Network Printer Server

Control Center

for Ethernet Module

NOTE: In the interest of higher quality and value, Panduit products are continually being improved and updated. Consequently, pictures may vary from the enclosed product.
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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

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

**USB Port connector pin assignment:**

<table>
<thead>
<tr>
<th>Pin 1</th>
<th>Pin 2</th>
<th>Pin 3</th>
<th>Pin 4</th>
<th>Pin 5</th>
<th>Pin 6</th>
<th>Pin 7</th>
<th>Pin 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vbus</td>
<td>GND</td>
<td>D+</td>
<td>D-</td>
<td>+5V</td>
<td>GND</td>
<td>+5V</td>
<td>GND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1-3. 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.

Note 2: 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.
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.

![Control Center - Configuration](image)

- 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. Assigning an IP Address to the Server

3-3-1. 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; or the printer is set for USB port and must be changed to Ethernet Port (see Quick Guide for instructions).
- 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 “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.

3-3-2. 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.
3-3-3. Setting the IP Address Using the Server’s Web Pages

1. If you don’t know the current IP of your 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 your 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).

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

![Network Printer Server Login](image)

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**Network Printer Server Login**

**Status**

**Printer Information**

- Printer Model: TDP43ME G3.0wl
- Internal USB Port: connection (high speed)

**Server Information**

- Server Name: NetPS
- Description: Network Printer Server via Ethernet to USB
- Firmware Version: 2.3552
- MAC Address: 00-11-65-0F-A3-45

**TCP/IP Status**

- IP Address: 192.168.1.101 (dhcp)
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.1.254
- DNS Server: 192.168.1.254
- DHCPServer: 192.168.1.254
- Lease Time: 36000 second
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.
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.

![User Account]

<table>
<thead>
<tr>
<th>Set User Account</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Set Administrator</strong></td>
</tr>
<tr>
<td>New Administrator</td>
</tr>
<tr>
<td>New Password</td>
</tr>
<tr>
<td>Retype Password</td>
</tr>
</tbody>
</table>

**User Account List**

<table>
<thead>
<tr>
<th><strong>User Name</strong></th>
<th><strong>Password</strong></th>
<th><strong>Add</strong></th>
</tr>
</thead>
</table>

- **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.
  - 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: SNMP 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.
If you want to restore factory default values of the Server and upgrade new firmware of Ethernet/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 commands 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 comes 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 alert messages will be removed out from the memory when click “Dump” button.
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

<table>
<thead>
<tr>
<th>Problem</th>
<th>Recommended Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why the Control Center cannot detect the Ethernet module?</td>
<td>✦ Make sure the network cable is connected correctly.</td>
</tr>
<tr>
<td>Why I cannot use IE to set the Ethernet module?</td>
<td>✦ The Control Center may be blocked by firewall. Please refer to &quot;Firewall&quot; section to change the firewall configuration.</td>
</tr>
<tr>
<td>Why the IP address of Ethernet module cannot be changed?</td>
<td>✦ 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.</td>
</tr>
<tr>
<td></td>
<td>✦ Please login to the control center and change the &quot;DHCP client&quot; to TCP/IP.</td>
</tr>
</tbody>
</table>

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 cannot 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.

   ![Diagram showing options]

   **Load the Factory Default (Server)?**

   This server will load the factory default and then restart!

   ![Yes and No options]

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.
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**

**Upgrade Server Firmware**

<table>
<thead>
<tr>
<th>New Firmware File</th>
<th>Browse</th>
<th>Upload</th>
</tr>
</thead>
</table>

The version now is 2.3532