

OPERATION MANUAL

GodexLAN for Wireless LAN & Ethernet Module

Operation Manual : GodexLAN
Version : Rev. E
Issue Date : 2012.07.12
P/N : 920-061510-00

1. PRODUCT OVERVIEW	1
1-1. General Description	1
1-2. Ethernet Module Specifications	2
1-3. Wireless LAN Module Specifications	3
1-4. Product CD	3
2. THE CONTROL CENTER	4
2-1. Get the Control Center from CD	4
2-2. Using the Control Center	4
2-3. System menu	5
3. NETWORK CONFIGURATION	6
3-1. Setting up Local Windows Printer Driver	6
3-2. Connecting the Hardware	6
3-3. Wireless Connection	7
3-3-1. Preliminary	8
3-4. Assigning an IP Address to the Server	
3-4-1. Preliminary	14
3-4-2. Setting the IP Address Using the Control Center	
4. THE SERVER'S WEB PAGES	
4-1. Introduction	19
4-2. Using the Server's Web Pages	
4-2-1. Displaying Server Status4-2-2. Setting up Server Configuration	
5. TROUBLESHOOTING	
5-1. Q & A	
5-1. Q & A	
6. RESTORE FACTORY DEFAULTS	_
7. UPGRADE SERVER FIRMWARE	29

1. Product Overview

1-1. General Description

Network Printer Server is designed to connect your printers to your network, allowing all network users access to these shared printers. This Server provides the following features and benefits:

- Reliability: The Server provides high performance and reliability combined with low power consumption.
- Flexibility: The Server supports print sharing in all major computer systems and environments.
- Easy to Install: The Server installs, operates, and is managed in a reliable and easy fashion.
- Security: You can assign administrator name and password to restrict login.
- Monitoring: The Server's web pages and user software allow you to continuously monitor the status of connected printer devices.
- Future Proof: The firmware stored in the Server's Flash memory can be upgraded over the network.

 This allows you to quickly update and enhance its operational features when new Server software becomes available.

To fully benefit from this document, you should be familiar with basic networking principles. The instructions described in this manual are based on the settings in a new Server. To reload the Factory Parameters, you can reset this Server back to Factory Default, which will restore most of the settings. For details, please refer to the chapter "Restore Factory Defaults".

1-2. Ethernet Module Specifications

ITI	EM	Description				
CPU		32-bits RDC(x86), 133 MHz				
SDF	RAM	4M Bytes				
Flash Memory		2M Bytes				
	Connector	RJ-45 Connector				
	Standard	IEEE 802.3 10/100Base-Tx (Auto-Sense)				
ETHERNET Protocol Server		ARP, IP, UDP, TCP, HTTP, DHCP, FTP, SNMP, SMTP				
		TCP Server ; UDP Server				
	Setup	HTTP Browser Setup (IE & Netscape)				
	Security	Setup Password & Connect Password				
USB Port Connector Standard		Dual row 8-pin header				
		USB 2.0 Host mode, Full speed 12M bps				
POWER		DC 5V, 300mA				
LED I	LED LAMP SYS(PWR), LAN-100 MBPS, LAN –10MBPS					
ENVIRONMENT		Operating Temp: 0°C ~50°C				
		Storage Temp: -10°C~70°C				
DIMENSIONS		95 x 51.5 x 20 mm (W x D x H)				
WEI	GHT	100 gm				
OTHERS		Watch Dog Function, Firmware On-lined Updated Via Ethernet				

USB Port connector pin assignment:

Pin 1	Vbus	Pin 3	D+	Pin 5	+5V	Pin 7	+5V(RLY)
Pin 2	GND	Pin 4	D-	Pin 6	GND	Pin 8	GND

1-3. Wireless LAN Module Specifications

ITE	EM	Description			
CPU		32-bits RDC(x86), 133 MHz, miniPCI			
SDRAM		16M Bytes			
Flash Memory		2M Bytes			
	Standard	IEEE 802.11b/g, 2.4GHz, DSSS			
	Data Speed	802.11b : 1, 2, 5.5, 11 Mbps			
		802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps			
	Network	Infrastructure, Ad-Hoc			
	TX Power	802.11b : ~15 dBm; 802.11g : ~12 dBm			
	RX Sensitivity	802.11b : -80 dBm@11 Mbps, Packed Error Rate 8%			
Wireless LAN	IXX Sensitivity	802.11g: -65 dBm @ 54 Mbps, PER 10%			
	Protocol	ARP, IP, UDP, TCP, HTTP, DHCP, FTP, SNMP, SMTP			
	Server	TCP Server ; UDP Server			
	Security	802.11b: WEP64-128bit			
		802.11g: WPA-PSK / WPA2-PSK with TKIP/AES			
	Setup	HTTP Browser Setup (IE & Netscape)			
	Security	Setup Password & Connect Password			
	Connector	RJ-45 Connector			
Ethernet	Standard	IEEE 802.3 10/100Base-Tx (Auto-Sense)			
	Function	Support Wireless LAN setup configuration and Alertnative Wireless LAN			
USB Port	Connector	Dual row 8-pin header connector			
OSB TOIL	Standard	Host mode, Full speed 12M bps			
POV	VER	DC 5V, 500mA			
LED LAMP		SYS(PWR), LAN/WLAN			
ENVIRONMENT		Operating Temp : 0°C ~45°C			
		Storage Temp : -10°C ~70°C			
DIMEN	SIONS	95 x 70 x 20 mm (W x D x H)			
WEI	GHT	185 gm			
ОТН	ERS	Watch Dog Function, Firmware On-lined Updated Via Ethernet			

USB Port connector pin assignment:

Pin 1	Vbus	Pin 3	D+	Pin 5	+5V	Pin 7	+5V(RLY)
Pin 2	GND	Pin 4	D-	Pin 6	GND	Pin 8	GND

1-4. Product CD

This CD provides easy-to-use Control Center software and the User's Manual. The Control Center is available on the CD or from official website. This Server can be configured and managed from its internal web pages or from the Control Center. These web pages or PC tools offer you a management tool suitable for all supported network environments.

2. The Control Center

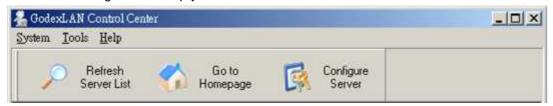
2-1. Get the Control Center from CD

- 1. Insert the included CD into the personal computer.
- 2. Go to "Control Center" folder and double click the "Setup Control Center.exe" icon to install the program to your personal computer.
- 3. After the installation is completed, please click the "Control Center" icon to start the program.



2-2. Using the Control Center

You can use the following tools to help you use the server:



- Refresh Server List: renew to auto search the existing servers on the network.
- Go to Homepage: go to the web pages of the highlighted print server.
- Configure Server: configure the highlighted printer server.
- *Note 1: You can also right-click the mouse button on the highlighted print server to get the "Configure Server" and "Go to Homepage" functions.
- *Note2: You can also double-click on the highlighted server to get the "Configure Server" function.

Displaying Server Status

You can start the Control Center and click on a server to see its status which includes Printer Information, Server Information, TCP/IP status, and Supported Protocols.

Setting up Server Configuration

Click the "Configure Server" button to setup the highlighted print server. Then type the administrator ID and password to login.

- TCP/IP: You have to set the Server's TCP/IP configuration to connect TCP/IP network. Please see the chapter of Network Configuration for more details.
- Wireless: Set the wireless connection configurations. Please see the Wireless Connection section in the chapter of Network Configuration for more details.

2-3. System menu

- System: Select the "Exit" item to close the Control Center.
- Tools: Select "Configuration" item to configure the Control Center. The configuration includes server information setting and language setting.



• Help: To display the version information of Control Center.

Quitting the Control Center

There are two ways to close the Control Center. The first way is clicking the "X" box (close box) at the top right corner of the window. The second way is choosing "Exit" item in the "System" menu in the Control Center.

3. Network Configuration

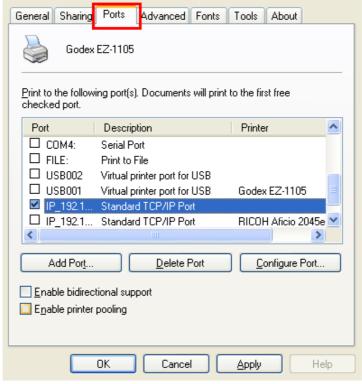
3-1. Setting up Local Windows Printer Driver

You are advised to install your Windows printer driver in advance. For most printers, you can install the printer drivers with the following procedure:

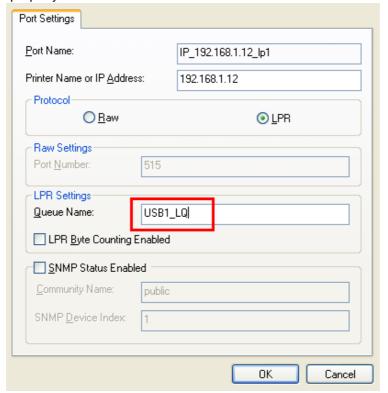
- 1. Click Start, click Control Panel, click Printers and Other Hardware, and then click Printers and Faxes.
- 2. Double click Add Printer to start the Add Printer Wizard, and then click Next.
- 3. Click Local printer, clear the Automatically detect and install my Plug-n-Play printer check box to avoid having to wait for the completion of another printer search, and then click Next. If you leave this option selected, Windows will attempt to find the printer itself and figure out what kind it is. If Windows does not find the printer, the wizard will continue as described in this task.
- 4. Select a Windows driver for your printer. Click Next.
- 5. Choose whether you want to share the printer with other network users. Do you want to print a test page? Select the appropriate radio button and click Next and Finish.

3-2. Connecting the Hardware

- 1. Turn off the printer.
- 2. Connect the Ethernet module to the network with a twisted-pair category 5 cable, 10baseT or 100baseTX.
- 3. Turn on the printer and make sure it is ready for use.
- * Note: If you need to connect the printer via LPR protocol, please go to Windows printer setting page and go to "Ports" setting. Select TCP/IP port from ports list and click "Configure Port".



On "Port Settings", change the "Protocol" to "LPR". And the "Queue Name" setting must be "USB1_LQ" to connect your printer properly.



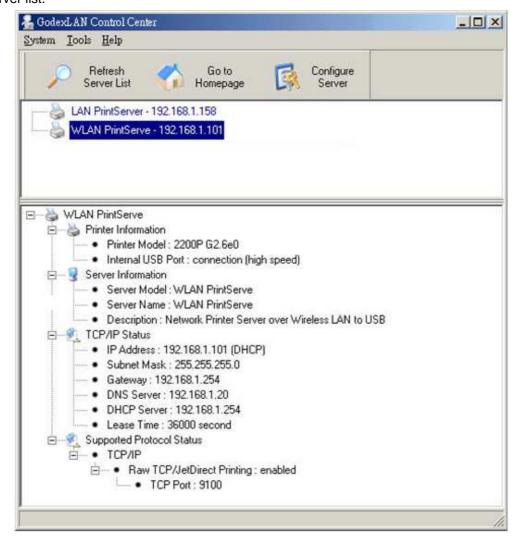
3-3. Wireless Connection

3-3-1. Preliminary

- Before you can access wireless network, wireless parameters should be set correctly. You have to setup the first wireless parameter set through LAN (wired) connection.
- Wireless access can be set as:
 - 1. Infrastructure (station) mode, which need an access point to route network messages, or
 - 2. Ad-hoc mode, which connect nearby wireless PC/devices with the same SSID (Service Set ID).
- Wireless access can be secured by WEP64, WEP128, or WPA-PSK / WPA2-PSK with TKIP/AES.
- In infrastructure mode, if network administrator wants to change any security related parameters,
 Network Printer Server should be changed first, and then access point. If parameters mismatch causes wireless access is not allowed, you have to modify those parameters through LAN connection.
- In infrastructure mode, the maximal transfer rate is 54 MBits depending on access point's capability. In ad-hoc mode, only 802.11b (the maximal transfer rate is 11 MBits) is allowed by specification.

3-3-2. Set Wireless Configuration Using Network Printer Server Control Center

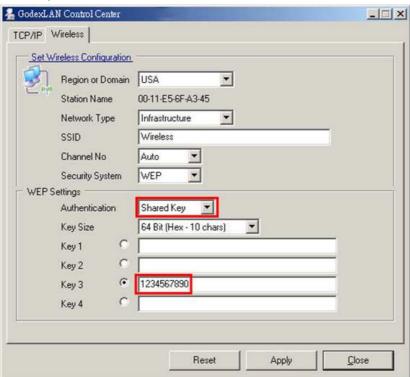
- 1. Install the "Control Center" program to your PC. Network Printer Server Control Center is available in the product CD of Ethernet or Wireless LAN module.
- 2. Start the Network Printer Server Control Center and an Auto-searching Network Printer Server window will appear.
 - *If the wireless parameters are not correct or not set yet, you have to use LAN to access Network Printer Server.
- 3. If the tool finds Network Printer Servers in your local area network, then you have to select a server from the server list.



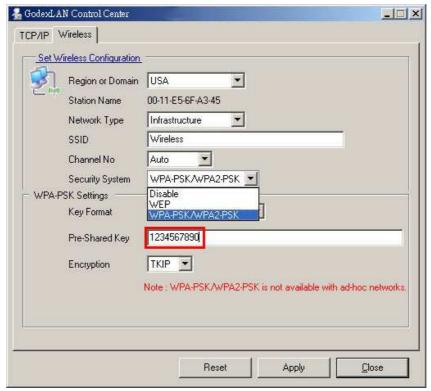
4. Double click the highlighted server (or click the "Configure Server" button) and type the server's administrator (default: admin) and password (default: admin).



- 5. After you login successfully, from the Server menu, select wireless. The set Wireless dialog appears.
- 6. In order to join an existing wireless network, you have to set the correct network type (infrastructure or ad-hoc), SSID, and the correct security method with the correct key information.
- *Please check with your Network Administrator about network setting if necessary.
- 7. If the wireless network is secured by WEP64 or WEP128, authentication method, key index, and WEP key must be set correctly.



8. If the wireless network is secured by WPA-PSK/WPA2-PSK, the shared key must be set correctly.

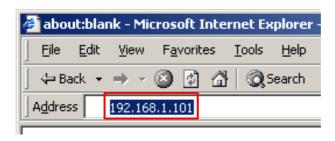


- 9. Click Apply to save your settings. And the server will reboot.
- 10. You have now finished the procedure of setting the wireless parameters.
- *In infrastructure mode, Network Printer Server Control Center searches all channels to join the matched wireless service set. In ad-hoc mode, Network Printer Server Control Center searches all channels to join the matched wireless ad-hoc service set too, however, if none of them are found, Network Printer Server Control Center creates that service set in the assigned channel.
- *In ad-hoc mode, WPA-PSK/TKIP is not allowed.

3-3-3. Set Wireless Configuration Using Server's Web Pages

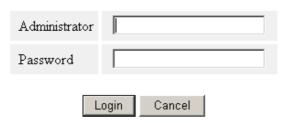
1. You can see the IP address of Network Printer Server in the server list. Open IE Browser and type server's IP address or click the Home Icon of Network Printer Server Control Center.



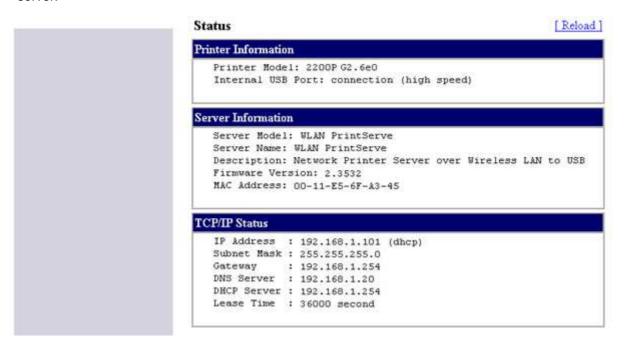


- * If the wireless parameters are not correct or not set yet, you have to use LAN to access Web Pages.
- * If the TCP/IP parameters of Wireless LAN module are not correct, you have to use Network Printer Server Control Center to set the TCP/IP parameters first.
- 2. Go to the web page and click "Login" link.
- 3. Login your administrator (default: admin) and password (default: admin).

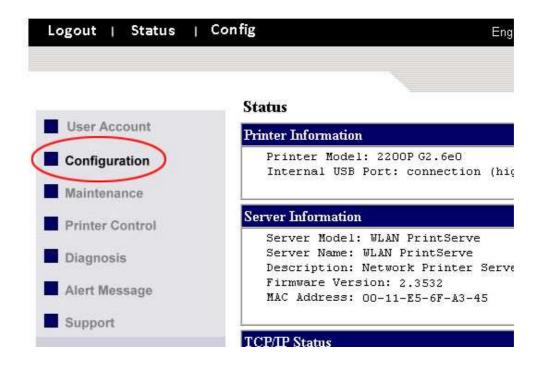
Network Printer Server Login



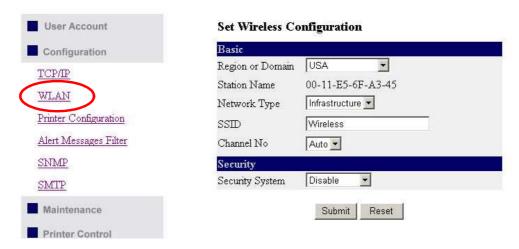
4. After you have logged in successfully, the first configure page will be General Configuration of printer server.



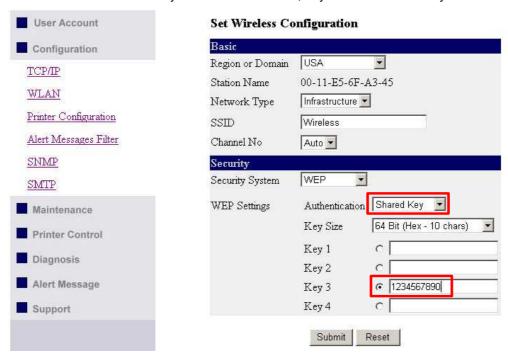
5. To proceed the wireless configuration, click the "Configuration" icon.



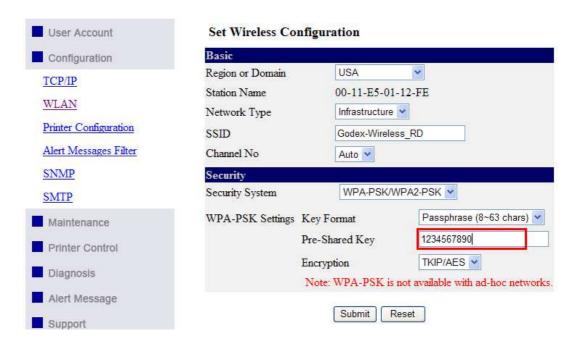
6. Click "WLAN" icon.



- 7. In order to join an existing wireless network, you have to set the correct network type (infrastructure or ad-hoc), SSID, and the correct security method with the correct key information.
- 8. If the wireless network is secured by WEP64 or WEP128, key index and WEP key must be set correctly.



9. If the wireless network is secured by WPA-PSK/TKIP, the shared key must be set correctly.



- 10. Click Submit to save your settings. And the server will reboot.
- 11. You have now finished the procedure of setting the wireless parameters.
 - * In infrastructure mode, Network Printer Server Control Center searches all channels to join the matched wireless service set. In ad-hoc mode, Network Printer Server Control Center searches all channels to join the matched wireless ad-hoc service set too, however, if none are found, Network Printer Server Control Center creates that service set in the assigned channel.
 - *In ad-hoc mode, WPA-PSK/WPA2-PSK is not allowed.

After properly configuring the wireless parameters, you can remove the network cable and reboot the printer. The Wireless LAN module will then connect to your wireless network. Network Printer Server Control Center will detect if a network cable is plugged-in or not. If a network cable is plugged-in, Network Printer Server Control Center will always connect to the network through the network cable. Otherwise it will always connect to the network through wireless module. Once Network Printer Server connects to the network, either by network cable or by wireless module, all operations of print server are exactly the same.

3-4. Assigning an IP Address to the Server

3-4-1. Preliminary

- If you have a DHCP server on your network, your Server will receive an IP address automatically. The IP address will then appear on the Control Center or on the page of configuration report. If your DHCP server does not give an IP address to the Server, the Server will use the Factory IP address.
- If you are not working in a DHCP network, you need to manually set the Server's IP address.

Ethernet Address

You do not need to know the Ethernet address of your Server for assigning an IP address to it. The Control Center can automatically search Servers and list their Ethernet addresses.

IP Address

Unless you are assigning an IP address using DHCP, you must obtain an unused IP address from your network administrator.

Methods for Setting the IP Address

You can set the IP address of your Server using one of the following methods, depending on your network operating environment:

- Automatic IP Address Assignment
- Manual IP Address Assignment

Server Names and Server Name Rules

The default server name of the Server is "WLAN PrintServe/LAN PrintServer". If you put two or more Servers in your local area network, to avoid using the same server names you have to change the server names by using the Control Center or the Server's web pages. If your server name is longer than 15 characters, the Server uses only the first 15 characters.

3-4-2. Setting the IP Address Using the Control Center

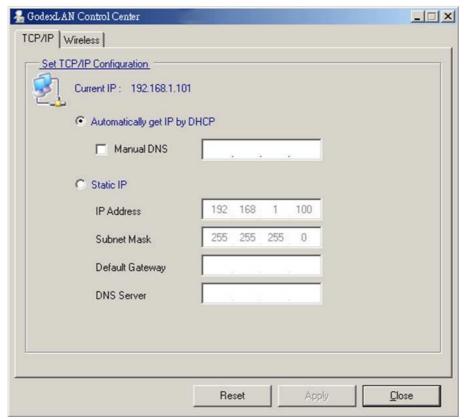
- 1. Start the Control Center and Auto-searching Server window will appear.
- 2. If the tool finds print servers in your local area network, then you have to select one server from the Server List.



3. Double click the highlight list and enter the Server's administrator (default: admin) and password (default: admin).



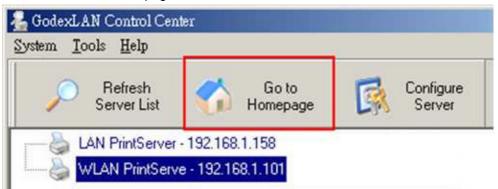
4. After you have logged in successfully, select TCP/IP from the Server's menu. The Set IP Address dialog appears.



- 5. Click the button corresponding to your choice of IP setting method (static or dynamic using DHCP). When assigning a static IP address you also have to define Subnet Mask and Default Gateway. If you choose "Automatically get IP by DHCP", you can use desired DNS by clicking the Manual DNS button and manually assigning a DNS.
- 6. Click Apply to save your settings. And the Server will reboot.
- 7. You have now finished the procedure of setting the IP address.

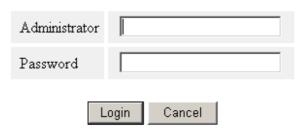
3-4-3. Setting the IP Address Using the Server's Web Pages

- 1. If you don't know the current IP of you Server, you have to do the Step1~Step4 of Set the IP Address Using the Control Center.
- 2. You can see the IP address of you Server in the Server List. Open IE Browser and enter the Server's IP address or click the "Go to Homepage" button in the Control Center.

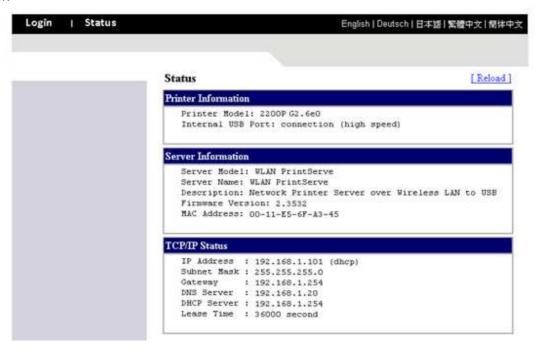


- 3. Go to the web page and click "Login" link.
- 4. Login your administrator (default: admin) and password (default: admin).

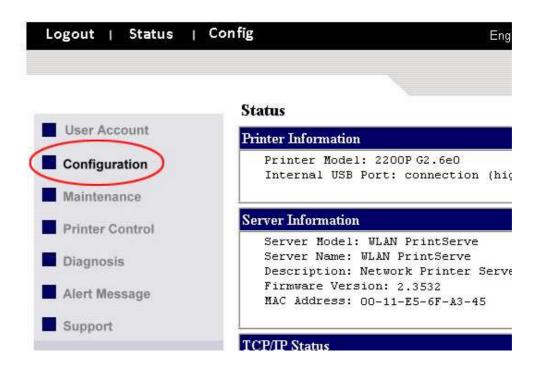
Network Printer Server Login



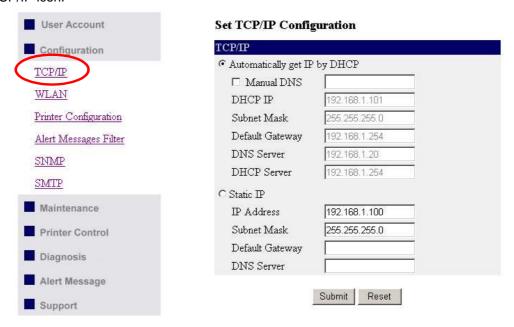
5. After you have logged in successfully, the first configure page will be General Configuration of printer server.



6. Click the "Configuration" icon.



7. Click TCP/IP icon.



- 8. Click the button corresponding to your choice of IP setting methods (static or dynamic using DHCP). When assigning a static IP address you also have to define Subnet Mask and Default Gateway.
- 9. Click Submit to save your settings. And the Server will reboot. You have now finished the procedure of setting the IP address.

4. The Server's Web Pages

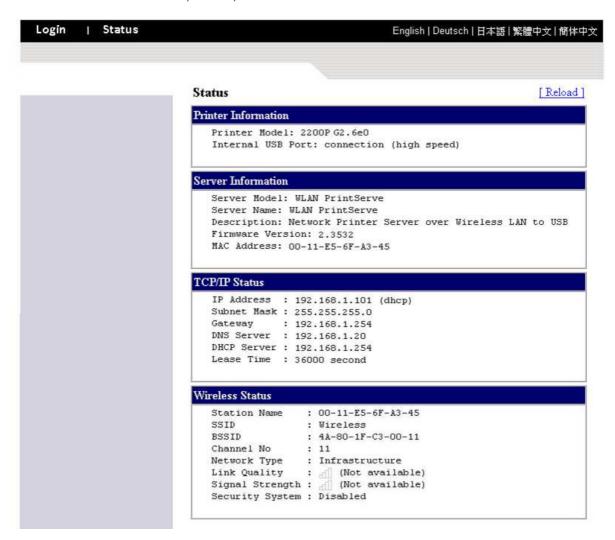
4-1. Introduction

The Server runs the daemon of http server, *httpd* on TCP port: 9100. Users may use the web pages to see the Server's system status and configure the Server.

4-2. Using the Server's Web Pages

4-2-1. Displaying Server Status

You can see the status of Printer, Server, TCP/IP and Wireless.



4-2-2. Setting up Server Configuration

To set up the Server configuration, the system will request user to enter administrator (default: admin) and password (default: admin) to login.

 User Accounts: You can change administrator name and password or add a user account for print server. If you forgot administrator name and password, you must perform Restore Factory Default action.
 Please refer to the chapter "Restore Factory Defaults".

Set Administrator

New Administrator: enter your desired administrator name.

New Password: enter your desired password.

Retype Password: confirm your previous password typing.

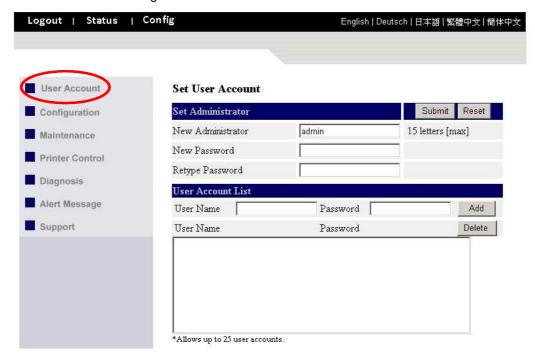
User Accounts list

User name: add a new user account for accessing the storage attached to the Server.

Password: set a password for added user.

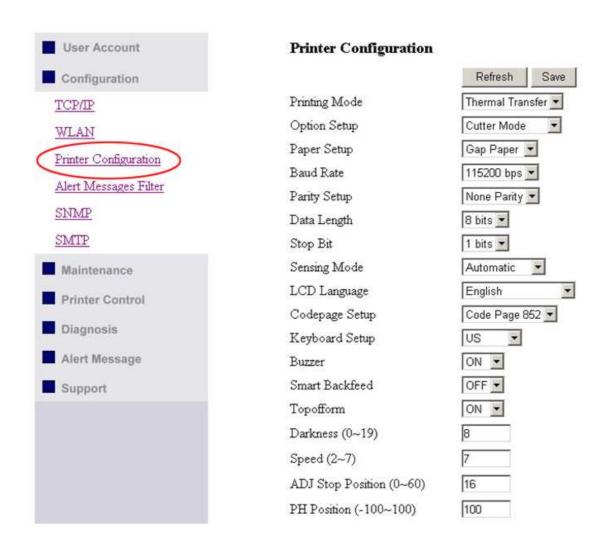
Add: click Add button, after entering the user name and corresponding password. The account will take effect once shown in the blank below.

Delete: delete the existing user account.

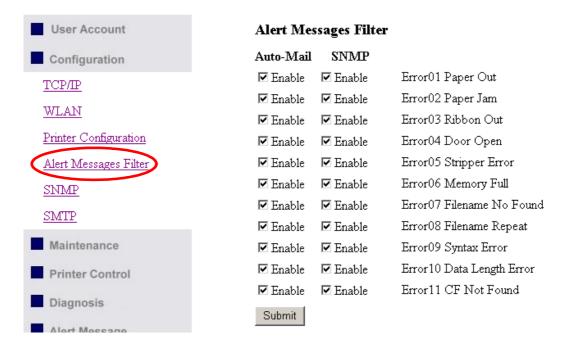


Configuration

- ◆ TCP/IP: You have to set the Server's TCP/IP configuration to connect TCP/IP network. Please see the chapter of Network Configuration for more details.
- WLAN: Set or change the WLAN configurations. Please see the "Set Wireless Configuration Using Server's Web Pages" section of Network Configuration chapter for more details.
- ◆ Printer Configuration: Set or change the configurations of printer. Please refer to printer's operation manual check the function of each setting item.



♦ Alert Message Filter: Enable or disable the options to send error messages via Auto-Mail or SNMP.



◆ SNMP: This Server runs an SNMP daemon supporting SNMP v1 and v2c protocols (Simple Network Management Protocol). Users can use SNMP client software such as HP OpenView to

manage the Server. The Server supports all relevant parts of MIB-II and a private MIB. You can set these MIB variables from the Server's web pages or by using the Control Center. You can set community and some parameters for SNMP server. The SNMP Configuration includes:

Authentic Community: set Community name of SNMP server.

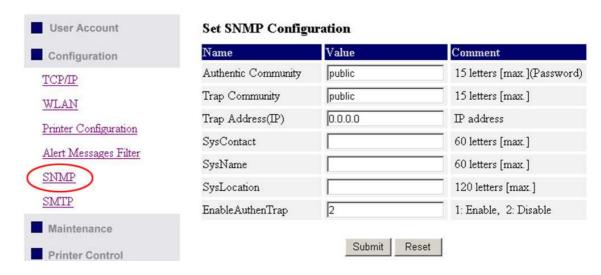
Trap Community: set Trap Community name for SNMP server to send trap packets.

Trap Address (IP): enter an IP address to send the Trap packet.

SysContact: enter some letters for variable of SysContact that represents the name of system contact.

SysName: enter some letters for variable of SysName that represents the name of system.

SysLocation: enter some letters for variable of SysLocation that represents the location of system. EnableAuthenTrap: enter 1 or 2 for the variable of EnableAuthenTrap that represents to enable (1) or disable (2) to send Trap packets receiving the wrong Community name.



◆ SMTP:

SMTP Protocol: enable or disable the SMTP Protocol.

SMTP Server Name: set the IP address or server name of SMTP Server.

SMTP Port Number: set the port number, the range is from 1 to 65535. Typical is 25.

Subject: set the subject of notification mail.

From Address: set the From Address of notification mail.

To Address: set the From Address of notification mail.

Cc: set the Cc receiver of notification mail.

Duration Cycle: set the cycle time to send the notification mail.

Event Counter: set the accumulation number of error messages to send the notification mail.

*Note: If Duration Cycle and Event Counter are both set together, the sending notification mail event will be triggered depending on which conditions is fulfilled first.

Set SMTP Configuration

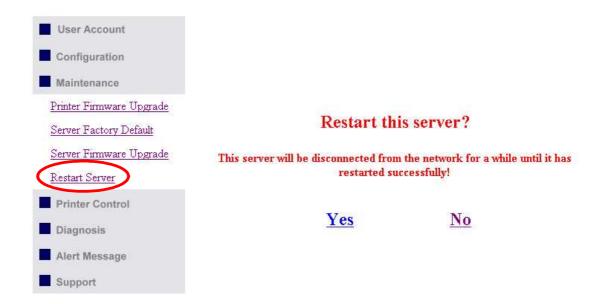
Configuration	Name	Value	Comment
TCP/IP	SMTP Protocol	▼ Enable	Check to enable SMTP
WLAN	SMTP Server Name	192.168.1.22	IP address or server name
Printer Configuration	SMTP Port Number	25	1~65535
Ser WARK PE	Subject	Error Message	78 letters [max.]
Alert Messages Filter	From Address	ErrorMessag@xxxxx.com	Format as xxxx@xxx xxx xx
SNMP	To Address	xxxxx@xxxxx.com	Format as xxxx@xxx xxx xx
SMTP	Cc		Format as xxxx@xxx xxx xx
Maintenance	Duration Cycle	1	1~255 hour
Printer Control	Event Counter	2	1~255
Diagnosis		Submit Reset	
Alert Message			

Maintenance



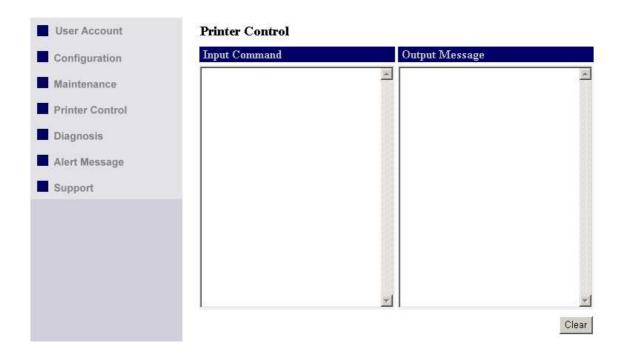
If you want to restore factory default values of the Server and upgrade new firmware of Ethernet/Wireless LAN or printer, you can use the Maintenance tool:

- Printer Firmware Upgrade: click Open to find the firmware file to be upgraded. Click Upload to upload the firmware into the printer.
- ◆ Server Factory Default: click this button, the Server will restore factory default values.
- Server Firmware Upgrade: click Open to find the firmware file to be upgraded. Click Upload to upload the firmware into the Server.
- Restart Server: click this button, the Server will restart.



Printer Control

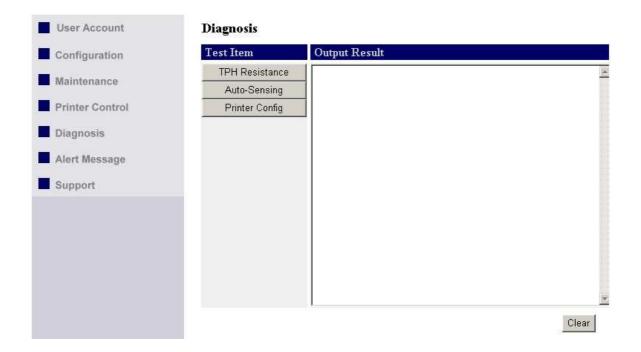
Input printer's command language in "Input Command" window and press Enter key, the server will then transfer a line of commends to printer. If sent command returns response message, the message will be displayed in "Output Message" window.



Diagnosis

The Diagnosis function can check the hardware status of printer.

- ◆ Click "TPH Resistance" button to check the bad dot information of Thermal Print Head. The checking result will be displayed in "Output Result" window.
- ◆ Click "Auto-Sensing" button will control the printer to do Auto-Sensing.
- ♦ Click "Printer Config" button to get the configuration of the printer in "Output Result" window.



Alert Message

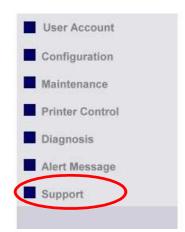
Collect and display the error message that come from the printer. You can click "Dump" button to get printer's error message and display it on Alert Message window. Click "e-mail" to send the message to designated mail address or click "Clear" to remove the message.

*Note: The all alter messages will be removed out from the memory when click "Dump" button.



Support

Display the contact information of technical support.





5. Troubleshooting

This chapter provides useful information to help you resolve difficulties that you may experience with your Server. Fault symptoms, possible causes, and remedial actions are provided within a quick reference table.

5-1. Q & A

Problem

Why the Control Center can not detect the Ethernet/Wireless LAN module?

Why I can not use IE to set the Ethernet/Wireless LAN module?

Why the IP address of Ethernet/Wireless LAN module can not be changed?

Recommended Solution

- Make sure the network cable is connected correctly.
- ◆ The Control Center may be blocked by firewall. Please refer to "Firewall" section to change the firewall configuration.
- Please check the module's Gateway address is same as the computer's Gateway address. Both of them must be in the same Gateway domain for setting the Ethernet module by IE.
- Please login to the control center and change the "DHCP client" to TCP/IP.

5-2. Firewall

If a firewall software has been installed on your PC, it may block the communication between the PC and the print server so that the print server can not work properly. To solve this problem, either disable the firewall or configure the firewall to allow the following TCP and UDP ports:

7303, 7305, 20005, 30201, 30202, 30203

6. Restore Factory Defaults

- 1. Go to the Server's web page and click Login
- 2. Enter administrator (default: admin) and password (default: admin).
- 3. Click Maintenance.
- 4. Click Server Factory Default.



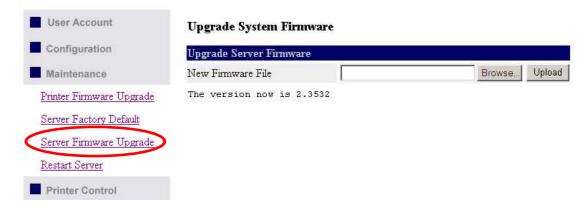
5. Click Yes to confirm

7. Upgrade Server Firmware

*Note: Failure of server firmware loading or upgrading may cause damage to the Ethernet/Wireless LAN module. Please follow below procedures for loading and upgrading firmware, or please seek help from your network administrator.

This chapter describes how to upgrade firmware. Please follow the following procedure:

- 1. Power on the Server. Suppose that the Server is in DHCP mode.
- 2. Check the Server's IP address.
- 3. First, run Control Center. It will automatically search for Servers on the LAN. Then Servers' IP addresses will be shown in Control Center.
- 4. Run any Web browser, like Microsoft Internet Explorer. Go to "http://Server's IP address" to access the Server's home page.
- 5. Click Login at the top of the menu.
- 6. Login the Server with Administrator (default: admin) and Password (default: admin).
- 7. Click Maintenance.
- 8. Click Server Firmware Upgrade.



- 9. Click Browse button to choose the file of new firmware.
- 10. Click Upload button to start firmware upgrade.
- 11. Wait for 15 seconds for system reboot.

Upgrade System Firmware

