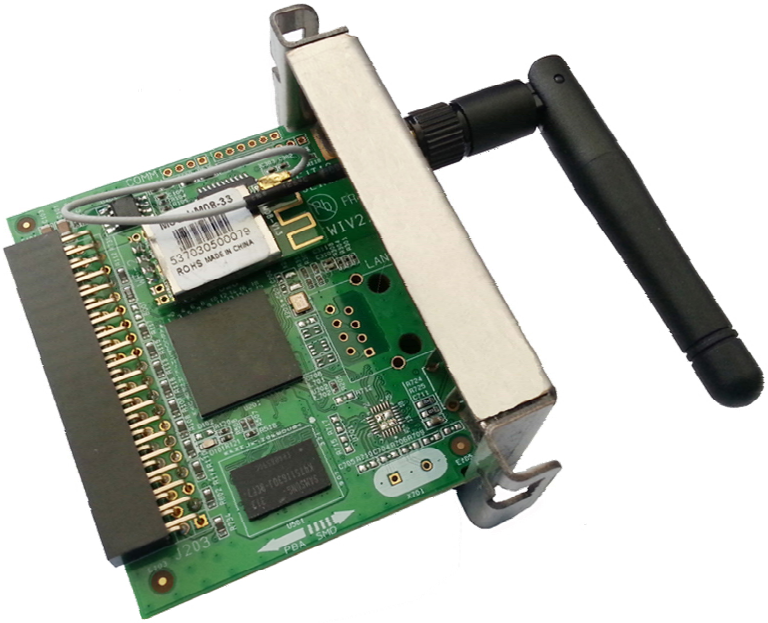
USER’S MANUAL

WLAN Interface Module

JK-W03



SHANDONG NEW BEIYANG INFORMATION TECHNOLOGY CO., LTD

Revision records

Date	Version records	Description	Author
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Warning and caution

⚠ Warning: Items shall be strictly followed to avoid injury or damage to body and equipment.

⚠ Caution: Items with important information and prompts for operating the printer.

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Safety instructions

Before operating and using the product, please read the following items carefully:

1) The interface module is a part of whole machine, and please observe the cautions in User's Manual while using;
2) Keep this manual safe and at hand for reference purpose.

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1 Overview

1.1 Introduction

The interface module cooperates with SNBC's printer for using, and they are used to realize the function of printer network communication. They can carry out the Wi-Fi communication, 10/100Mbps Ethernet communication, port 9100 printing, printer status back, configuration and maintenance of interface module, and so on.

1.2 Main features

1) Features

- Support 802.11b, 802.11g, 802.11n protocol communication;
- Support 10/100Mbps Ethernet communication (optional);
- Support original printing method, and the port number can be configured;
- Support LPR/LPD printing;
- Support port 4000 status back;
- Support the IPX parameter setting of port 3100;
- Support port 3000 parameter setting;
- The parameter setting supports security verifying through password;
- Support updating firmware on-line;
- Support printer status inquiry and interface module maintenance based on HTTP;
- Support HTTP and web page updating;
- Support restoring default configuration through button;
- The communication speed is more than 500KByte/s.

2) Supported protocols

- IPv4
- IPv6
- IPX/SPX
- ARP
- ICMP
- TCP
- UDP
- DHCP
- DHCPv6
- TFTP
- HTTP
- IPX

2 Main technical index

Item		Content	
Wire related		Wire communication speed	10Mbps/100Mbps
Wireless related		Wireless communication speed	Max. 150Mbps
		Transmission distance	If there is no obstacle in the room, the maximum distance is 100m (the transmission distance changes with the using environment).
		Channel	1-13
		Safety	64/128 WEP, WPA-PSK, WPA2-PSK
		Network card type	USB2.0
Interface module related	Status monitoring	Special configuration tool Browser	
	Configuration management	Special configuration tool Browser	
	Firmware updating	TFTP, web page updating on-line	
	Basic communication protocol	ARP, RARP, IP, ICMP, TCP, UDP, IPv6, DHCPv6, IPX	
	Printing communication method	Port 9100, LPR/LPD	
Printer related	Status inquiry	Software developing package (including DLL and Demo), browser	
	Average printing communication speed	More than 500KByte/s	

Table 2.1 Technical index of WLAN interface module

3 Appearance and modules

3.1 Appearance and modules

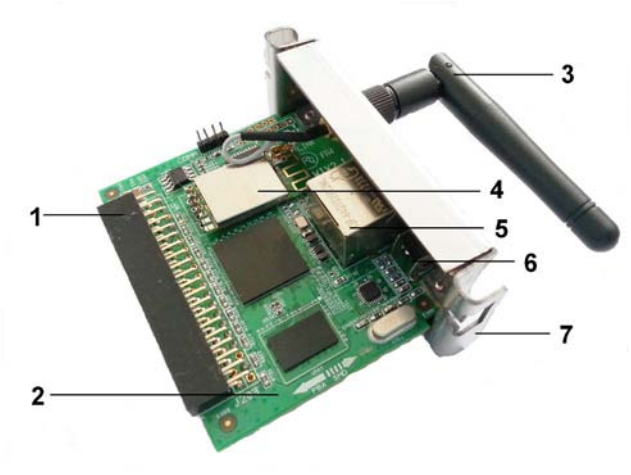


Figure 3.1.1 Appearance of interface module

1—40P double bend socket

2 —control board

3 —antenna

4 —WIFI module

5—Ethernet communication interface (optional)

6 —reset button

7 —interface baffle

3.2 LED description

The wired interface module has two LEDs, one yellow and one green.

Green LED: When the interface module has been connected to the Ethernet, the green LED is on;

Yellow LED: The yellow LED will flash when receiving or sending a data package, or detecting a conflict.

4 Installation

4.1 Unpacking

Open the carton and check whether all items listed on the packing list are included or have any damages. In case of damages or missing items, please contact your dealer or the manufacture for assistance.

4.2 Connecting interface module

Refer to Figure 4.2.1, insert the interface module into the communication interface of printer, and fix it onto the printer with screws. Then insert the network cable into the 10/100M BASE-T communication interface.

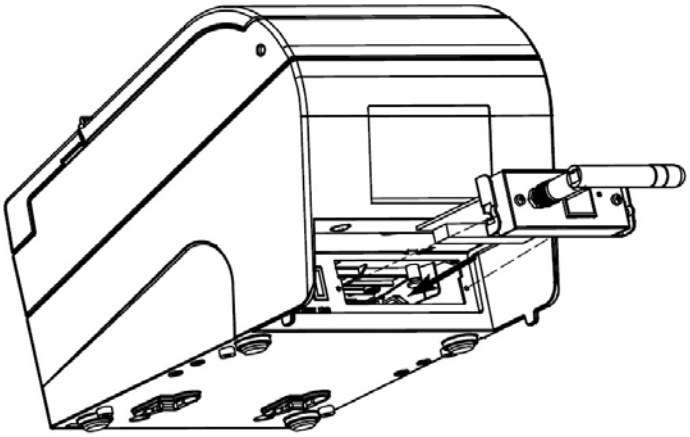
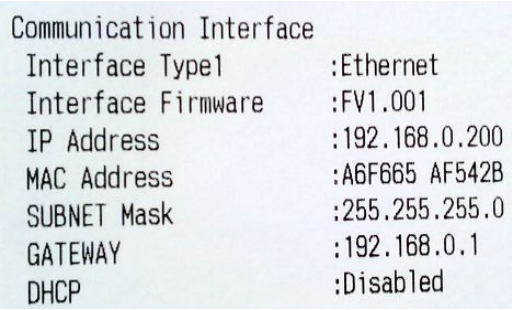


Figure 4.2.1 Installation of interface module

After having finished the installation of interface module, print the self-test page with reference to the explanation in printer's User's Manual, and the self-test page information related with JK-W03 interface module is as follows:

```
Communication Interface
 Interface Type        :Wi-Fi
 SSID                  :defaultSSID
 Mode                  :Ad-Hoc
 Interface Firmware    :FV1.000
 IP Address            :192.168.0.200
 MAC Address           :00C002 B7E758
 SUBNET Mask           :255.255.255.0
 GATEWAY               :192.168.0.1
 DHCP                  :Disabled
```

Figure 4.2.2 Self-test page information under wireless mode



```
Communication Interface
 Interface Type1        :Ethernet
 Interface Firmware     :FV1.001
 IP Address             :192.168.0.200
 MAC Address            :A6F665 AF542B
 SUBNET Mask            :255.255.255.0
 GATEWAY                :192.168.0.1
 DHCP                   :Disabled
```

Figure 4.2.3 Self-test page information under wired mode

Among which:

- Interface Type: indicate type of interface. When the wireless interface is valid, it is Wi-Fi; when the wired interface is valid, it is Ethernet;
- SSID: indicate the service area identifier of wireless communication;
- Mode: indicate wireless mode. Infra is infrastructure mode and Ad-Hoc is point-to-point mode;
- Interface Firmware: indicate the firmware version of interface module;
- IP Address: indicate the currently used IP address of interface module;
- MAC Address: indicate the hardware address of interface module;
- SUBNET Mask: indicate subnet mask;
- GATEWAY: indicate gateway;
- DHCP: indicate whether obtaining the network configuration parameters like IP address and so on through DHCP. Disabled indicates NO and Enabled indicates Yes.

5 Device search and parameter configuration

5.1 Connecting wireless module through wireless network

5.1.1 Checking parameters of wireless module

The parameters of the wireless module are the factory default values when receiving the wireless module for the first time, which can be confirmed by printing the printer self-test page.

```
Communication Interface
 Interface Type        :Wi-Fi
 SSID                  :defaultSSID
 Mode                  :Ad-Hoc
 Interface Firmware    :FV1.000
 IP Address            :192.168.0.200
 MAC Address           :00C002 B7E758
 SUBNET Mask           :255.255.255.0
 GATEWAY               :192.168.0.1
 DHCP                  :Disabled
```

Figure 5.1.1 wireless mode self-test page information

The factory settings are as follows:

SSID (wireless network name): defaultSSID

Mode (wireless network mode): AD-HOC

IP Address (IP address): 192.168.0.200

SUBNET Mask (subnet mask): 255.255.255.0

GATEWAY (gateway address): 192.168.1.1

DHCP: Disabled

PASSWORD: none

Print Port: 9100

Inactivity time: 5

If the parameters are not the default values, please connect according to the actual parameters of the wireless module, and the parameters of wireless module can also be reset to the default values through the button on the wireless module (please refer to chapter 5.8).

After the wireless network module works normally, it can be connected and configured.

5.1.2 Wireless network connection with wireless module using network card

```
Interface Type        :Wi-Fi
SSID                  :defaultSSID
Mode                  :Ad-Hoc
```

Figure 5.1.2 wireless mode self-test page information

If the Mode parameter of the wireless module is AD-HOC, it indicates that the wireless module is under AD-HOC mode. Under this mode, you can carry out the wireless network connection with wireless module directly using network card rather than using wireless router. But if AD-HOC mode is used, the configured and used computer must have a wireless network card. SSID represents the name of the wireless network connected by the current wireless module.

If you are using Windows 7 system or a system which has similar operation interface, please double click the icon at the lower right corner of the desktop to open the wireless network connection interface, as shown in the figure:

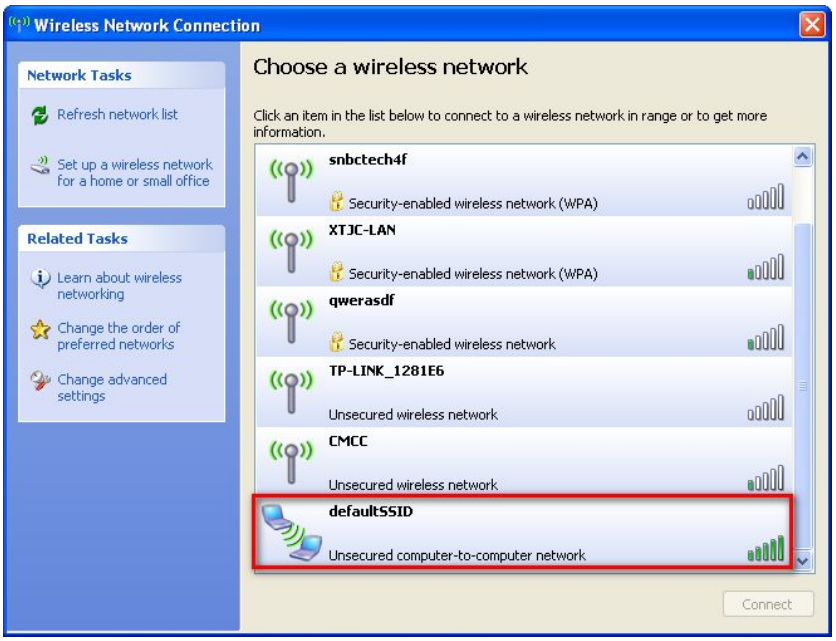


Figure 5.1.3 wireless network connection interface

Caution: represents AD-HOC mode wireless network built by wireless module; represents Infa mode wireless network built by wireless Router. Since our wireless module is under AD-HOC mode, choose the corresponding wireless network name defaultSSID under AD-HOC mode to connect, the network marked by red lines shown in figure 5.1.3.

If you are using Windows 7 system or a system which has similar operation interface, please click the icon at the lower right corner of the desktop to open the wireless network connection interface, as shown in the following figure:

Figure 5.1.4 WIN7 system wireless network connection interface

Caution: represents AD-HOC mode wireless network built by wireless module; represents Infa mode wireless network built by wireless Router. Since our wireless module is under AD-HOC mode, choose the corresponding wireless network name defaultSSID under AD-HOC mode to connect, the network marked by red lines shown in figure 5.1.4.

Configure the wireless interface under AD-HOC (point-to-point) mode.

5.1.3 Wireless network connection through wireless router

If the Mode of wireless module is Infa, it indicates that the wireless module is under base station mode. Under this mode, the wireless network connection with network interface board is realized through wireless router. The PC can be connected to the wireless router through wired or wireless method, and it can communicate with printer when setting the IP address of PC and printer in the same network segment.

5.2 Search interface module through configuration tool

Through the BYNetWinConfig.exe (V3.07 and above) tool, you can search the network interface modules connected to the same network, and configure and change their parameters.

Before running the software, connect the host to the network that the printer is in, and set the network mode, SSID, and subnet mask of host to make them consistent with interface module. In addition, the IP address of host should be among the subnet to ensure that the host and the interface module are in the same subnet.

Note:

While changing the parameters of network interface module through the configuration tool, if there are several devices with the same IP address in a subnet (for example, several interface modules use the factory setting), the communication cannot be carried out since the conflict of IP address. Therefore, when changing the network parameters of the interface module with factory settings, only one network interface device can be connected each time and ensure that the IP addresses after the change are not the same.

While configuring the parameters of network interface module, don't set the same SSID and channel for network of point-to-point mode and infrastructure mode to avoid abnormal communication.

For detailed usage of network interface module configuration tool, please refer to the following explanation:

Run BYNetWinConfig.exe, and show the main window of configuration tool (Figure 5.2.1).

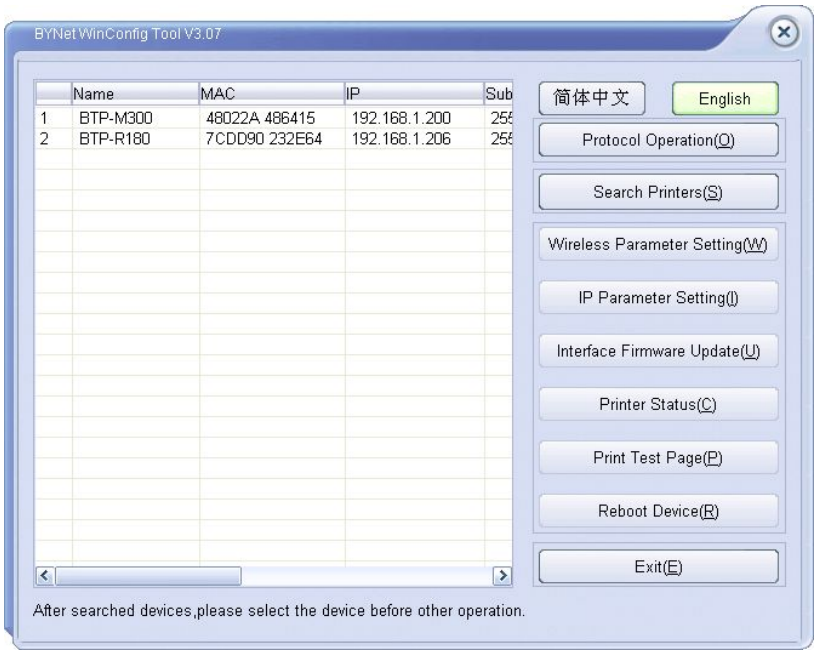


Figure 5.2.1 Main window of configuration tool

- Search the printer

Click "Protocol Operation (O)" in the main window, then the search protocol selection window will pop up. If selecting IPX/SPX protocol, then you can search the printers connected to the network, which all adopt JK-W03 interface module; If selecting UDP broadcast protocol, then you can search the JK-W03 interface module printers of different network segments. The search results will show in the list box so

that the user can configure and manage easily. The information displayed includes: Printer name, MAC address, IP address, gateway address, subnet mask, DHCP enabled, firmware version of interface module and interface type.

Note:

1. When JK-W03 network interface adopts UDP protocol, UDP broadcast protocol, and UDP and IPX/SPX protocol for search, the IP address cannot conflict. When configuring the factory setting of JK-W03 interface module, adopt the configuration mode of single connection and single search. If adopting IPX/SPX protocol search, then you can search and configure the factory settings of several JK-W03 interface modules.
2. If adopting IPX/SPX protocol search, the host end of user should install IPX/SPX protocol and configure relative parameters. The detailed setting steps are as follows:

The following are the steps to install IPX protocol under Windows XP system:

Open property of "Network Neighborhood", select "Local Area Connection", and then click the right button to open the dialog box of property (see Figure 5.2.2):

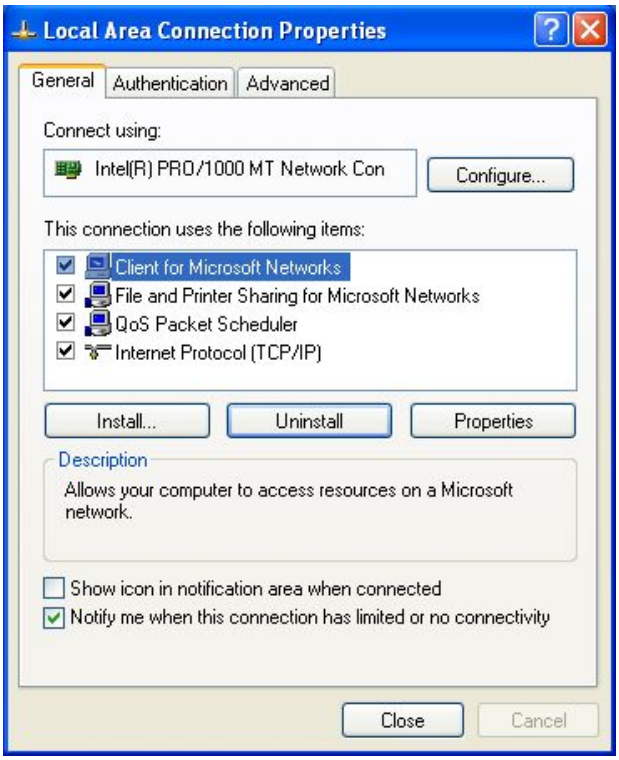


Figure5.2.2 Property dialog box of local area connection

Click "Install" button, and the following dialog box will pop up (see Figure 5.2.3):

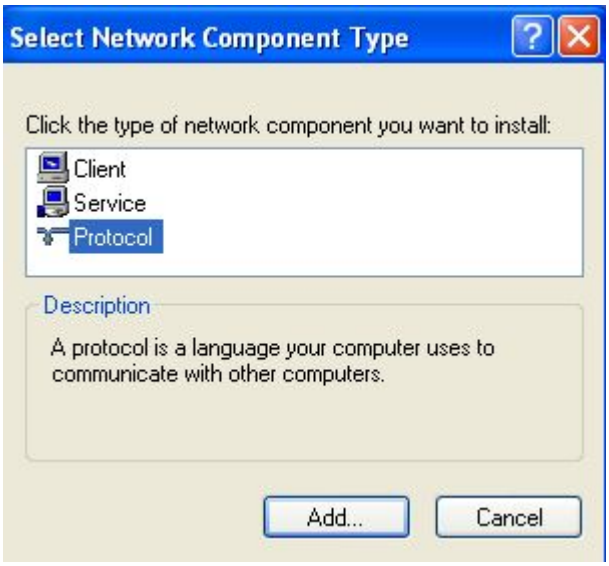


Figure 5.2.3 Select type of network components

Select "protocol", click "Add" button and the following dialog box will pop up (see Figure 5.2.4):

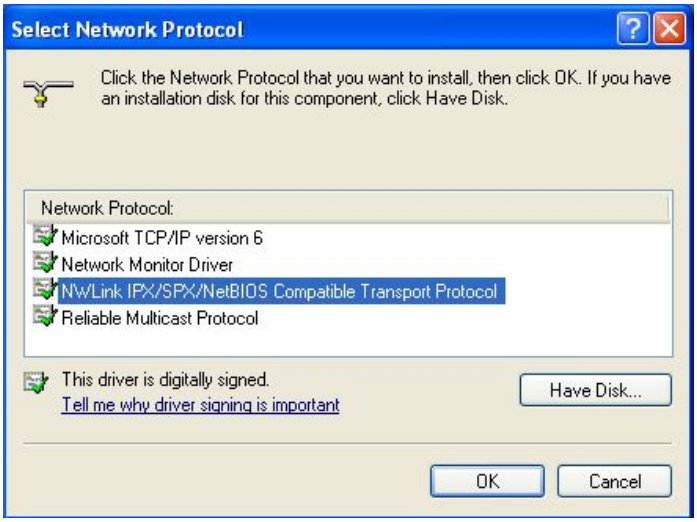


Figure 5.2.4 Select network protocol

Select "NWLink IPX/SPX/NetBIOS Compatible Transport Protocol", and click "OK" button to finish the installation of IPX protocol.

After installing the IPX/SPX protocol, select IPX/SPX protocol and click "Property" button to open the window of IPX/SPX property. Then set the frame type to "Ethernet 802.3" and set the net number to "00000000" (see Figure 5.2.5):

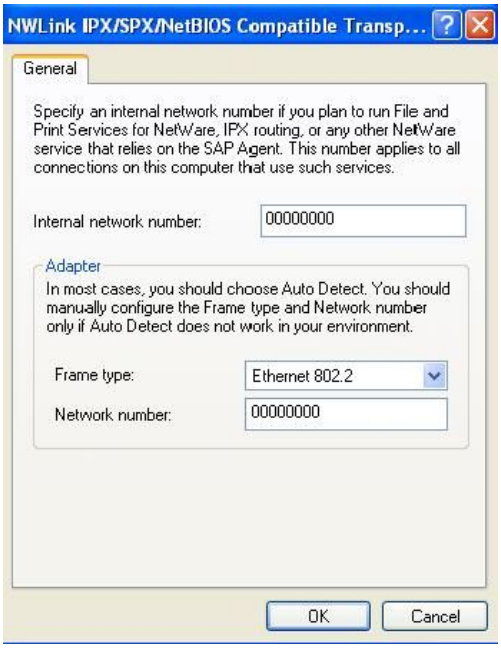


Figure 5.2.5 Protocol property window

Through the above steps, finish the installation of IPX protocol and it can be used.

- Password verifying function

Select the device in list box of main window, click the "Set network parameter" button of main window and the password verifying dialog box will pop up (see Figure 5.2.6). Then enter the configuration password (there is no password in the default configuration, and click "OK" directly), and then click "OK" to verify the password.

Figure 5.2.6 Password verifying window

- Set the wireless network parameters like SSID, etc.

After passing the password verification, enter the window of "Set wireless parameters" (see Figure 5.2.7), and then you can change the network parameters of printer, like network mode, wireless SSID, wireless encryption and so on.

Figure 5.2.7 Set wireless parameters window

Region selection: Select different channel region and the channel range used by different regions is different.

Communication mode: Select the working mode of printer wireless network. The base station mode (that is, infrastructure network) is the type that using wireless router to build the wireless network. The peer-to-peer mode (that is, AD-HOC mode) builds the wireless network directly using wireless network card.

SSID: Name of wireless network. It is used to set the name of wireless network to be connected.

Channel: It is used to set the range of wireless frequency used by wireless network. It needs to be set only when the communication mode is set to peer-to-peer mode.

Safe mode: It is used to set whether the wireless network has adopted encryption mode. If it is encrypted, then check this item and carry out detailed settings; If it is not encrypted, then there is no need to check this item.

Encryption method: Set the encryption method of wireless network. The encryption methods supported by infrastructure network and peer-to-peer network are different. Under base station mode, support WEP, WPA-PAK and WPA2-PSK; Under peer-to-peer mode, support WEP and WPANONE mode.

Wep mode or Wpa mode: It is used to set the encryption mode during WEP and WPA encryption. When adopting WEP encryption, you can select "Open System" and "Shared Key" these two kinds of mode; when adopting WPANONE, WPA-PSK or WPA2-PSK, you can select "AES" and "TKIP".

Wep size: It is used to set the length of encryption key during WEP encryption.

Format of encryption key: It is used to set whether the password selects ASCII or HEX.

Wep data or Wpa data: It is used to set the password during encryption. The length of password supported by different encryption mode is different. When adopting WPANONE, WPA-PSK or WPA2-PSK encryption, you can set 8~63 ASCII or 64 HEX.

Note: During the setting of wireless network parameters, be careful that the wireless network parameters need to be set at one time, and this cannot be separate. If the setting of wireless network parameters is wrong, this will cause that the wireless module cannot connect to the wireless network normally. Then the wireless module parameters need to be set again and restore the parameters to factory defaults.

■ Set network parameters like IP address, etc.

After the password verifying passes, enter the window of "Network parameter setting" (see Figure 5.2.8), then the network parameters like IP address can be changed.

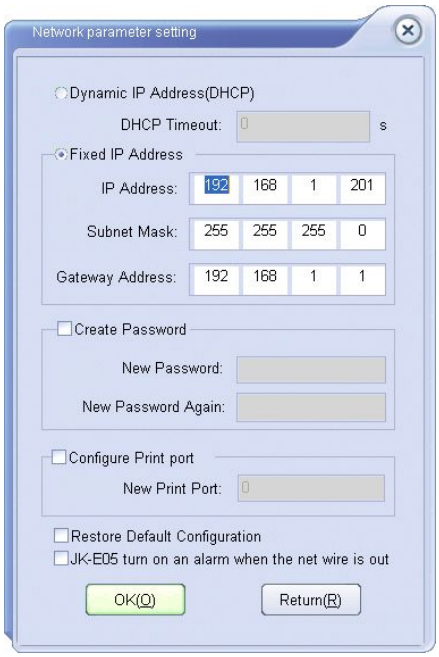


Figure 5.2.8 Network parameters configuring window

Through this window, there are two methods to configure the network parameters. One method is "Get IP address automatically", and the other method is to set the parameters like IP address manually. Meantime, you can also change the configuration password, printing port and restore default settings. After the change, click "OK" to exit from configuration of port and click "Reset" button to wait for restart of printer and finish changing the configuration.

The factory settings are as follows:

IP address: 192.168.0.200

Subnet mask: 255.255.255.0

Gateway address: 192.168.1.1

DHCP enabled: Disabled

PASSWORD: none

Print Port: 9100

Inactivity time: 5

■ Interface module firmware updating

Select the device in list box of main window, click "Interface firmware update" button to enter window of firmware updating (see Figure 5.2.9) and then check whether the IP address is consistent with that of selected device (compare with the self-test page printed by the device).

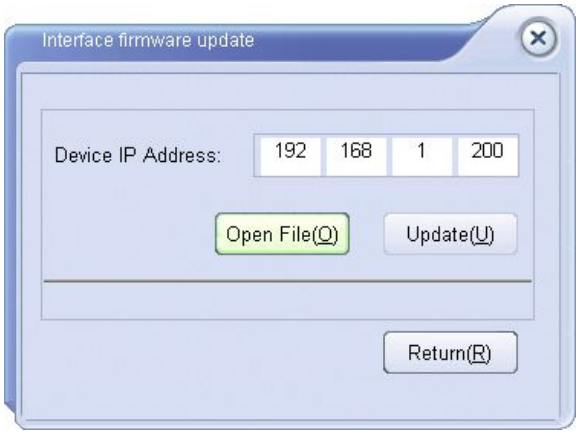


Figure 5.2.9 Firmware updating window

If their IP addresses are consistent, click "Open File" button and select the file to be updated. Then click "Update" button to realize the function of transmission data updating.

■ Check status of printer

Select the device in list box of main window, click the "Check Printer Status" button in the main window to check the status of printer (see Figure 5.2.10).

Figure 5.2.10 Printer status checking window

■ Print the test page

Select the device in the list box and click the "Print self-test page" button in the main window to print out the test page.

Note: When printing the self-test page, the IP address of printer and PC must be in the same network segment.

■ Reset

After finishing the updating, click "Reset" button to finish the reset and restart of interface in order to make the change and updating valid.

5.3 Realization of printing function

Install the printer driver, and the port type selects parallel interface. After finishing the installation, configure the port of printer driver to network port again. Take BTP-2002NP printer under Windows XP system for example to explain how to configure the network port:

1) Right click the installed BTP-2002NP icon and open the property window (see Figure 5.3.1);

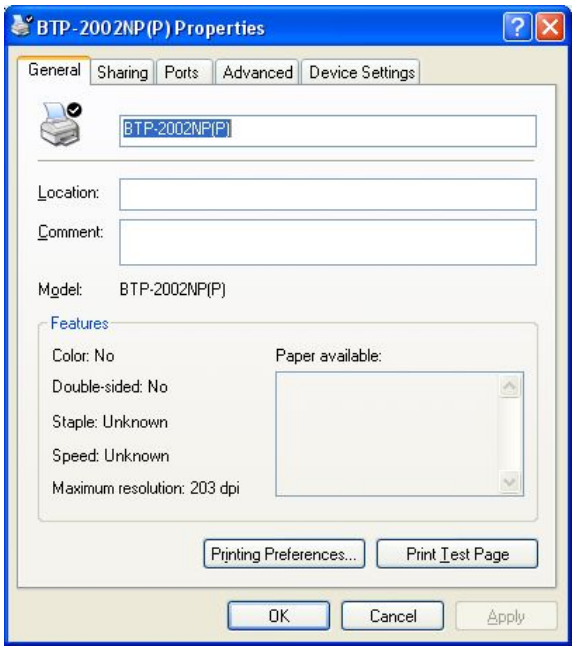


Figure 5.3.1 Printer property window

2) Select "Port" property (see Figure 5.3.2), and the TCP/IP port has not been installed. Then click "Add Port" button;

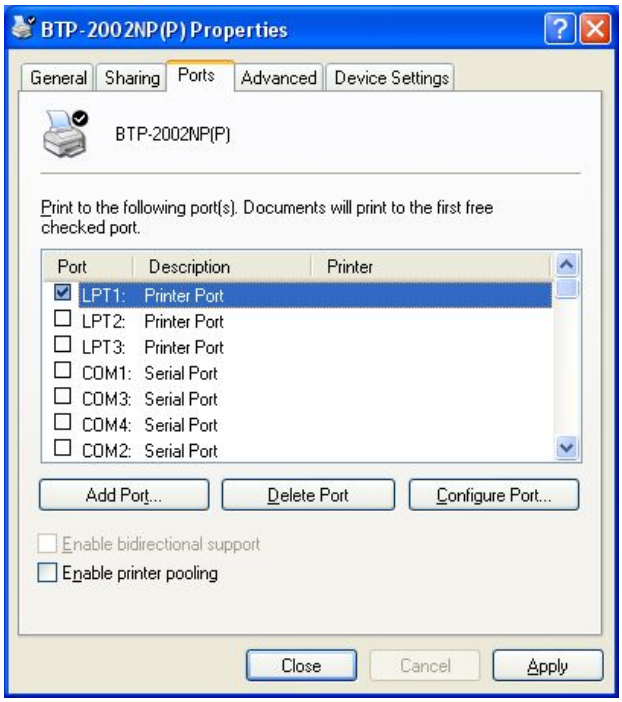


Figure 5.3.2 PORT property

3) Select "Standard TCP/IP Port" in the list box of "Printer Ports" window, then click "New Port" button

(see Figure 5.3.3);

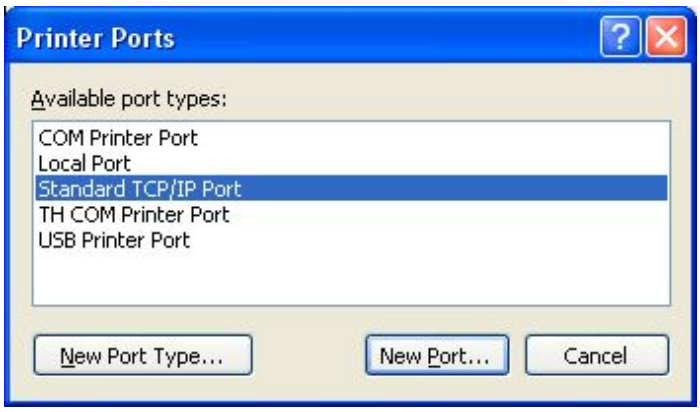


Figure 5.3.3 Printer Ports

4) Click "Next" (see Figure 5.3.4);

Figure 5.3.4

5) In relative editing box, fill in "Printer Name or IP Address". The contents filled in should be consistent with that on the self-test page of printer, and then click "Next" (see Figure 5.3.5);

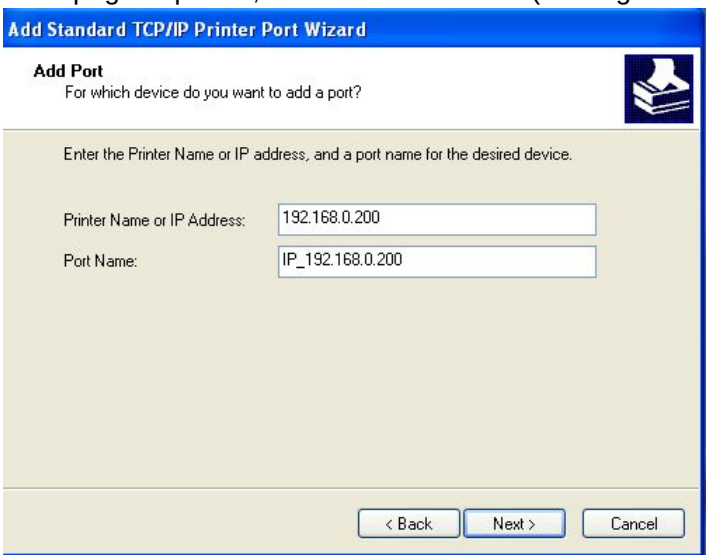


Figure 5.3.5

6) The default contents (see Figure 5.3.6), and click "Next";

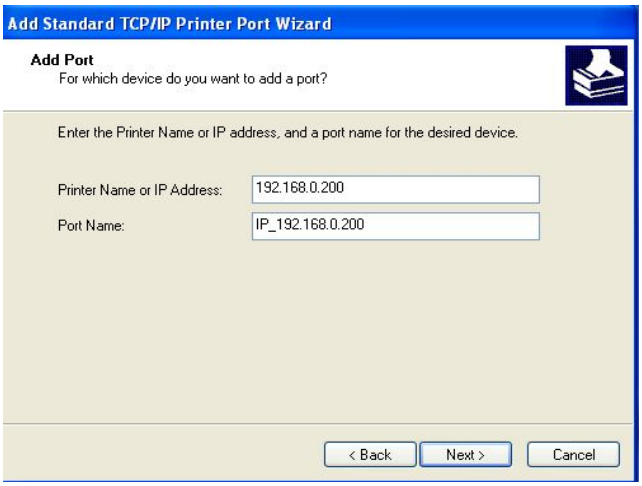


Figure 5.3.6

7) Refer to Figure 5.3.7, click "Finish" button to finish the adding of port;

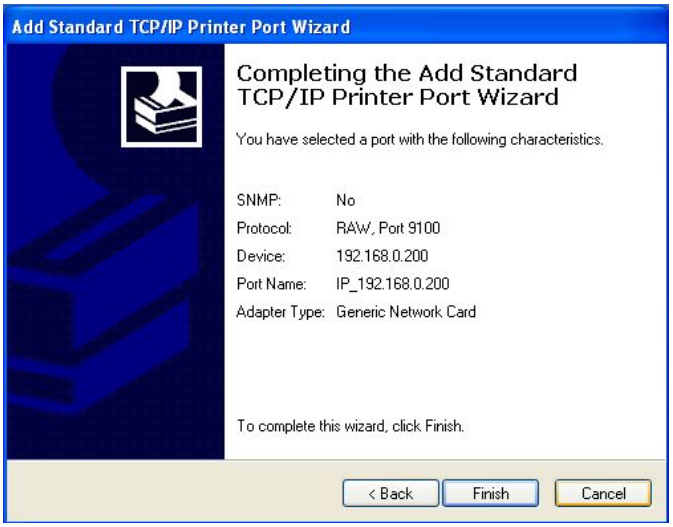


Figure 5.3.7

8) Refer to Figure 5.3.8, select the newly added TCP/IP port, click "Application" and then click "OK" button to finish the configuration of TCP/IP port.

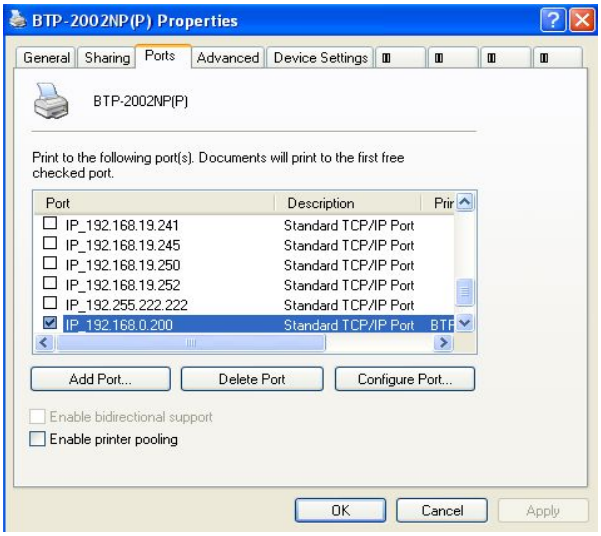


Figure 5.3.8

5.4 Firmware updating

JK-W03 interface module supports updating firmware online, and the updating function is realized through TFTP protocol. Use BYNetWinConfig.exe tool to update the firmware (refer to Chapter 4.3), or you can send the firmware updating file to port 69 of interface module for updating through any TFTP client. While updating the firmware, you must adopt the firmware provided by SNBC.

JK-W03 interface module supports web page updating and you can update the firmware of interface module through the browser (refer to Chapter 4.7.3).

If the failure of updating (power-down of printer during the process of updating) causes that the interface module cannot work normally, then the printer should be turned off and carry out short circuit to the BOOT jumper wire on the interface board. Then power on the printer again, and the interface module will enter BOOTLOADER mode. After the interface module enters BOOTLOADER mode, the firmware of interface module can be updated again. After finishing the updating successfully, turn off the power of printer, disconnect the BOOT jumper wire and power on the printer again, then the interface module can work normally.

Take TFTP command coming with Windows2000 system as an example to explain how to update the firmware:

Enter command-line mode of Windows and input the following command:

C:>tftp –i 192.168.0.200 upfile.jk

-I indicates sending the file in binary mode; 192.168.0.200 is IP address of the interface module, whose firmware needs to be updated; upfile.jk is the firmware needing to be updated.

5.5 Status back

The obtaining of printer status can be realized through the status monitoring demo provided by SNBC. The demo provides the user with sound code, and it instructs the user how to call the DLL function provided by SNBC. The inquiry of printer status can be realized through its own programming and the printing function can be realized through sending the print data to the printer.

Refer to the usage explanation for methods to use the status monitor demo:

Run NetPrnStatusDemo.exe, and the main window of status monitor will pop up (see Figure 5.5.1):

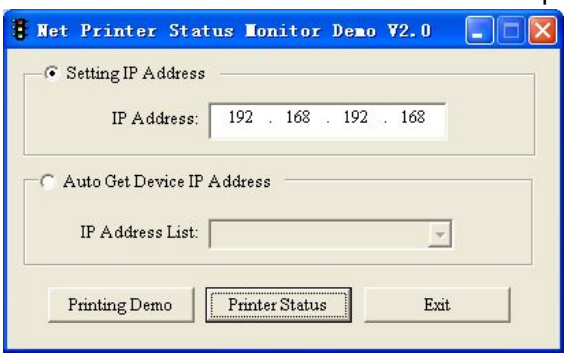


Figure 5.5.1 Main window of status inquiry

Select "Setting IP Address", and you can enter IP address manually; Select "Auto Get Device IP Address", and you can search the device IP addresses connected to the network automatically (you can select the device IP address in the list);

Click "Printing Demo" button to connect the printer, send print data and close the connection; Click "Printer Status" button to enter status monitoring window (see Figure 5.5.2):

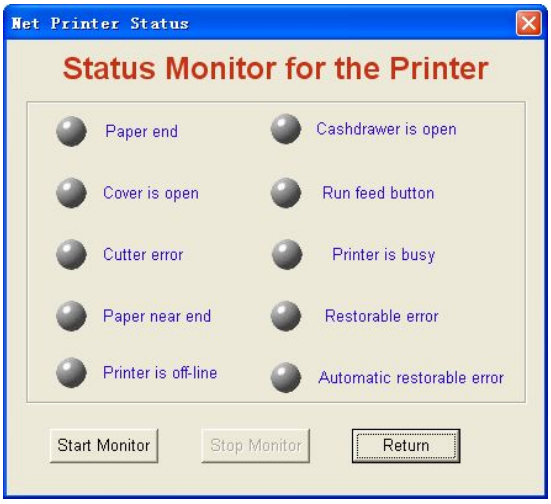


Figure 5.5.2 Status monitoring window

Click "Start Monitor" button to start monitoring the status of printer, and refer to Figure 5.5.3 for normal printer status:

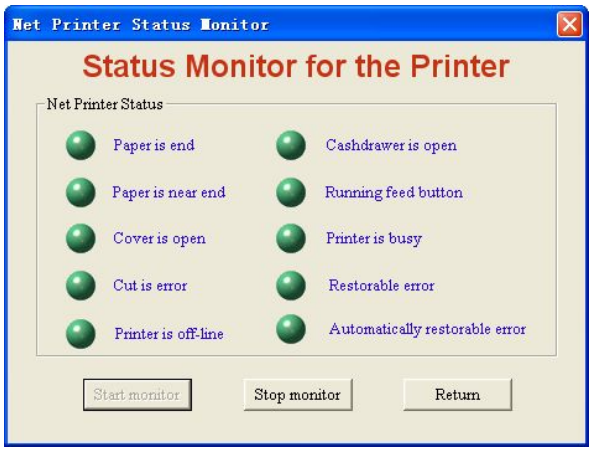


Figure 5.5.3 Normal printer status display

If status of printer changes, the interface LED will be red. Click "Stop Monitor" button to stop status monitoring and click "Return" button to return to the main window.

5.6 HTTP function

The interface module provides HTTP service. The status of printer and interface module can display based on WEB page at the host end through browser, and can also carry out the operation of configuring the interface module and printing the test page. This service adopts the TCP port of port 80.

When the user adopts this service:

Firstly, the user needs to get the IP address of interface module through self-test page or special configuration tool;

Secondly, enter IP address of interface module in location bar of browser. Then you can inquire the printer status and maintain the interface module through WEB page. The following is the detailed explanation of WEB page.

5.6.1 Interface Status

Start Internet browser, enter IP address of printer and you can see window of interface status. Then click "Refresh" button to refresh current status (see Figure 5.6.1):

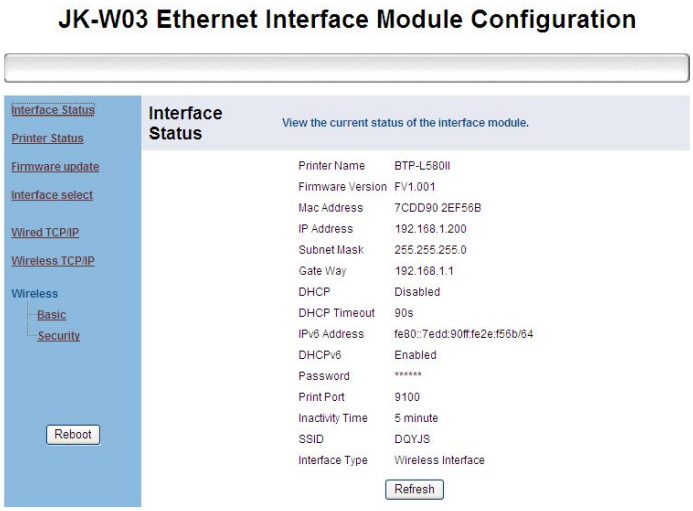


Figure 5.6.1 Interface status

5.6.2 Printer Status

Click "Printer Status" link to check status of printer connected to the interface. If there is abnormal status, the letters in the page will show in red. Click "Refresh" button to refresh current status and click "Print Test Page" to print the self-test page through printer (see Figure 5.6.2):

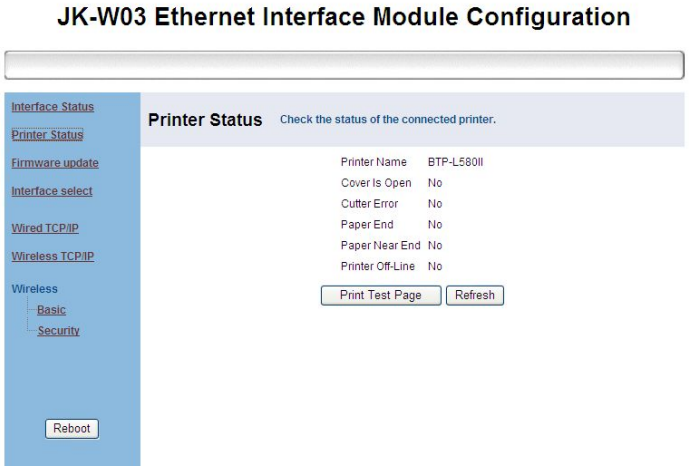


Figure 5.6.2 Printer status

Note: When printer is busy or there is error in the printer, then the printer cannot print the self-test page.

5.6.3 Firmware update

Click "Firmware update" link and update the interface firmware through this web page (if you have set the safety password, you can enter only when you have entered correct password, see Figure 5.6.5), see Figure 5.6.3. Click "Browse" button to select the firmware needing to be updated, then click "Update" button to update the firmware. When the web page like Figure 5.6.4 appears, it indicates that the updating is successful, and the printer will restart automatically. When the file is wrong or the updating fails, the web page will pop up the prompt message of invalid file format or updating failure.

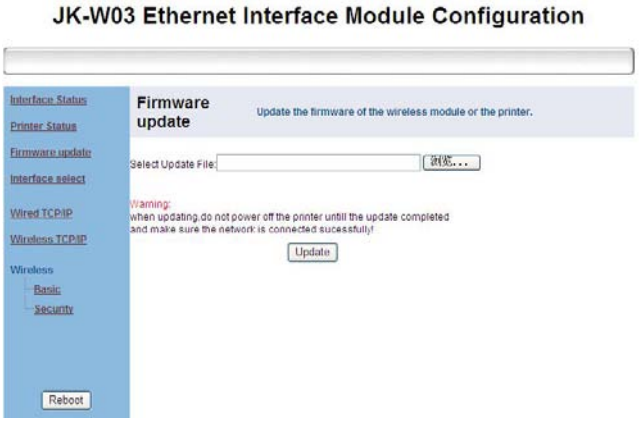


Figure 5.6.3 Firmware updating page

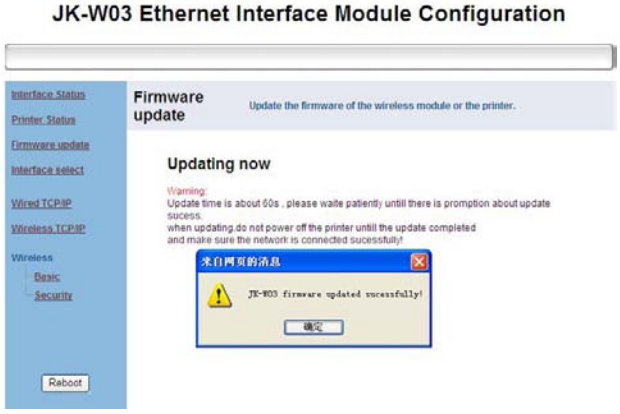


Figure 5.6.4 Firmware updating successfully

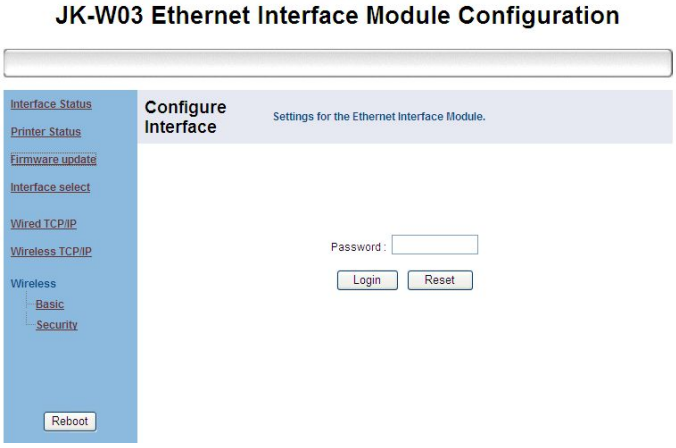


Figure 5.6.5 Safe login

Note: During the process of updating, keep smoothness of network. Before finishing the updating, forbid turning off the printer or refreshing the web page.

5.6.4 Interface select

When wired mode and wireless mode of interface module can be used at the same time, the "Interface select" link will be added to the web page. Click "Interface select" to set current network interface type (if you have set the safety password, you can enter only when you have entered correct password). If selecting "Wireless", adopt wireless interface; If selecting "Wired ", adopt wired interface.

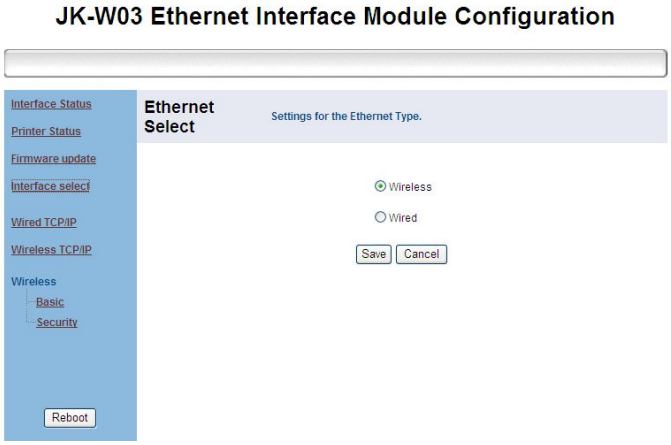


Figure 5.6.6 Interface select configuration page

Note:

Interface select configuration page will show only when wireless interface and wired interface can be used at the same time. When there is only wireless interface or there is only wired interface, this page will not show.

5.6.5 Wired TCP/IP and Wireless TCP/IP

Click "Wired TCP/IP" or "Wireless TCP/IP" link to enter page of wired interface or wireless interface (if you have set the safety password, you can enter only when you have entered correct password).

"Print Port" is used to set the print port number.

"Inactivity time" is used to set the overtime time of TCP connection, unit: min. If setting the "Inactivity time" to 0, it indicates that the connection is always on.

"New Password" is used to set the safety password of web page and configuration tool. After selecting this item, the test box can be edited, and you can set the safety password (only digit and letter can be used as safety password, and the maximum length of password is 10 bits).

"IP Address" provides two methods to change the configuration. One method: select "DHCP Client", then you can get the IP address, subnet mask, and gateway address automatically through DHCP protocol. Select DHCP Client:, then the test box of DHCP Timeout can be edited and you can enter the overtime time of DHCP (unit: s). If the IP address cannot be got within overtime time, adopt the default IP address 192.168.0.200; The other method: Click "Fixed IP Address", then the input box below can be edited and you can set the IP address, subnet mask and gateway address manually.

"IPv6 Assignment Method" is used to set the obtaining method of IPv6 address. It can display only when IPv6 function has been activated, and the methods that can be set: DHCPv6, Auto, Manual. When selecting Manual, then you can input the IPv6 address to be set in edit box of "IPv6 address", and input the IPv6 subnet prefix length in the edit box behind "/".

After making the change, click "Save" to save the setting and you can also restore the factory settings

through clicking "Restore Defaults" button.

After changing the configuration, restart the printer to make new configuration valid. The restarting of printer can be carried out through clicking the "Reboot" button on the left, or through turning off/on the printer power. The configuration page is as follows:

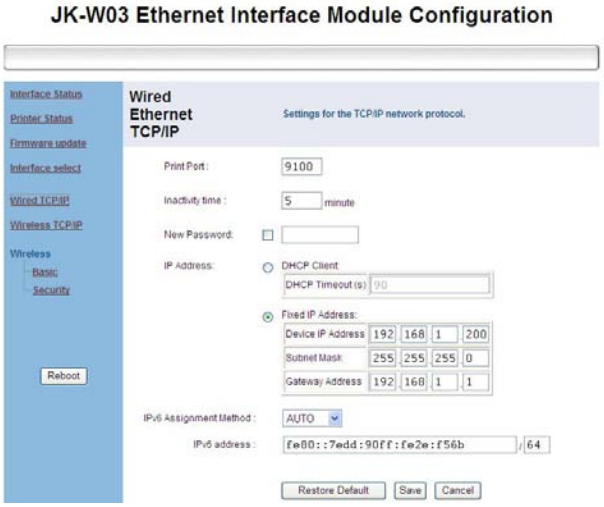


Figure 5.6.7 TCP/IP configuration page

Note:

Only letter or digit can be set as safety password and cannot use special symbols.

Only when wired mode and wireless mode of interface module are valid at the same time, "Wired TCP/IP" and "Wireless TCP/IP" will show at the same time. Otherwise only one relevant page will show.

5.6.6 Wireless network parameter setting

Click "Basic" and "Security" link under "Wireless" to enter basic configuration and security configuration page of wireless parameters.

The following parameters can be set under "Basic" page:

"Region or Domain": Set the region or domain list of wireless network channel and different options allow different setting range. The default is "--Default--"

"Network Type" is used to set the type of wireless network. "Ad Hoc" indicates the peer-to-peer network connected directly with network card and "Infa" indicates the infrastructure network using wireless router.

"SSID" is used to set the name of wireless network.

"Channel No" is used to set the channel number of wireless network. When adopting peer-to-peer mode, it needs to be set and there is no need to set it when adopting infrastructure network.

Refer to Figure 5.6.8 for "Basic" configuration page.

JK-W03 Ethernet Interface Module Configuration

Figure 5.6.8 Configuration of wireless basic parameters

In the "Security" page, the encryption mode and the password of wireless network can be set.

Under base station mode, support WEP, WPA-PAK and WPA2-PSK; Under peer-to-peer mode, support WEP and WPANONE mode.

When adopting WEP encryption, you can select "Open System" and "Shared Key" these two kinds of mode; when setting to WPANONE, WPA-PSK or WPA2-PSK, you can select "AES" and "TKIP".

"Disable": Indicate not adopt encryption mode.

"WEP": Indicate adopt WEP encryption mode.

"WPANONE": Indicate adopt the WPANONE encryption authentication mode, and this mode can be used only under peer-to-peer mode.

"WPA-PSK / WPA2-PSK": Indicate adopt WPA-PSK or WPA2-PSK encryption authentication mode. This mode can only be used in the base station wireless network built by wireless router.

"Encryption": Set the encryption mode used by WPANONE, WPA-PSK and WPA2-PSK to AES or TKIP.

Key or WPAKey: Used to set the password used by wireless network.

Refer to figure 5.6.9 for the "Security" configuration page:

JK-W03 Ethernet Interface Module Configuration

Figure 5.6.9 Configuration of wireless security information

After making the change, click "Save" to save the setting, and you can also restore the factory default settings through clicking "Restore Defaults" button. After changing the configuration, you need to restart the printer to make new configuration valid. You can restart the printer through clicking the

"Reboot" button on the left side or through turning on/off the printer power.

Note: Don't restart the wireless network parameters "Basic" and "Security" unless all parameters have been set. If performing the restart operation after having set partial parameters, then this may lead to abnormal connection of wireless network.

5.7 Button function and restore defaults

Insert thin material into button hole of interface module (see Figure 3.1.1) and keep pressing down the button for more than 5s to start the printer. Then when the printer starts feeding paper, restore the factory settings of interface module.

Note:

The interval between starting of printer and printer starting feeding paper is about twenty seconds.

5.8 General procedure of wireless network module connecting configuration

The use of wireless network module needs to connect and configure the wireless network, and the following is the explanation of general procedure.

Step 1: Restore the parameters of wireless network to factory settings.

Step 2: Build the wireless network connection through the connection of wireless network with wireless network module.

Step 3: Set the IP address of wireless network card on PC to the same with the network segment of printer.

Step 4: Search for wireless network interface through the network configuration tool BYNetWinConfig (V3.07 and above).

Step 5: Configure the wireless parameters and IP parameter of wireless network through the network configuration tool or the network page of wireless interface board.

Step 6: After finishing the configuration of parameters, restart the wireless interface and then the wireless interface will use new parameters to connect to the network.

6 Interface signal

The wireless part adopts the USB interface WIFI module bought from outside and the main technical specifications are as follows:

Item	Content	
Bus type	USB2.0	
Data transmission speed	11,5.5,2,1 Mbps (802.11b mode) 54, 48, 36, 24, 18, 12, 9, and 6 Mbps (802.11g mode)	
Working channel	1-11	
Transmission distance	If there is no obstacle in the room, the maximum distance is 100m (the transmission distance changes with the using environment).	
Transmission power	11b:13dBm@11Mbp;11g:10dBm@54Mbps; 802.11n(HT20)10dBm; 802.11n(HT40)9dBm	
Reception sensitivity	802.11/802.11bg mode: 11b:-84dBm@11Mbp; 11g:-72dBm@54Mbps	802.11n mode: HT20:-68dBm@MSC7, HT40:-67dBm@MSC7
Safety	WPA/WP2/WPAI,64/128/152-bit WEP,WPS	
Wireless standards	802.11b, 802.11g, 802.11n	
Wireless debug mode	DSSS (Direct Sequence Spread Spectrum) and OFDM (Orthogonal Frequency Division Multiplexing)	

Table 6.1.1

FCC STATEMENT:

1. 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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 or more 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 Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Federal Communication Commission Statement (FCC, U.S.)

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.

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.

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.

IMPORTANT NOTES

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Co-location warning:

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Limited Channels fixed for use in the US:

IEEE 802.11b or 802.11g or 802.11n(HT20) operation of this product in the U.S. is firmware-limited to Channel 1 through 11. IEEE 802.11n(HT40) operation of this product in the U.S. is firmware-limited to Channel 3 through 9.

OEM integration instructions:

This device is intended only for OEM integrators under the following conditions:

The antenna must be installed such that 20 cm is maintained between the antenna and users, and the transmitter module may not be co-located with any other transmitter or antenna. The module shall be only used with the external antenna(s) that has been originally tested and certified with this module.

As long as 3 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

Validity of using the module certification:

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization for this module in combination with the host equipment is no longer considered valid and the FCC ID of the module cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End product labeling:

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains Transmitter Module FCC ID: 2AEQL-JK-W03".

Information that must be placed in the end user manual:

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.