (E) 编辑 (E) 查看 (Y) 呼叫 (C) 传送 (E) 帮助 (H)	
D 🗃 🍘 🕉 🗈 🔁 😭	
Set New Destination Port : 4660 OK ++   COM PORT Setting	
<pre>++ [0]:Exit [1]:Baud Rate&gt; 115200 [2]:Data Bits&gt; 8 [3]:Parity Check&gt; None [4]:Stop Bit&gt; 1 [5]:Flow Control&gt; Xon/Xoff [6]:Link Mode&gt; ICP Client [7]:Virtual Com&gt; Enable [8]:Pair Connection&gt; Disable [*]:Local Port&gt; 4660 [a]:Destination IP&gt; 010.000.050. [b]:Destination Port&gt; 4660 [S]:Save :S</pre>	001
	>
已连接 1:00:55 自动检测 115200 8-M-1 SCROLL CAPS NUM	捕打

#### Exit

You can input 0 to leave COM PORT Setting page.

Page?



# **Chapter 4 Web Console Configuration**

The Web Console is the most user-friendly method available to configure NPort WS-120M. This chapter introduces the Web Console function groups and function definitions. The following topics are covered in this chapter:

- Configuring Your Browser
- System
  - Basic Setup
  - Wireless Setup
  - Radio
  - Security
- Serial Server
  - RS232 Setup
- Management
  - Change Password
  - SNMP Setup
  - > Upgrade Firmware
  - Backup/Restore Settings
  - > Telnet
  - Reboot

# 💊 Note:

You may use either a cross-over or straight-through Ethernet cable to connect NPort WS-120M to a PC, Hub, or Switch. NPort WS-120M.s Ethernet port will auto-detect which type of cable is being used, and then adjust the signals accordingly.

# **Configuring Your Browser**

Before opening your browser, you need to enable cookies.

# Attention:

To use the Web Console, you will need to **enable your browser for cookies**. Your browser's cookie options should be located on your browser's Internet Properties window. Since different browsers , and different versions of the same browser are configured differently, refer to your browser's help section for details.



1. Type 192.168.\*.\* (the IP address which get from **DHCP** or you set through **HyperTerminal** ) in your browser's **Address** box, and then press **Enter**.

2. Input the password if prompted. The password will be transmitted with MD5 encryption over the

Ethernet. Note that you will not be prompted to enter the password if the NPort WS-120M is not currently password protected.

3. The NPort WS-120M homepage will open. On this page, you can see a brief description of the Web Console's four function groups.

$(\bigcirc)$		Basic Setup		
Wireless Bridge		hostname	ws120	
[ = Logout ]	4 	IP Address	O Manual ODHCP	
About	5	IP Address	192.168.18.92	
- Paeic Satun		IP Subnet Mask	255.255.255.0	
Basic setup		Default Gateway	192.168.18.254	
Wireless Setup		Primary DNS Server	218.2.135.1	
🛚 Radio		Secondary DNS Server	218. 2. 135. 1	
Security	1			
a Scan List		Apply	Cancel	
Serial Server				
RS232 Setup				
Management				
Change Password				
SNMP Setup				
Upgrade Firmware				
Backup/Restore Settings				
Teinet				
Reboot	~			





### **Basic Setup**

$(\bigcirc$		Basic Setup		
Wireless Bridge		hostname	ws-120	
[ = Logout	1	IP Address	O Manual O DHCP	
System		IP Address	192.168.18.92	
- Dagie Cotum		IP Subnet Mask	255.255.255.0	
Banc Setup		Default Gateway	192.168.18.254	
Wireless Setup		Primary DNS Server	218.2.135.1	
a Radio		Secondary DNS Server	218.2.135.1	
a Security		-		
a Scan List	]	Apply	Cancel	
Serial Server				
RS232 Setup				
Management				
Change Password				
SNMP Setup				
Upgrade Firmware				
Backup/Restore Settings				
Telnet				
Reboot	~			

NPort WS-120M WLAN supported IP configurations are Manual and dynamic (DHCP). Choose from two possible .**IP configuration modes. Manual** and **DHCP**.

### IP configuration

Method	Function Definition
Static	User defined IP address, Netmask, Gateway.
DHCP	DHCP Server assigned IP address, Netmask, Gateway, DNS, and Time Server.

#### IP address

Setting	Factory Default	Necessity
E.g., 192.168.1.1		
(IP addresses of the form	102 168 1 1	Dequired
x.x.x.0	192.100.1.1	Kequileu
and x.x.x.255 are invalid.		



An IP address is a number assigned to a network device (such as a computer) as a permanent address on the network. Computers use the IP address to identify and talk to each other over the network. Choose a proper IP address that is unique and valid in your network environment.

Netmask

Setting	Factory Default	Necessity
E.g., 255.255.255.0	255.255.255.0	Required

A netmask is used to group network hosts into subnets. When a packet is sent out over the network, the NPort WS-120M will use the netmask to check whether the desired TCP/IP host specified in the packet is on the same subnet as the NPort. If the address is on the same subnet, a connection is established directly between the NPort WS-120M and the host. If the host is not on the same subnet, the packet is sent to the Gateway address.

#### Gateway

Setting	Factory Default	Necessity
E.g., 192.168.1.1	None	Optional

A gateway is a network gateway that acts as an entrance to another network. Usually, the computers that control traffic within the network or at the local Internet service provider are gateway nodes.

NPort WS-120M needs to know the IP address of your network's default gateway computer in order to communicate with the hosts outside the local network environment.

For correct gateway IP address information, consult your network administrator.



### **Radio Settings**

Wireless Bridge	Radio Settings
[ Eogout ]	
About	Apply Cancel
Basic Setup	
Wireless Setup	
s Radio	
» Security	
scan List	
Serial Server RS232 Setup	
Management	
Change Password	
SNMP Setup	
Upgrade Firmware	
Backup/Restore Settings	
Teinet	
Reboot	

In "Radio Setting" page, You may choose from two different WLAN modes—Infrastructure Mode and

Ad-hoc Mode—which are described in the following.

#### SSID

Enter the name of the wireless network (SSID) that the WS-120M is connected to.

#### **Infrastructure Mode**

In the following example, the NPort WS-120M communicates with the host computer via the AP. The host computer connects to the AP via an Ethernet connection, allowing serial data to be transmitted back and forth between the serial devices and host computer.

#### **Ad-hoc Mode**

In the following example, two NPort WS-120M devices establish an Ad-hoc peer-to-peer relationship, which means that they communicate with each other directly, without going through an AP (Access Point)..

#### Channel

Select a radio channel for the wireless network from the pull-down menu. In infrastructure mode, the AP will specify the channel automatically. In Ad-hoc mode, the user must use the pull-down menu to specify the channel.



((((	Encryption Settings		
	WEP / WPA		
wireless Bridge	Network Authentication	WPA-PSK	
[ 📕 Logout ]	WPA Pre-Shared Key	12345678	
lystem About	Data Encryption		
About Cotur	WEP Key 1 💿	****	(HEX)
Basic Setup	WEP Key 2 🔿	*****	(HEX)
Vireless Setup	WEP Key 3 🔘	******	(HEX)
Radio	WEP Key 4 🔿	* * * * * * * * * *	(HEX)
Security			
Scan List		Apply Cancel	
erial Server			
RS232 Setup			
lanagement			
Change Password			
SNMP Setup			
Upgrade Firmware			
Backup/Restore Settings			
Teinet			
Reboot			

The wireless network interface supports data encryption (WEP, 64 or 128 bits) and WPA-PSK/WPA2-PSK encryption.

#### **Network Authentication**

Select an authentication scheme of **Open** System ,**WPA-PSK** or **WPA2-PSK** from the pull-down menu.

#### WPA Pre-Shared Key

When WPA-PSK or WPA2-PSK is enabled. You should fill the WPA Pre-Shared Key in the textbox.

#### WEP Key Index

Selects the **Primary WEP Key** for your wireless network.

#### WEP Key 1/2/3/4

For each of the four WEP Keys, enter the appropriate **WEP Key**. The WEP Keys are used to help prevent data from being stolen as it is transmitted over public networks. The WEP Key setting(s) for the NPort WS-120M must be the same as the WEP Key settings for the AP.





#### RS232 Setup

((((	RS232 Setup				
00110111011010000111010	Baud Rate	115200 🗸 bps			
Wireless Bridge	Parity	⊙None ○Odd ○Even	🔾 Mark 🔘 Space		
[ 📕 Logout ]	Data bits	🔾 7 bits 💿 8 bits			
System	Stop bits	🔾 1 bits 💿 2 bits			
About	Flow Control	⊙None ○Xon/Xoff ○R	TS/CTS		
Basic Setup					
	Transfer Layer	● TCP Server ○ TCP Clie	nt OUDP		
Wireless Setup	Enable Virtual C	OM for Serial/IP	🗹 Enable		
a Radio	Pair Connection		Enable		
Security	Level Ded		4660		
s Scan List	Local Port		4000		
Quality Community					
Serial Server		Apply Cancel			
13232 3644					
Management					
Change Password					
SNMP Setup					
Upgrade Firmware					
Backup/Restore Settings					
Teinet					
Reboot					

#### **Baud Rate**

In the drop-down box you can select the Baud Rate of RS232

#### Parity

You can select the Parity from the radio button "None, Odd, Even, Mark or Space"

#### Data bits

You can select the Data bits from the radio button "7 bits or 8 bits"

#### **Stop bits**

You can select the Stop bits from the radio button "1 bits or 2 bits"

#### **Flow Control**

You can select the Flow Control from the radio button "None, Xon/Xoff or RTS/CTS"

#### **Transfer Layer**

You can select the Transfer Layer from the radio button "TCP Server, TCP Client, UDP"

1. When you select the TCP Server, you should configure some setting of TCP Server as follows image:





2. When you select the TCP Client, you should configure some setting of TCP Client as follows image:

Transfer Layer O TCP Server O TCP Client O UDP					
	Enable Virtual COM for Serial/IP	🗹 Enable			
	Pair Connection	Enable			
	Destination IP	10.0.50.1			
	Destination Port	4660			

3. When you select the UDP, you should configure some setting of UDP as follows image:

Transfer Layer OTCP Server OTCP Client OUDP			
	Destination IP	10.0.50.1	
	Destination Port	4660	
	Local Port	4660	



**Change Password** 

Change Password					
Current Password New Password					
Repeat New Password Restore Default Password O Yes O No					
Apply	Cancel				

You can have your desired password by changing password..

- 1. Take the following steps to change password.
- 2. Enter your currently-used password in the current field.
- 3. Enter your new password in the New Password field.
- 4. Re-enter the new password to confirm it in the Repeat New Password field.
- 5. Finally, click "Apply" to save the change.

(Also, if you desire to restore to the factory-set password, please click "Yes". The default setting is disabled.)



SNMP Setup					
💿 Enable i O Disable					
public					
private					
0.0.0.0					
Cancel					
	Cancel				

In SNMP Setup you can enable and disable SNMP.

### **Read Community Name**

When you Enable the SNMP, you should set the Read Community Name same as SNMP tool Setting.

#### Write Community Name

When you Enable the SNMP, you should set the Write Community Name same as SNMP tool Setting.

#### **IP Address to Receive Traps**

You can set a IP address, When SNMP tool change some setting, you can read some message from the address.

#### **Upgrade Firmware**

Upgrade Firmware				
Browse to locate the firmware file [ 浏览				
Upload				

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- 1. Open Upgrade Firmware;
- 2. Click **Browse** to select your wanted file for upgrade.
- 3. Click **Upload** to enable the file to be loaded to your WS-120M.
- 4. Reboot your WS-120M and check whether the firmware has been upgraded in the Basic Information.

## **Backup / Restore Settings**

NPort WS-120M provides backup and restore for file management.

Backup / Restore Settings			
Back up a copy of the current settings to a file	Backup		
Retrieve backed up settings from a file File	Retrieve		
Restore factory default settings	Restore		

#### Backup:

You have access to back up the currently settings by enabling NPort WS-120M's Backup function.

#### Retrieve:

Retrieve button allows you to retrieve your backup files.

#### Restore:

This button can be used to clear ALL data and restore ALL settings to the factory default values.





Telnet	
Enabled/Disabled Telnet	
Apply Cancel	

In this page you can enable or disable the function of Telnet.

## **Reboot AP**

In some cases, if you want to reboot NPort WS-120M, click Yes and then apply. WS-120M will reboot.

Reboot	
Reboot This Wireless Bridge 🔾 Yes 💿 No	
Apply Cancel	



If you have any further questions, please contact your local authorized reseller for support.

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