AXIS OfficeBasic USB
AXIS OfficeBasic Parallel

Network Print Servers

User's Manual

Safety Notices
Take some time to read through the safety notices before installing the print server. Please observe all safety markings and instructions when using this product.

Important:
Observe "Important:" in the text to avoid operational impairment. Do not proceed until you have fully understood the implications.

Electromagnetic Compatibility (EMC)

USA
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. Shielded (STP) network cables must be used with this unit to ensure compliance with the class B limits..

Europe
This digital equipment fulfils the requirements for radiated emission according to limit B of EN55022, and the requirements for immunity according to EN55024 residential, commercial, and light industry. Compliance is not valid for unshielded network cables.

Japan
This is a class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual. Compliance is not valid for unshielded network cables.

Australia
This electronic device meets the requirements of the Radio communications (Electromagnetic Compatibility) Standard 1998 AS/NZS 3548. Compliance is not valid for unshielded network cables.

Liability
Every care has been taken in the preparation of this manual; if you detect any inaccuracies or omissions, please inform your local Axis office, which can be found on the cover of this document. Axis Communications AB cannot be held responsible for any technical or typographical errors and reserves the right to make changes to the product and manuals without prior notice. Axis Communications AB makes no warranty of any kind with regard to the material contained within this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Axis Communications AB shall not be liable nor responsible for incidental or consequential damages in connection with the furnishing, performance or use of this material.

Axis' Trademarks
AXIS Print Monitor, AXIS AddPrinter.

Other Trademark Acknowledgments
Adobe Acrobat Reader, Apple, Ethernet, Internet Explorer, Macintosh, Microsoft, Mozilla, NetScape, Windows, are registered trademarks of the respective holders.

Support Services
Should you require technical assistance, please contact your Axis dealer. If your questions cannot be answered immediately, your Axis dealer will forward your queries through the appropriate channels to ensure you a rapid response. If you are connected to the Internet, you can find online manuals, technical support, software updates, application software, corporate information, etc. at http://www.axis.com/techsup/

Patent information
Axis AB has intellectual property rights relating to technology embodied in the product that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the patents listed at http://www.axis.com/patent.htm and one or more additional patents or pending patent applications in the US and other countries.

USER'S MANUAL AXIS OfficeBasic USB/AXIS OfficeBasic Parallel EN
Part No: 22998, Revision 2.0a
Date: August 2005 — Copyright © Axis Communications AB, 2005
This manual applies to the AXIS OfficeBasic USB/AXIS OfficeBasic Parallel with firmware version 7.00 or higher.

Table of Contents

Section 1 Introduction

Thank you for purchasing the AXIS OfficeBasic USB/AXIS OfficeBasic Parallel. This product has been developed to connect your printers anywhere in your network, allowing all network users access to shared printer resources.

About this Manual

This manual is applicable for the AXIS OfficeBasic USB/AXIS OfficeBasic Parallel with firmware version 7.00 or higher, providing introductory information as well as detailed instructions on how to set up and manage the print server in various network environments. It is intended for everyone involved in installing and managing the print server. To fully benefit from this manual, you should be familiar with basic networking principles.

These instructions are based on the settings in a **new** and **unconfigured** print server. To reload the default parameters, you can perform a Factory Default, which will restore most of the settings. See "Performing a Factory Default" on page 56.

About Axis

Axis increases the value of network solutions. The company is an innovative market leader in network video and print servers. Axis' products and solutions are focused on applications such as security, surveillance, remote monitoring and document management. The products are based on in-house developed chip technology, which is also sold to third parties.

Axis was founded in 1984 and is listed on the Stockholmsbörsen (XSSE:AXIS). Axis operates globally with offices in 14 countries and in cooperation with distributors, system integrators and OEM partners in 70 countries. Markets outside Sweden account for more than 95 % of sales. Information about Axis can be found at www.axis.com

Support Services

Should you require any technical assistance, please contact your Axis reseller. If your questions cannot be answered immediately, your Axis reseller will forward your queries through the appropriate channels to ensure a rapid response.

If you are connected to the Internet, you can:

- Download user documentation and firmware updates
- Find answers to previously resolved problems in the FAQ database. Search by product, category or phrase
- Report problems to Axis support staff by logging in to your private support area
- Visit Axis support Web on www.axis.com/techsup

Supported Environments

Network Printing
- Windows
- Macintosh

Section 2 Product Overview

Package Contents

Verify that nothing is missing from the print server package by using the check list below. Please contact your dealer if anything is missing or damaged. All packing materials are recyclable.

AXIS OfficeBasic USB

Hardware	Model	Part Number
Network Print Server	AXIS OfficeBasic USB print server	0171-001-01
Adhesive Holder & Clip	ACC AXIS 5500 CLIPS KIT	20119
USB Cable*	Length: 70 cm, 28 inches	20208

* The USB cable shipped with this product supports USB Low-Speed and Full-Speed, Hi-Speed is <u>not</u> supported.

AXIS OfficeBasic Parallel

Hardware	Model	Part Number
Network Print Server	AXIS OfficeBasic Parallel print server	0107-001-02

Common to Both Print Servers

Hardware	Model	Part Number
Power Adapter PS-H	Australia	19111
	Europe	19108
	Korea	19112
	UK	19109
	USA / Japan	19110

Media	Title	Part Number
CD	AXIS Network Product CD	22965
Warranty Sheet	Warranty Axis Servers	21681
Printed Material	AXIS OfficeBasic USB & AXIS OfficeBasic Parallel Installation Guide	22910

> Ensure that the print server's Power Adapter is marked with the correct voltage! Refer to the tables above for details.

AXIS Network Product CD

The AXIS Network Product CD provides an easy-to-use electronic catalog, that includes Axis software, firmware and user documentation. If your computer is set to French, German, Italian or Spanish, the information will automatically be presented in that language, otherwise you will see the English version.

To read the PDF documents you need an Acrobat Reader, which can be fetched at http://www.adobe.com/products/acrobat/readermain.html

Start-up Procedures for Windows

If your computer is configured to autostart CDs, the AXIS Network Product CD will start automatically when inserted into a local CD drive on Windows 98, Me, NT, 2000 and XP platforms. You can also navigate to the CD root directory and start the *index.htm* file from within the Windows file manager.

Start-up Procedures for Mac OS

Using your preferred file manager application, navigate to the CD root directory and click *index.htm*

Latest Versions

The latest version of Axis documentation, software and firmware is available on www.axis.com

Physical Description

AXIS OfficeBasic USB
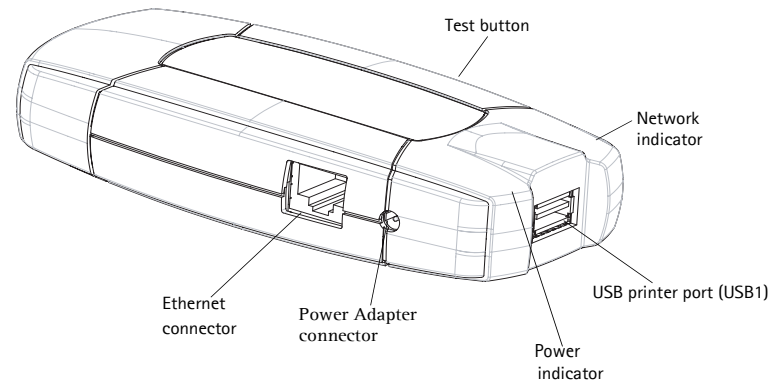
AXIS OfficeBasic Parallel
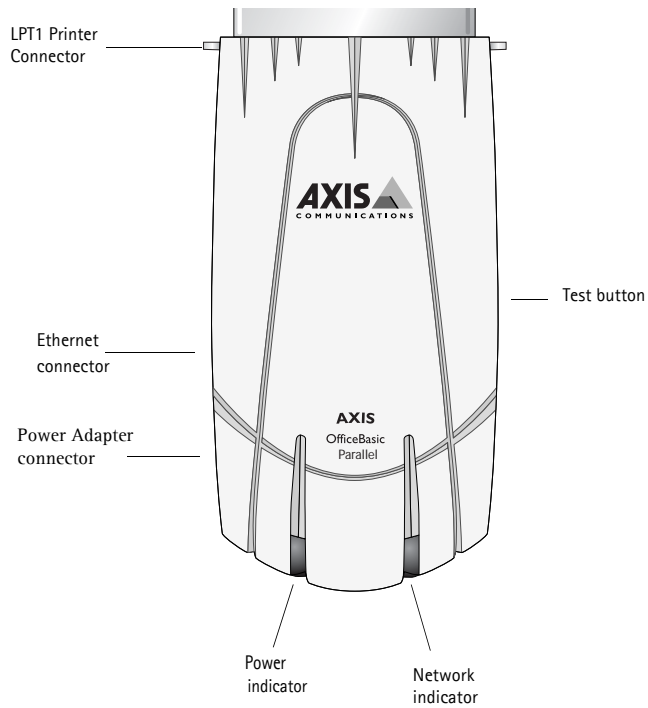
Underside Label on Print Server
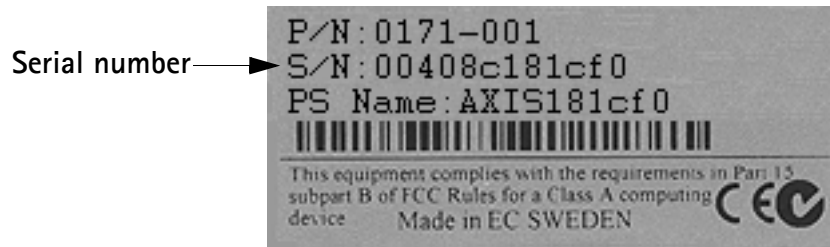
Serial number →

Serial number	MAC/Ethernet address:
00408c181cf0 =	00-40-8c-18-1c-f0 (Windows) 00:40:8c:18:1c:f0 (Macintosh)

Network Connector	AXIS OfficeBasic USB/AXIS OfficeBasic Parallel is designed for 10 Mbps or 100 Mbps Ethernet networks and connect to the network via a twisted pair category 5 cable (10baseT or 100baseTX) or better.
Printer Ports	
AXIS OfficeBasic USB	One Low-Speed/Full-speed USB 1.1 port. The port also works with USB v 2.0 in Low-Speed/Full-Speed.
	Note: The USB cable shipped with the product supports Low-Speed and Full-Speed. IMPORTANT! Hi-Speed is <u>not</u> supported.
AXIS OfficeBasic Parallel	One high-speed IEEE 1284 compatible parallel port.
Test Button	The test button is used for:

- Printing a test page to check the connection to the printer.
- Printing the parameter list showing the print server settings.
- Performing a Factory Default of the print server, which will restore the parameters and settings to their factory default values.

See *"The Test Button"* on page 56 for details.

Network Indicator	The network indicator flashes to indicate network activity.
Power Indicator	The power indicator is lit while power is applied. If it is not lit, or if it flashes, there is a problem with the print server or its Power Adapter. See *Troubleshooting*, on page 51.
Printer Compatibility	All printers can be used except host-based printers (also known as CAPT, GDI, PPA or Windows-based printers).

Installation Methods

Installation and Integration

Refer to the table below to select the appropriate installation method. All Axis client software is available on www.axis.com

Environment	Method/Client Software	Description
Windows	AXIS AddPrinter Wizard	Used for adding network printers to your workstation in Windows 2000, XP and 2003
	AXIS Print Monitor	Used for adding network printers to your workstation in Windows 98/Me/NT
Macintosh	Bonjour and Macintosh standard methods in native/classic mode	Used for installing network printers in Macintosh

Configuration and Management

The print server can be configured and managed from its internal Web pages, using HTTP. These Web pages offer you a platform independent management tool that is suitable for all supported network environments. See *Using a Web Browser for Print Server Management*, on page 42 for details.

Features and Benefits

Reliability   The print server provides high performance and reliability combined with low power consumption. The electronic circuits are based on the AXIS ETRAX 100 LX chip, which comprises an integrated 32 bit RISC processor and associated network controllers.

Flexibility   The print server supports printing in Windows and Mac OS environments.

Speed   The AXIS ETRAX 100 LX chip has been specifically designed for LAN products.

Easy to Install   The print server installs, operates and is managed in a reliable and easy fashion.

Security   You can assign a password to restrict unauthorized configuration of the print server.

Monitoring   The internal print server Web pages allow you to continuously monitor printer status.

Future Proof   The firmware stored in the print server's Flash memory can be upgraded over the internal Web pages or FTP. This allows you to quickly update and enhance its operational features when new print server software becomes available.

Section 3   Basic Installation

Connecting the Hardware

AXIS OfficeBasic USB
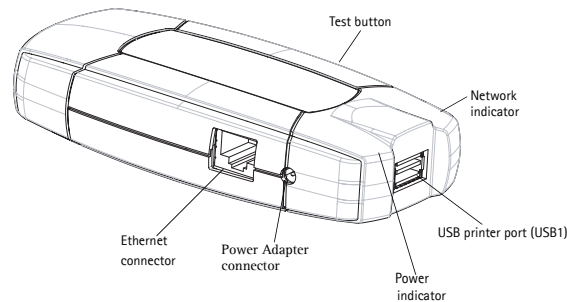
AXIS OfficeBasic
Parallel
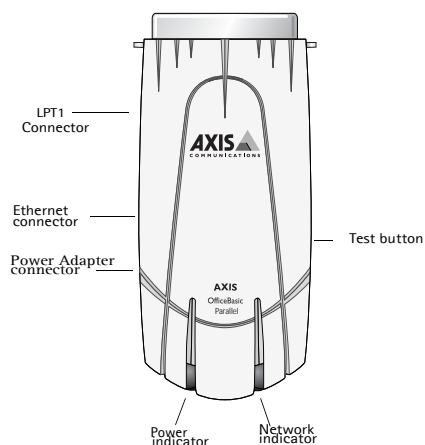
1. Make sure that your printer is switched <u>off</u> and that the Power Adapter is <u>disconnected</u> from the print server.

2. Locate the **serial number**, found on the underside label of the print server, and write it down. You will need this number to configure the print server. **Example**: S/N: 00408c181cf0

AXIS OfficeBasic USB
AXIS OfficeBasic
Parallel
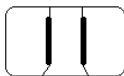
Connect the printer to the USB port using the USB cable.
Connect the printer directly to the LPT port or using a printer cable.

3. Connect the print server to the network using a twisted pair (category 5 or better) RJ45 cable, 10baseT or 100baseTX.

4. Switch on the printer and make sure it is ready for use.

5. Connect the Power Adapter to the print server. The Power indicator will light up. When the Network indicator starts to flash, the print server is correctly connected to the network.

6. Wait 1 minute. Then press the test button on the print server once. A **test page** will be printed on the connected printer. The test page will show a list of the most important parameters.

Mounting the AXIS OfficeBasic USB

Using the supplied clip and holder, your AXIS OfficeBasic USB can be mounted in many ways, e.g. on the back of the printer or on a wall.

Adhesive Clip		Fasten to print server by peeling off adhesive tape.
Adhesive Holder		Fasten to mounting surface by peeling off adhesive tape.

Methods for Setting the IP Address

The IP address of your print server can be set using one of the following methods, depending on your network operating environment:

Dynamic IP Address Assignment

Method	Environment/ Server required	Comment
AXIS AddPrinter Wizard	Windows 2000, XP and 2000	Axis software that allows you to find print servers in your network and assign an IP address to them. See *"Adding Printers in Windows 2000/XP/2003 using AXIS AddPrinter Wizard"* on page 20
DHCP	DHCP server	Dynamic assignment of IP addresses. See *Dynamic IP Address Assignment*, on page 16
Auto-IP	Windows environment	Automatic assignment of IP addresses. See *Dynamic IP Address Assignment*, on page 16
RARP	RARP server	Static assignment of IP addresses. Cannot be used over routers. See *IP Address Management*, on page 49
BOOTP	BOOTP server	Static assignment of IP addresses. See *IP Address Management*, on page 49

Static IP Address
Assignment

Method	Platform	Comment
AXIS AddPrinter Wizard	Windows 2000, XP and 2000	Axis software that allows you to find print servers in your network and assign an IP address to them. See *"Adding Printers in Windows 2000 / XP / 2003 using AXIS AddPrinter Wizard"* on page 20
arp/ping	Windows	Requires the IP address for each device to be set individually. Cannot be used over routers. See *"Set the IP Address using ARP in Windows 98/NT/ Me/2000/XP/2003"* on page 16
	Mac OS X	Requires the IP address for each device to be set individually. Cannot be used over routers. See *"Set the IP Address with ARP in Mac OS X"* on page 17

Important:

- The ability to set the IP address with ARP and PING will only be enabled the first **10 minutes** after restarting the print server.

- Ping operates on single network segments only, i.e. **it cannot be used over routers**.

- DO NOT use the IP addresses used in the following examples when installing your print server. Consult your network administrator before assigning an IP address to your print server.

- The default host name of the print server is 'AXIS' followed by the last 6 digits in the serial number. e.g. AXIS181636. The host name (Print server name) can be changed in the PS_NAME. field on the **Admin | General Settings** page.

- The host name limitations conclude that if you want to register the same host name at a WINS server and a DDNS server, the host name should be no longer than 15 characters and it should only contain the characters 'A–Z', 'a–z', '0–9' and '–'.

- Refer to your system manuals or to your network administrator for instructions on how host name resolutions are performed on your system.

Dynamic IP Address Assignment

Obtaining an IP Address through DHCP

If you have a DHCP server on your network, your print server will receive an IP address automatically. The IP address will then appear on the test page printed when you press the test button once. You should now be able to access the print server's internal Web pages as described on *"Accessing the Web Pages"* on page 42.

If you are <u>not</u> working in a DHCP network, you need to set the IP address of the print server manually. See *Static IP Address Assignment*, below..

Obtaining an IP Address through Auto-IP

Auto-IP may be used to set the IP address automatically in the absence of a DHCP server. The Auto-IP address structure is: **169.254.xxx.xxx.**

Note that the Auto-IP function will only work when the DHCP parameter is enabled in the print server. This function is enabled automatically upon installation of a brand new print server. If you perform a Factory Default using the test button on the print server and you do not have a DHCP server on your network, Auto-IP will automatically set the IP address of the print server.

The **DHCP Enabled** parameter is enabled/disabled in the print server's Web pages: **Admin │ Network Settings │ Detailed View │ TCP/IP Network => DHCP Enabled.**

Static IP Address Assignment

Set the IP Address using ARP in Windows 98/NT/ Me/2000/XP/2003

Follow the instructions below to set the IP address using arp/ping in Windows

1. Open a Command Prompt and write:

Example

```
arp -s <IP address> <Ethernet address>
ping -t <IP address>
```

```
arp -s 192.168.3.191 00-40-8c-10-00-86
ping -t 192.168.3.191
```

2. Without interrupting the "ping -t" loop, restart the print server by disconnecting and then re-connecting the power supply.

3. If the host returns `Reply from 192.168.3.191 ...` or a similar message, the IP address has been set successfully.
Interrupt the "ping -t" loop by pressing CTRL+C on your keyboard.

If the host returns `Request timed out` you need to reboot the print server and perform steps 1-3 above again. Rebooting the print server is done by disconnecting and then re-connecting the print server's Power Adapter.

4. Log in to the print server's Web pages (see *"Using a Web Browser for Print Server Management"* on page 42), select **Admin** | **Network Settings** | **Detailed View** | **TCP/IP Network** and define the **Default Router** and **Subnet Mask**.

You have now set the IP address of the print server. Continue to *"Adding a Network Printer to your Workstation"* on page 18.

Note:

> • When you execute the ping command for the first time, you will experience a significantly longer response time than is usual.
>
> • The ability to set the IP address with ARP and PING will only be enabled the first 10 minutes after restarting the print server.

Set the IP Address with ARP in Mac OS X

Follow the instructions below to set the IP address using arp/ping in Macintosh

1. Open a Terminal and write:

Example

```
arp -s <IP address> <Ethernet address>
ping <IP address>
```

```
arp -s 192.168.3.191 00:40:8c:10:00:86
ping 192.168.3.191
```

2. Restart the print server by disconnecting and then re-connecting the Power Adapter.

3. If the host returns `psname is alive...` or a similar message, the IP address has been set successfully.

If the host returns `Request timed out` you need to reboot the print server and perform steps 1-3 above again. Rebooting the print server is done by disconnecting and then re-connecting the print server's Power Adapter.

4. Log in to the print server's Web pages (see *"Using a Web Browser for Print Server Management"* on page 42), select **Admin** | **Network Settings** | **Detailed View** | **TCP/IP Network** and define the **Default Router** and **Subnet Mask**.

You have now successfully set the IP address of the print server. Continue to *"Adding a Network Printer to your Workstation"* on page 18.

Notes:

- If the host name has not been mapped to an IP address, simply replace the host name entry with the IP address.

- When you execute the `ping` command for the first time, you may experience a significantly longer response time than is usual.

- The ability to set the IP address with ARP and PING will only be enabled the first 10 minutes after restarting the print server

Adding a Network Printer to your Workstation

Configuration Methods

Once you have set the IP address of your print server, your network printer can be added to any PC on your network. The method that you choose should be dictated by your printing requirements and your supported network environments. Select the appropriate method from the table below:

Operating system	Network Protocol	See...
Windows	TCP/IP	"Adding Printers in Windows" on page 19
	NetBIOS/NetBEUI	
Macintosh	TCP/IP	"Adding Printers in Macintosh" on page 34
	AppleTalk	

Section 4 Adding Printers in Windows

Overview of Installation Methods

This section describes how to add network printers to a computer running Windows. Refer to the table below to determine the most appropriate installation method according to your computer environment:

Windows Platform	Printing Protocol	Method/Software	See...
Windows 2000, XP, 2003	TCP/IP (LPR)	AXIS AddPrinter Wizard	"Adding Printers in Windows 2000 / XP / 2003 using AXIS AddPrinter Wizard" on page 20
		Windows Add Printer Wizard	"Adding Printers in Windows 2000 / XP / 2003 using Windows Add Printer Wizard" on page 23
Windows 2000	NetBIOS/NetBEUI	AXIS Print Monitor software	Adding NetBIOS/NetBEUI Printers in Windows 2000 using AXIS Print Monitor, on page 28
Windows NT	TCP/IP	Microsoft LPR Monitor	Adding Printers in Windows NT using the Microsoft LPR Monitor, on page 26
		AXIS Print Monitor software	Adding Printers in Windows NT over TCP/IP using AXIS Print Monitor, on page 31
	NetBIOS/NetBEUI		"Adding NetBIOS/NetBEUI Printers in Windows NT using AXIS Print Monitor" on page 29
Windows 98/Me	TCP/IP (LPR)		"Adding Printers in Windows 98, Me over TCP/IP using AXIS Print Monitor" on page 30
	NetBIOS/NetBEUI		"Adding Printers in Windows 98 and Me over NetBIOS/NetBEUI using AXIS Print Monitor" on page 32

If you intend to use the print server in a multi-protocol environment, refer to the chapters pertaining to the respective operating systems in this manual.

Adding Printers in Windows 2000 / XP / 2003 using AXIS AddPrinter Wizard

AXIS AddPrinter is a Wizard that locates your network printers and helps you install them in your Windows environment. When you have completed the Wizard, the network printer is ready for use. To install a network printer you must be logged in as an Administrator or be a member of the Administrators' group.

1. Install AXIS AddPrinter Wizard on all Windows 2000, Windows XP and Windows Server 2003 workstations that will print via the print server.

2. Before you continue, ensure that the print server is properly connected to the printer, network and power.

3. Start AXIS AddPrinter. Click **Next**. The Wizard will perform an automatic search for all Axis network printers, which is indicated by the progress bar at the bottom of the screen.
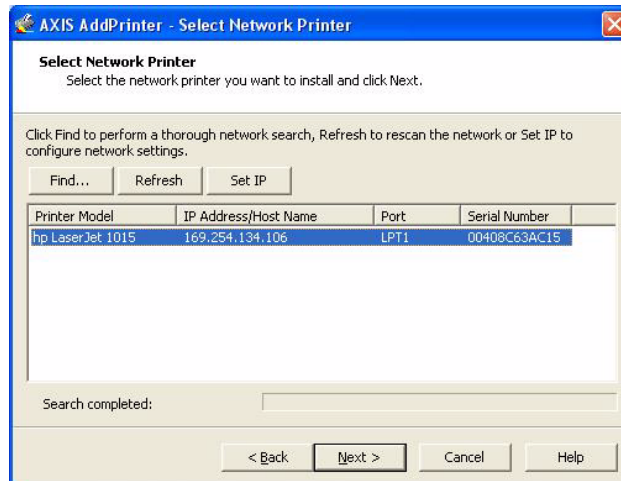

4. Select a printer from the **Select Network Printer list** and click **Next**. If the printer does not appear, see *Easy Access to All Network Printers*, below.

5. The Wizard searches for a suitable printer driver.

    If a suitable driver is not found, you will be asked to select a driver, otherwise the Wizard suggests which Printer Model and Printer Driver to use.

    Click **Change driver** to select another driver, or click **Finish** to accept and install the suggested driver.
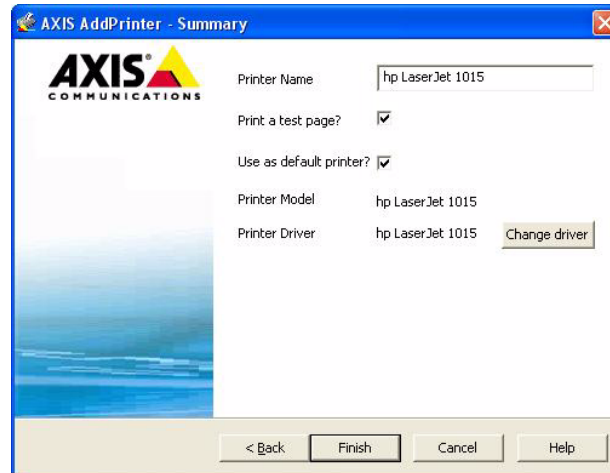
The installation is complete and you can start using the network printer.

Easy Access to All Network Printers
The Wizard's **Select Network Printer list** also provides quick and easy access to all connected and configured network printers.

Find...
If the print server is located outside your local subnet it will not appear in the list. This may be the case if your router blocks SLP traffic. Click **Find.** Enter the IP address or host name displayed on the print server's Test page and click **OK.** *Example: 192.168.3.191 or AXIS181cf0*

Refresh
If the print server has just been switched on, the printer has not had time to report its presence. This process can take a few minutes. In this case, **Printer Model** is stated as **No printer connected.** Click **Refresh** to rescan your local network segment for available print servers and update the status. If you still do not see the expected values, click **Help** and select **Troubleshooting.**

Set IP
To set or change the IP address, select the print server and click **Set IP.** Decide whether you want to configure the IP settings manually or want the Wizard to suggest a static IP address.

Example: Select **Suggest...** and click **OK.** Confirm – or modify – the Wizard's suggested IP settings. Click OK.

Note: The **Suggest...** option is only available when the computer has one network card.
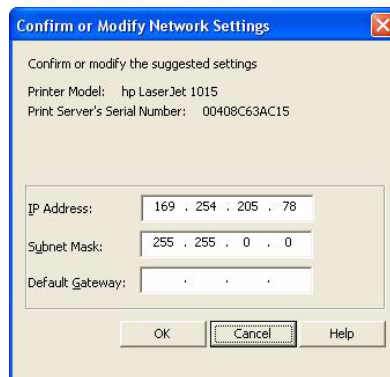
Go Straight to the Print Server's Web Interface

Right-click on a printer in the **Select Network Printer list** and select **Print server home page** to configure the print server from its embedded Web pages.

Adding Printers in Windows 2000 / XP / 2003 using Windows Add Printer Wizard

Follow the instructions below to use the standard Windows method (TCP/IP over LPR) for adding a network printer in Windows 2000/ Windows XP/Windows Server 2003.

Windows XP/2003:

1. Go to **Start** │ **(Settings)** │ **Printers and Faxes** and click the **Add a Printer** icon to start the **Add Printer Wizard**. Click **Next.**

Windows 2000:

1. Go to **Start** │ **Settings** │ **Printers** and click the **Add Printer** icon to start the **Add Printer Wizard.** Click **Next.**

2. Select **Local Printer attached to this computer** and make sure the **Automatically detect and install my Plug and Play printer** check box is not checked. Click **Next.**
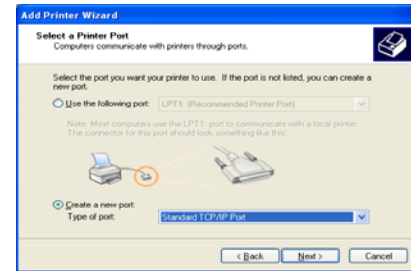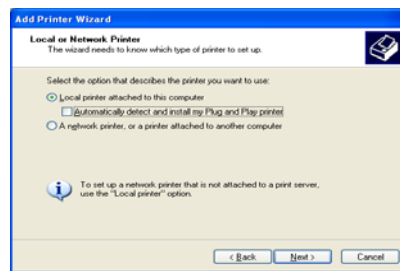
3. Click the **Create a new port** radio button and select **Standard TCP/IP Port** from the list. Click **Next** and the **Add Standard TCP/IP Printer Port Wizard** starts. Click **Next**.

4. In the **Printer Name or IP Address** field, enter the IP address of the print server (*Example: 192.168.3.191*). The **Port Name** field will be filled in automatically. Optionally, add **_LPT1** as a suffix. Click **Next**.
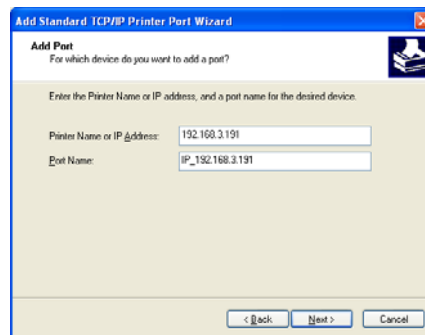
5. Choose **Device Port**:

   - **LPT1** for **AXIS OfficeBasic Parallel**
   - **LPT1** for **AXIS OfficeBasic USB**
     (if you want the USB port to appear as an option in the drop-down list you must install Axis software*)

   Click **Next.**

6. Select **Manufacturer and Printer** from the driver list. Click **Next**.

7. Choose whether you want to keep the existing driver or replace it. Click **Next**. Supply a name for the printer and choose whether you want to make it your default printer. Click **Next**. Choose whether you want to share the printer with other network users, print a test page, etc. Select the appropriate radio button and click **Next** and **Finish**

8. Next, from your desktop, go to **Start** | **Printers (and Faxes).** Highlight the network printer you have just installed and right-click, choose **Properties** then **Ports** | **Configure Port:**
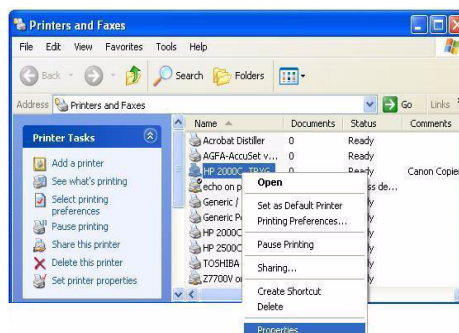
9. In the **LPR Settings – Queue Name** field, you will see the value **"pr1".** Change the values to:

| AXIS OfficeBasic USB | USB1 |
| AXIS OfficeBasic Parallel | LPT1 |
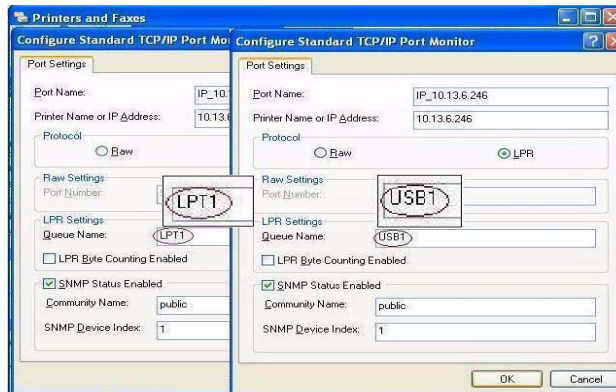
Click **OK** and then **Apply**. Print a test page to verify. You have now completed the installation.

* *Tcpmon.ini

> If you use an older version of Windows, the USB port will not be shown.
>
> For the USB port to appear as an option in the Windows Device Port list (see Step 5 above), install Axis tcpmon Upgrade Utility. This script upgrades the tcpmon.ini file (in the system32 directory) by adding new Axis print server ports in the Windows Available Ports list. The old tcpmon.ini file will be saved as tcpmon.ini_bak in the same directory, no other information will be affected. You have to be logged in as an Administrator to use this program. The program is available at **ftp.axis.com/pub_soft/prt_srv/utility/tcpmon**

Adding Printers in Windows NT using the Microsoft LPR Monitor

If you have not already done so, you should perform the TCP/IP basic setup procedures prior to installing a printer for LPR printing.

Preparing for LPR Printing

In the **Control Panel**, double-click the Network icon. Select the **Services** tab. If the TCP/IP Printing entry appears, then TCP/IP is already installed. Close the **Network** folder and go on to *Installing an LPR printer*, below.

First, prepare for LPR printing:

1. Open the **Control Panel** and double-click the **Network** icon.

2. Select **Protocols**.

3. Add **TCP\IP Protocol**.

4. Select **Services**.

5. Add **Microsoft TCP\IP Printing**.

Installing an LPR Printer

1. Go to **Start** | **Settings** | **Printers** | **Add Printer**. Select **My Computer** (for peer-to-peer printing) and click **Next**.

2. From the **Available Ports** list, choose the appropriate printer port, which will appear as the host name or IP address of the print server.

3. If the host name or IP address of the print server you wish to use does <u>not</u> appear in the list, click **Add Port**.

4. Choose **LPR Port** from **Available Printer Ports** and click **New Port**.

5. Type the print server's name or IP address in the field **Name or address of server providing lpr** (Example: 10.13.6.198).

   Then enter which port to use in the field **Name of printer or print queue on that server**:

AXIS OfficeBasic USB
AXIS OfficeBasic Parallel

USB1
LPT1

Click **OK** and then **Close**.

6. The added print server will now appear in the **Available Ports** list.

7. Click **Next**, choose an appropriate driver and finish the installation in the normal manner.

Adding Printers in Windows using AXIS Print Monitor

AXIS Print Monitor is the recommended tool to use for network printing in Windows 98 and Me. AXIS Print Monitor is available free of charge on www.axis.com

AXIS Print Monitor Overview AXIS Print Monitor allows a print server to be connected in the same simple fashion as connecting a local printer. Once installed, it is automatically initialized upon system startup. AXIS Print Monitor has been developed for peer-to-peer printing, allowing your print jobs to be sent directly to the print server.

Printing Environments AXIS Print Monitor supports printing over NetBIOS/NetBEUI and TCP/IP (LPR and Raw TCP). To enable printing in these environments, please ensure that the desired printing protocols are running on your client.

Peer-to-Peer Printing The AXIS Print Monitor needs to be installed on each workstation to perform peer-to-peer printing. Once installed, the AXIS Print Monitor allows you to access all network printers, just as if they were connected directly to your workstation.

Client/Server Printing AXIS Print Monitor needs only to be installed on one server to perform client/server printing. The installed printers must be configured to be shared to allow clients to use them. Pop-up messages should not be enabled on the server as they will not be displayed on the client platforms.

Note:

AXIS Print Monitor can also be used for DOS printing. Please refer to the AXIS Print Monitor's Readme file for instructions. The Readme file is located in the same folder where AXIS Print Monitor is installed on your PC.

Adding NetBIOS/NetBEUI Printers in Windows 2000 using AXIS Print Monitor

See to it that the NetBEUI protocol is installed on your client. Follow the procedure below to install Axis Printer Ports from a Windows 2000 workstation:

1. Install AXIS Print Monitor on all workstations that will print via the Axis print server. AXIS Print Monitor is available free of charge on www.axis.com

2. To start the Add Printer Wizard, select **Settings** | **Printers** from the **Start** menu and double-click the **Add Printer** icon. Start the installation by clicking **Next**.

3. The Wizard asks you to select **Local printer** or **Network printer**. Select **Local printer** and click **Next**.

4. Click **Create a new port.** In the Available Ports dialog, select **AXIS Port** and click **Next**.

5. Select **NetBIOS/NetBEUI** as your choice of network protocol and click **OK**.

6. Select the AXIS Port you want to add from the list of available ports. The port appears as <name>.<port> AX100086.US1 or AXIS100086.LP1

AXIS OfficeBasic USB   US1
AXIS OfficeBasic   LP1
Parallel

7. Choose the appropriate printer driver for your printer. Click **Next** and proceed directly to step 9. It is only necessary to perform steps 7 - 8 if your printer does not appear in the list.

Note:

> Even if the desired printer is available in the **Manufacturers** and **Printers** lists, you are advised to use the printer driver provided with the printer. This assures you of the latest driver software.

8. Click the **Have Disk...** button. Insert the printer driver diskette/CD that was provided with your printer, select the appropriate diskette/CD drive and click **OK**.

9. Select the printer driver you want to install and click **Next**.

10. Enter an appropriate name for your printer and click **Next**.

11. Choose whether you want to share the printer with other network users and click **Next**.

12. Choose whether you want to print a test page, click **Next** and then **Finish**.

Adding NetBIOS/NetBEUI Printers in Windows NT using AXIS Print Monitor

See to it that the NetBEUI protocol is installed on your client. Follow the procedure below to install Axis Printer Ports from a Windows NT workstation:

1. Install AXIS Print Monitor on all workstations that will print via the Axis print server. AXIS Print Monitor is available free of charge on www.axis.com

2. To start the Add Printer Wizard, select **Settings | Printers** from the **Start** menu and double-click the **Add Printer** icon.

3. The Wizard asks you to select **My Computer** or **Network printer server**. Select **My Computer**, click **Next**.

4. Click **Add Port...** In the Available Ports dialog, select **AXIS Port** and click **New Port...**

5. Select **NetBIOS/NetBEUI** as your choice of network protocol and click **OK**.

6. Select the AXIS Port you want to add from the list of available ports. The port appears as <name>.<port>:

AXIS OfficeBasic USB
AXIS OfficeBasic
Parallel

US1 Example: AX1000086.US1
LP1 Example: AX1000086.LP1

Click **OK**.

7. Close the Printer Ports window.

8. Click the **Configure Port...** button. Choose whether error condition pop-up messages are to be displayed by checking the box in the Configure Axis Ports dialog. Define the frequency at which the error messages should be displayed after retry. Click **OK**. Continue the installation by clicking **Next**.

9. Choose the appropriate printer driver for your printer. Click **Next** and proceed directly to step 11. It is only necessary to perform steps 9 - 10 if your printer does not appear in the list.

Note:

> Even if the desired printer is available in the **Manufacturers** and **Printers** lists, you are advised to use the printer driver provided with the printer. This assures you of the latest driver software.

10. Click **Have Disk...** Insert the printer driver diskette/CD that was provided with your printer, select the appropriate diskette/CD drive and click **OK**.

11. Select the printer driver you want to install and click **Next**.

12. Enter an appropriate name for your printer and click **Next**.

13. Choose whether you want to share the printer with other network users and click **Next**.

14. Choose whether you want to print a test page and then click **Finish**.

Adding Printers in Windows 98, Me over TCP/IP using AXIS Print Monitor

1. Install AXIS Print Monitor on all workstations that will print via the Axis print server. AXIS Print Monitor is available free of charge on www.axis.com

2. Next, start the Windows Add Printer Wizard: select **Settings** | **Printers** from the **Start** menu and double-click the **Add Printer** icon.

3. After clicking **Next** in the first dialog, the Wizard asks you to select between **Local Printer** and **Network Printer**. You must select **Local Printer** as the print server emulates a local printer port. Click **Next**.

4. Choose the appropriate print driver for your printer. If the desired print driver already appears within the displayed **Manufacturers and printers** lists, highlight your selection, click **Next** and proceed directly to step 7. It is only necessary to perform steps 5- 6 if your printer does not feature in the model list.

5. Click the **Have Disk...** button. Insert the printer driver diskette/CD into the appropriate disk drive of your computer.

6. Select the type of printer you want to install from the diskette/CD and click **Next**.

7. Select the Printers@TCP/IP Port and click **Next**.

8. Enter an appropriate name for your printer and choose whether you want it to be the default printer. Click **Next**.

9. In the next window, do <u>not</u> order a Test Page to be written, just click **Finish**.

10. The printer you have defined will now be displayed in the Printers Folder. Right-click the printer object and select **Properties**.

11. Click the **Details** tab within the **Properties** page and then click **Add Port** to display the available monitors.

12. Click the radio button "other". Select **AXIS Port** and then click **OK**.

13. Select **LPR (TCP/IP)** as your choice of protocol and click **OK**.

14. Enter the IP address or the host name of your print server (Example IP address: 192.168.3.191, host name: AXIS181636).
    In the **Logical Printer Name** field, enter the port you wish to use:

AXIS OfficeBasic USB	USB1
AXIS OfficeBasic Parallel	LPT1

15. The TCP/IP port will then be added automatically to the list of available ports. Click **Apply** and **OK**.

16. You may now configure the port, as described below. The Axis Printer Port is now installed.

Configure the Port

1. Select **Settings** | **Printers** from the **Start** menu and highlight the printer you wish to configure. Select **File** | **Properties** | **Details** and click **Port Settings**. Click the **Configure Port** button.

2. Choose whether error condition pop-up messages are to be displayed by checking the box in the **Configure AXIS Ports** dialog. Define the frequency at which the error messages should be displayed after retry. Click **OK**.

Note:

Even if the desired printer is available in the Manufacturers and Printers lists, you are advised to use the print driver provided with the printer. This assures you of the latest driver software.

Adding Printers in Windows NT over TCP/IP using AXIS Print Monitor

1. Install AXIS Print Monitor on all workstations that will print via the Axis print server.
AXIS Print Monitor is available free of charge on www.axis.com

2. To start the Add Printer Wizard, select **Settings** | **Printers** from the **Start** menu and double-click the **Add Printer** icon.

3. The Wizard asks you to select **My Computer** or **Network printer server**. Select **My Computer**, click **Next**.

4. Click **Add Port...** In the Available Ports dialog, select **AXIS Port** and click **New Port...**

5. Select **LPR (TCP/IP)** as your choice of network protocol and click **OK**.

6. Enter the IP address or the host name of your print server (Example IP address: 192.168.3.191, host name: AXIS181636). In the **Logical Printer Name** field, enter the port you wish to use:

AXIS OfficeBasic USB   USB1
AXIS OfficeBasic   LPT1
Parallel

7. Close the Printer Ports window.

8. Your print server will be marked automatically in the list. Click the **Configure Port...** button. Choose whether error condition pop-up messages are to be displayed by checking the box in the Configure Axis Ports dialog. Define the frequency at which the error messages should be displayed after retry. Click **OK**. Continue the installation by clicking **Next**.

9. Choose the appropriate printer driver for your printer. Click **Next** and proceed directly to step 11. It is only necessary to perform steps 9 - 10 if your printer does not appear in the list.

Even if the desired printer is available in the **Manufacturers** and **Printers** lists, you are advised to use the printer driver provided with the printer. This assures you of the latest driver software.

10. Click the **Have Disk...** button. Insert the printer driver diskette/CD that was provided with your printer, select the appropriate diskette/CD drive and click **OK**.

11. Select the printer driver you want to install and click **Next**.

12. Enter an appropriate name for your printer and click **Next**.

13. Choose whether you want to share the printer with other network users and click **Next**.

14. Choose whether you want to print a test page and then click **Finish**.

Adding Printers in Windows 98 and Me over NetBIOS/NetBEUI using AXIS Print Monitor

Follow the procedures below to install Axis NetBIOS/NetBEUI printer ports on a Windows 98 workstation, using AXIS Print Monitor:

1. Install AXIS Print Monitor on all workstations that will print via the Axis print server. AXIS Print Monitor is available free of charge on www.axis.com

2. To start the Add Printer Wizard, select **Settings** | **Printers** from the **Start** menu and double-click the **Add Printer** icon.

3. After clicking **Next** in the first dialog, the Wizard asks you to select Local printer or Network printer. Select **Local printer** and click **Next**. Choose the appropriate printer driver for your printer. If the desired printer driver appears in the displayed **Manufacturers** and **Printers** lists, highlight your selection, click **Next** and proceed directly to step 6. It is only necessary to perform steps 4 - 5 if your printer does not appear in the model list.

Note:

> Even if the desired printer is available in the **Manufacturers and Printers** lists, you are advised to use the printer driver provided with the printer. This assures you of the latest driver software.

4. Click the **Have Disk...** button. Insert the printer driver diskette/CD that was provided with your printer, select the appropriate diskette/CD drive and click **OK**.

5. Select the printer driver you want to install and click **Next**.

6. Select the **AXIS Printer Port** from the Available Ports list. The port names appears as <name>.<port>. Here, <name> is AX followed by the last six digits of the print server's serial number (e.g. AX100086) and <port> is

AXIS OfficeBasic USB	US1
AXIS OfficeBasic Parallel	LP1

Click the **Configure Port** button.

7. Choose whether error condition pop-up messages are to be displayed by checking the box in the **Configure AXIS Ports** dialog. Define the frequency at which the error messages should be displayed after retry. Click **OK** and **Next**.

8. Enter an appropriate name for your printer and click **Next**.

9. Choose whether you wish to print a test page and click **Finish**.

Section 5   Adding Printers in Macintosh

Having set up the print server to your network, this section now describes how to set up your print server for printing in Mac OS X and earlier MacOS environments using TCP/IP or AppleTalk.

If you intend to use the print server in a multi-protocol environment, refer to the chapters pertaining to the respective operating systems in this manual.

Bonjour Printing in Mac OS X

Bonjour is available from Mac OS X 10.2 and up. Bonjour is enabled by default in the print server. You can alter the Bonjour parameters from the print server's Web interface: select **Admin | Network Settings | Detailed View | TCP/IP Network**.

1. From the Apple menu, select **Go | Applications | Utilities** and start the **Print Center** or the **Printer Setup Utility**.

2. Click **Add** in the Printer List.

3. From the drop-down list, select **Bonjour**.

4. High-light the printer you want to install. The print server's default name is **AXISxxxxxx Network Print Server** (where the xs represent the last six digits of the print server's serial number) followed by the ports available.
    Examples:
    AXIS610282 Network Print Server_USB1
    AXIS610282 Network Print Server_LPT1

    AXIS OfficeBasic USB
    AXIS OfficeBasic
    Parallel

5. Select **printer manufacturer** and **model** from the drop-down list. (For some printer drivers, Printer Manufacturer and Model are selected automatically.)
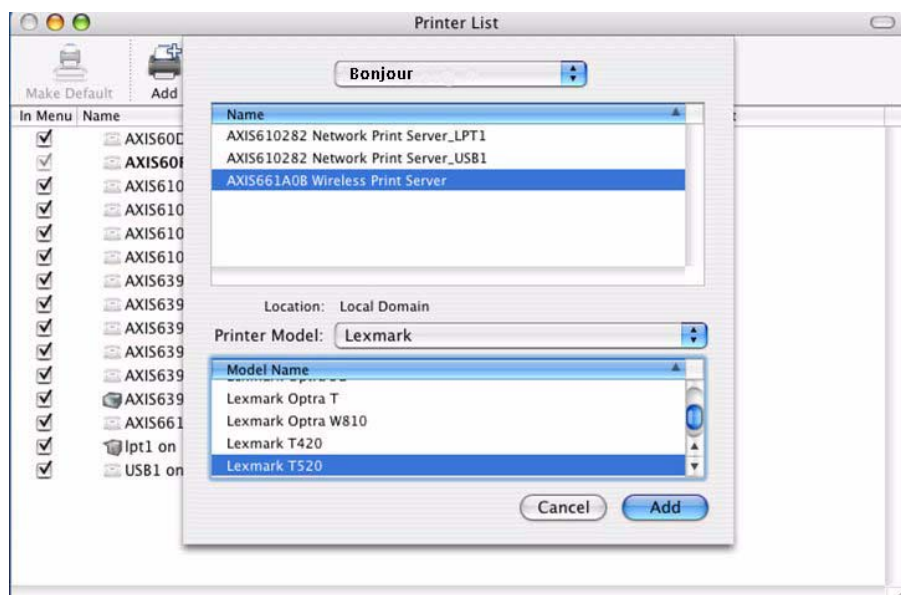
6. Click **Add** to finish the installation. The print server has now been added to the Printer List.
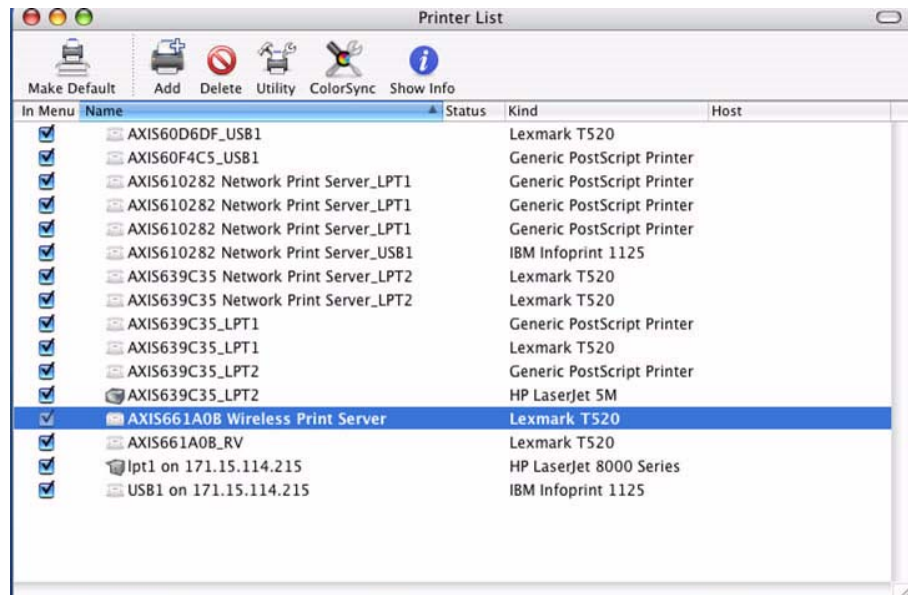
7. If you wish to configure printer settings, click **Printers | Configure Printer**.
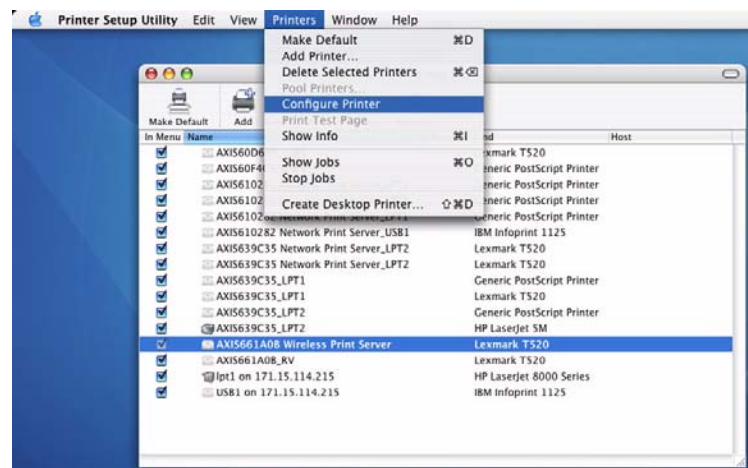
To Change the Bonjour Service Name

You can change the print server's Bonjour service name via the print server's Web interface: **Admin | Network Settings | Detailed View | TCP/IP Network** => Bonjour Service Name.

If the print server using Bonjour is already installed and the print server name or service name is changed, the print server must be removed from the Printer List and then re-installed with the new Bonjour service name.

Installation in Mac OS X using AppleTalk

This section describes setting up your print server for printing in the Mac OS X.

1. Start **Print Center** (from **Go** | **Applications** | **Utilities => Print Center**) or the **Printer Setup Utility**.

2. Select **Printers** | **Add Printer...**

3. From the **Printer List** dialog, select **AppleTalk**.

4. Now, the port of your print server will appear in the list of available printers. The port is shown as <host name>_<port>.

AXIS OfficeBasic USB | The <port> is USB1. Example: AXIS610282_USB1
AXIS OfficeBasic Parallel | The <port> is LPT1. Example: AXIS610282_LPT1

   Select the print server port you want to use.

5. Select an appropriate printer driver for your printer from the **Printer Model** drop-down list. If the printer is not available in the list, select **Generic**. (Note: **Generic** is only used for postscript printers.)

   You can also browse for a printer driver on your computer or network by selecting **Other...** from the list.

6. Click **Add** to complete the installation.

Installation of LPR printing in MAC OS X

If you want to print using LPR, select:

1. **Printers** | **Add Printer...**

2. From the **Printer List** dialog, select **LPR printers using IP.**

3. Enter the IP address or host name of the print server in the **LPR printer's Address** field. You must <u>uncheck</u> the **Use Default Queue on Server** check box and enter a Queue Name:

AXIS OfficeBasic USB | Enter USB1
AXIS OfficeBasic Parallel | Enter LPT1

4. Choose a printer driver from the **Printer Model** list and click **Add** to finish.

Installation on an Mac OS 9.1 or older, using AppleTalk

Basic Configuration On Mac OS 9.1 or older, basic configuration in AppleTalk is performed simply by opening the Chooser window and selecting a printer.

You can change the default name of your print server or any of default parameters by editing the print server's *config* file. To access the *config* file from a Macintosh, you can use:

- any Web browser with Javascript enabled
- FTP using MacTCP, Fetch or Anarchie

In order to use any of these methods, you must assign an IP address to the print server as described in *"Setting Parameters"* on page 39.

Choosing a Printer

Selecting a Printer   The method for choosing a printer varies depending on which version of LaserWriter printer driver you are using.

- The LaserWriter 7.0 driver assumes that you use a standard PostScript driver, and cannot take advantage of any printer specific features.
- The LaserWriter 8.0 driver uses PPD files that contain printer descriptions. This gives you full control over any features your printer might have.

Autodetect Printer Type   The print server can automatically detect the type of printer you are using if you enable **Autodetect Printer Type**. The print server can then recognize Epson and Hewlett Packard InkJet printers. Most Epson and Hewlett Packard InkJet printers that have Mac OS printer drivers for network printing are supported. Without the Autodetect Printer Type function, the AppleTalk printer type has to be specified manually in the print server. For Epson InkJets it would be "EPSONLQ2" and for HP InkJets it would be "DeskWriter". If the print server does not recognize the connected printer, the default setting "LaserWriter" will be used as printer type. "LaserWriter" is the recommended setting to be used with all PostScript printers.

To enable **Autodetect Printer Type**, log in to your print server's Web interface and select **Admin** | **Network Settings** | **Detailed View** | **Macintosh** | **Auto Detect Printer Type** | **Yes**.

See the **Help** pages in the print server's Web interface for details.

LaserWriter 7.0 Printer Driver   Follow the instructions below to choose a printer:

1. Select **Chooser** from the **Apple** menu.

2. Click the **LaserWriter** icon.

3. If your network has more than one zone, click on the zone you want. (If your network does not have any zones, this box will not appear.)

4. Click the name of the printer you want — the ports are shown as <host name>_<port>:

AXIS OfficeBasic USB   The <port> is USB1. Example: AXIS610282_USB1

AXIS OfficeBasic
Parallel

The <port> is LPT1. Example: AXIS610282_LPT1

5. Click the **Close** box. This completes the configuration and closes the Chooser.

Repeat this procedure for each Macintosh computer on the network using the print server.

LaserWriter 8.0
Printer Driver

Follow the instructions below to choose a printer:

1. Select **Chooser** from the **Apple** menu.

2. Click the **LaserWriter 8.0** icon.

3. If your network has more than one zone click on the zone you want. (If your network does not have any zones, this box will not appear.)

4. Click the name of the printer you want — the ports are shown as <host name>_<port>:

AXIS OfficeBasic USB
AXIS OfficeBasic
Parallel

The <port> is USB1. Example: AXIS610282_USB1
The <port> is LPT1. Example: AXIS610282_LPT1

5. Click **Setup...** and then **Auto Setup**. If the selected printer supports bi-directional printing and the appropriate PPD file is available, the installation is performed automatically and you can therefore proceed directly to step 7 (if this is not the case, the PPD file must be selected manually, as described in step 6).

6. Choose the PPD file matching your printer, and click **OK**.
    If your printer does not appear in the PPD file list, please contact your printer vendor. Use the Generic PPD if you do not need any printer specific features.

7. Click **OK**, and then click the **Close** box. This completes the configuration and closes the Chooser.

Repeat this procedure for each Macintosh computer on the network using the print server.

**Bi-directional
Support**

The print server allows the printer driver to communicate directly with the printer and consequently facilitates complete functional control over print jobs, e.g. automatic downloading of fonts not resident in the printer. This functionality has backward compatibility with older printers and Macintosh computers, which means that the print server can generate appropriate responses to Macintosh printer queries when the connected printer does not support bi-directional communication.

Verifying the Setup

You simply need to print a document from the Macintosh computer to verify communication to the chosen printer. The basic installation can be considered complete if the print test is satisfactory. print server is now ready for use.

Note:

> For information on advanced AppleTalk functions such as non-PostScript printer support, please refer to the Technical Reference on www.axis.com.

BCP and TBCP   You should specify if you want to enable or disable binary transfer of print data in the print server's Web interface **(Admin | Network Settings | Detailed View | Macintosh | Binary Protocol for Printer (1)**. By enabling binary transfer you reduce printing time, provided that the print job is sent as binary data to the print server. This is particular true when you are printing large bitmaps.

- TBCP enables the print server to use the TBCP (Tagged Binary Communication Protocol) to transfer print data to the printer. Select this alternative when using Postscript printers.

- BCP enables the print server to use the BCP (Binary Communications Protocol) to transfer print data to the printer. Select this alternative when using Postscript printers.

- None disables all binary transfers, select this alternative for all non-PostScript printers and for ASCII PostScript printing.

Notes:

> - If you have have set the Autodetect Printer Type parameter to YES, the text output format will be chosen automatically (Admin | Network Settings | Detailed View | Macintosh | Auto Detect Printer (1) Type | Yes).
>
> - Some printers, e.g. Epson InkJet printers, can not be used when TBCP is enabled.

Setting Parameters   In AppleTalk, you can change a limited number of the parameters of the print server. You can:

- enable and disable binary data transfers for your printing
- select the type of binary transfer protocol to use
- specify the AppleTalk printer type
- set the IP address

However, by assigning an IP address to your print server, you have access to all of the print server parameters via any standard Web browser or via FTP. Refer to *"Print Server Management Methods"* on page 41 for more information.

Example: The following example describes how you set the print server parameters in AppleTalk.

Important:

> DO NOT use the parameter values from this example when configuring your print server. You should select values that are appropriate for your printers and network settings.

1. Open the **Chooser** from the Apple menu.

2. Select a network printer driver — any LaserWriter will do.

3. Select the printer port ending with **_CFG**.

4. Close the Chooser.

5. Open a text editor, e.g. SimpleText.

6. Write a text file containing the parameters you want to set:

BINARY_TYPE_1.	:BCP
INT_ADDR.	:192.168.3.191
ATYPE_1.	:EPSONLQ2

Note:

> Parameters that you do not want to set should be excluded from the text file. Refer to the Parameter list in this manual for information about which values that are valid for each parameter.

7. Print the text file. The settings will be stored in the print server.

8. Open the Chooser and select the printer port you wish to use for printing documents.

9. Close the Chooser.

Note:

> The _CFG port disappears 60 minutes after the print server has been powered on. If you want it to reappear, you must restart your print server.

Section 6   Print Server Management Methods

The management and configuration tools that are supported by these print servers allow you to:

- Change the print server parameters, i.e. editing the *config* file
- Receive extended information about the print jobs
- Receive printer port status
- Monitor your printers
- Perform a Software Default on the print server
- Upgrade the print server's firmware. See *Updating the Firmware*, on page 53.
- Ignore false printer port messages. See *Overriding Port Status*, on page 50.

Configuration Overview   The method you should use to manage and configure your print server depends on the operating systems and protocols of your network. The table below displays which method to use for each supported environment.

Protocol	Configuration/Management methods
TCP/IP	Web Browser - See page 42 FTP - See page 47
AppleTalk, pre-Mac OS X	Chooser - See page 36

Using a Web Browser for Print Server Management

Once you have assigned a valid IP address to the print server, you are free to access the print server's Web pages from any Web browser with Javascript enabled.

The Web interface of the print server is divided into two modes of operation: **User mode** and **Admin mode**.

User   In User mode you can change language, but you have no rights to change any other parameters. This mode is intended for regular users who are only interested in using the print server's interface for checking print jobs or viewing printer properties. If you want to change any of the print server's settings, you must enter the Admin mode. However, if you have access rights to the Admin mode, you can change some of the basic parameters from User mode via the Configuration Wizard.

Admin   When in Admin mode, you have access to all the print server's parameters and you can change them to your liking. This mode is intended for network administrators and is password protected to prevent unauthorized changing of the print server parameters.

Accessing the Web Pages   Follow the steps below to access the internal Web pages of the print server:

1. Start your Web browser.

2. In the **Location/Address** field, type the host name or the IP address of your print server. Press **Enter**. The User Mode **Printer Overview** page of the print server will appear in the browser window.

3. Click **Admin** to enter the Admin mode.
If the management password is set to anything but **pass,** you must enter **root** as the user.
The password **pass** is the default password of the print server.
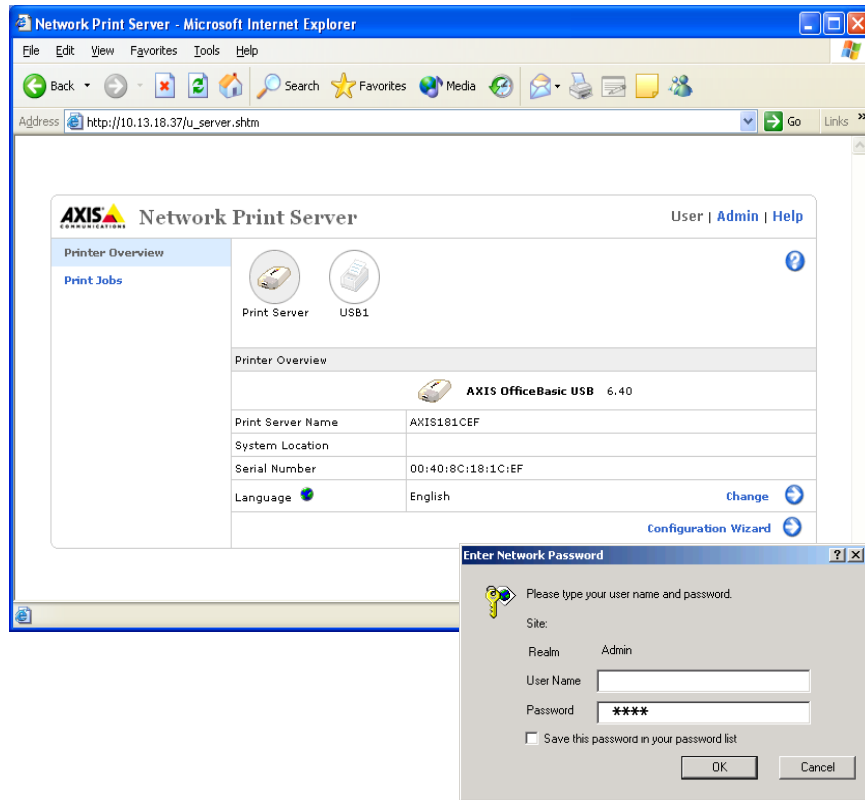
Axis print server internal Web page - main view and login. If you use the default
User/Password combination, **Enter Network Password** will not appear.

Axis print server internal Web pages – examples*
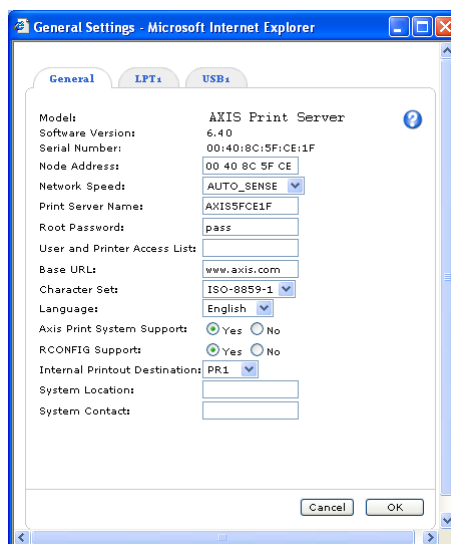
Admin | General Settings | General

Admin | Network Settings | Detailed View | TCP/IP Network

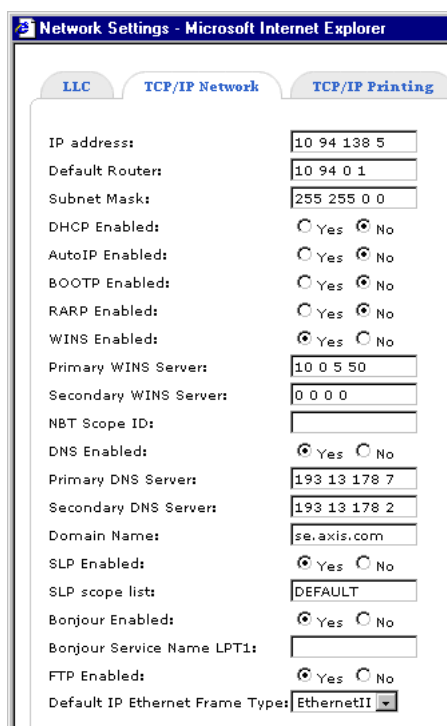* All print server models may not display the same parameter options as shown in these examples.

Services Available from the User Mode The following services are available from the User mode. An additional link to the Axis home page is available from this mode.

Printer Overview The Printer Overview page contains a section that allows you to view the general parameter setting of the print server, including the print server name and the location of the print server in your organization, if defined.

If you have admin access rights you can use the **Configuration Wizard** to perform basic configuration of the print server.

By clicking a printer icon, a printer page opens, allowing you to view the status and the supported capabilities of the connected printer. The extent of this information is depending on the printer model. From the printer page, you can also print a test page to the selected printer.

Print Jobs From the **Print Jobs** page you can view the status of the current print jobs, including the number of printed bytes and the origin of the print job. You can also view a log of the 20 latest print jobs that includes user, printing protocol and file size. A log that displays accumulated usage of the connected printers allows you to control the usage of the connected printers.

Help The **Help** page presents you with basic information about the print server and the Web user interface. A short description of the Axis installation tools you should use when installing a printer on your computer is also included.

Configuration Wizard The **Configuration Wizard** will guide you through the procedure of verifying some default settings and configure a few parameters. When you are finished, the print server is correctly configured for all printers and network environments.

Changing Language and Character Set You can change the language and character set used in the print server's Web interface from the User mode. Available languages are English (default), French, German, Spanish, Italian and Japanese. The available character sets are SHIFT_JIS, ISO-8859-1 and UTF-8. When choosing a character set, it is important that your Web browser uses the same character set as you print server.

ISO-8859-1 is the default character set.

- For Japanese, SHIFT_JIS or UTF-8 should be used. SHIFT_JIS is default for Japanese.
- Other languages should use UTF-8 or ISO-8859-1.

Services available from the Admin Mode

The following services are available from the Admin mode. An additional link to the Axis home page is available from this mode.

This Print Server

The **This Print Server** page contains a section that allows you to view and modify the general parameter settings of the print server, including print server name, node address, password and base URL. Management operations, like restarting the print server and resetting most of its parameters to their software default values, are also available.

By clicking on a printer icon, a printer page opens, allowing you to view the status and the supported capabilities of the connected printer. The extent of this information depends on the printer model. From the printer page, you can also send a test page to the selected printer.

Print Jobs

From the **Print Jobs** page you can view the status of the current print jobs, including the number of printed bytes and the origin of the print job. You can also view a log of the 20 latest print jobs that includes user, printing protocol and file size. A log that displays the accumulated usage of the connected printers allows you to control the usage of the connected printers.

To delete an ongoing print job, use the delete button next to the job.

Network Settings

From the **Network Settings** page you can set all parameters that control the network traffic to and from the print server. You can enable or disable network protocols and fine-tune parameter settings. For additional information, see the Online Help.

Caution!

Any network configuration should involve the Network Administrator.

Support

Using the **Support page** you can receive assistance to resolve any installation or print problems that might occur. If your problems persist, the Support page also allows you to produce a Server Report. The Server Report includes the settings of the print server, information about your connected printers as well as current network settings. The Server Report is of great value for support assistance, so please mail, email or fax it to your support channel together with a detailed description of the problem.

Statistics

The **Statistics** page displays information about the network traffic to and from the print server as well as information about the connections to different network servers and services.

Help

Help displays a comprehensive description of the configuration and management activities that can be performed from the internal Web pages of the print server. Theses activities include instructions on how to install the print server in various environments and how to upgrade it with new firmware. A detailed index is also available.

Parameter List   Shows all print server parameters and their current settings.

Restart   Restarts the print server.

Software Default   By pressing the **Software Default** button in the print server's Web interface all print server parameters and settings will be reset to their factory default values, except:

- Node Address (NODE_ADDR.)
- IP Address (INT_ADDR.)
- DHCP enabled (DHCP_ENB.)

Also see *"The Test Button"* on page 56 for instructions on performing a Factory Default.

Firmware Upgrade   Upgrades the print server's internal software.

Using FTP for Print Server Management

Having assigned an IP address to your print server, as described earlier in this manual, you can change its parameter settings using the File Transport Protocol (FTP).

Ensure that **FTP Enabled** is set to *yes*. To check this parameter, browse to the print server and select **Admin** | **Network Settings** | **Detailed View** | **TCP/IP Network**.

Editing the *config* File   Follow the instructions below to edit the *config* file using FTP:

1. Log in to the print server by typing:
   ```
   ftp <host name>
   ```
   - or –
   ```
   ftp <IP address>
   ```
   in a Windows Command window.

2. Enter user id and password. (The default entries are `root` and `pass`.)

3. Download the *config* file to your host by typing:
   ```
   get config
   ```

4. Edit the file using your preferred text editor.

5. Save the *config* file to the print server by typing
   ```
   put config CONFIG
   ```

Notes:

- It is important that the destination file is specified in capital letters. Otherwise the edits are temporary and will be lost once the print server has been powered down.

- To edit the *config* file on a older MacOS verions (pre-MacOSX) you will need FTP support such as MacTCP, Fetch or Anarchie. The procedure for editing the file is the same as described above.

The example on the next page shows how to upload and download the *config* file using FTP from a Command window.

Example:

```
> ftp npserver
connected to npserver.
220 Axis OffceBasic USB FTP Network Print Server
v7.00 October 04 2004 ready.
Name (npserver:thomas): root
331 User name ok, need password
Password: pass          (not visible)
230 User logged in
ftp> get config
200 PORT command successful.
150 Opening data connection for config
(192,36,253,4,13,223), (mode ascii).
226 Transfer complete.
8588 bytes received in 0.24 seconds (35.63 kbytes/s)
ftp> put config CONFIG
200 PORT command successful.
150 Opening data connection for CONFIG
(192,36,253,4,13,223), (mode ascii).
226 Transfer complete.
8588 bytes received in 0.45 seconds (19.04 kbytes/s)
ftp> bye
221 Goodbye.
>
```

Viewing the Account File

The *account* file contains data concerning the 10 last print jobs. It specifies an internal job number, the user that initiated the job, the protocol used, current status (Completed, Off-line, or Printing), number of bytes printed, elapsed time and off-line time.

Follow the instructions below to view the *account* file using FTP:

1. Log in to the print server by typing:
   ftp <host name> or ftp <IP address> in a Windows Command window.

2. Enter user id and password. (The default entries are root and pass.)

3. Download the *account* file to your host by typing get account

4. View the *account* file using your preferred text editor.

FTP Help   By typing `help` in step 3 in the FTP instruction sets above, a list of all general FTP commands will be displayed.

By typing `remotehelp` (or `rhelp`, depending on your FTP program) in step 3 in the FTP instruction sets above, a list of all print server specific commands will be displayed.

IP Address Management   You need root privileges on your Mac OS X system, or administrator privileges on a Windows NT server to

- set the IP address using RARP, DHCP
- add an entry to the ARP table with the command 'arp -s'
- You need to know the Ethernet address of your print server in order to assign an IP address to it. The Ethernet address is based upon the serial number of your print server. This means, for example, that a print server with the serial number of 00408C100086, will have the corresponding Ethernet address of 00 40 8C 10 00 86. The serial number is located on the backside label of the print server.
- Unless you are assigning an IP address using DHCP or Auto-IP, you must obtain an unused IP address from your network administrator.
- DDNS supports 47 character long host names and can only consist of the characters 'A-Z', 'a-z', '0-9' and '-'. If your host name consists of any other characters, they are converted to '-' when registering with a DDNS server. You can view which host name that is registered at a DDNS server in the print server's Web interface. Refer to *"Print Server Management Methods"* on page 41. If the host name matches another entry in the DDNS data base, the print server deletes that entry before registering.
- In order to register the host name of the print server in networks with dynamic IP address settings, WINS (Windows Internet Name Service) and DDNS (Dynamic Domain Name System) are supported. It is recommended that at least one of these methods should be used if you are setting the IP address of the print server using DHCP.
- The host name of the print server is specified by the PS_NAME. parameter. Refer to the *"The Parameter List"* on page 60.
- WINS only supports 15 character long host names. If your host name is longer than 15 characters, the print server truncates the host name to 15 characters when registering with a WINS server. You can view the print server host name that is registered at a WINS server in the print server's Web interface. Refer to *"Print Server Management Methods"* on page 41.

Follow these instructions to edit or create a scope in the DHCP manager of the DHCP daemon. The entries included in this scope should contain the following parameters:

- range of IP addresses
- subnet mask
- default router IP address
- WINS server IP address(es) or DDNS server IP address(es)
- lease duration

Activate the scope. The print server automatically downloads the DHCP parameters. If you are using WINS or DDNS, you should include at least one WINS or DNS server IP address in the DHCP scope. Immediately after the IP address has been received, the print server registers its host name and IP address on the WINS alternatively DNS server. The print server can automatically download a customized *config* file from a TFTP server. Just add the name of the config file and the TFTP server's IP address to your DHCP scope. The *config* file is downloaded immediately after the print server receives its IP address.

Overriding Port Status   Some USB printers do not deliver correct port status to the print server (for instance always reporting printer off-line even if the printer is on-line). If you set the **Override Portstatus** parameter to *Yes*, the print server will ignore the port status. To set this parameter, select **Admin | General Settings | USB1** from the print server's Web interface.

Section 7   Troubleshooting

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

Please visit www.axis.com for the latest troubleshooting tips, more support and additional help through the FAQ database or to fill in and submit a Support question.

LED Indicators, on page 51

Web Interface, on page 51

IP Address Check with Ping, on page 52

Axis Support Server Report, on page 52

Overriding Port Status   Some USB printers do not deliver correct port status to the print server (for instance always reporting printer off-line even if the printer is on-line). To override this, see *"Overriding Port Status"* on page 50.

LED Indicators   The LED indicators on the print server will flash in sequences to indicate different conditions:

Indicator	Color/Behavior	Explanation
Power	Green	OK
	Not lit	No power/Error
Network	Orange	OK - network connected
	Orange flashing	Activity on network
	Not lit	No physical connection to the network

Web Interface

Symptoms	Possible causes	Remedial actions
The print server's Web interface cannot be accessed from a Web browser.	The print server is not connected properly.	1. Check Power and Network indicator. 2. Check that assignment of IP addresses for the print server is correct. 3. To further check the IP addresses, run the Ping command from another computer as described in "IP address check" at the end of this chapter. Follow the appropriate recommendations.
	Problem with your proxy server.	Verify the proxy server settings in your Web browser.
	Other networking problems.	1. Verify that your network is accessible through your network socket. 2. Verify that your network cable is functional.

IP Address Check with Ping

By sending a data packet to a specific IP address and waiting for a reply, Ping can determine whether that IP address is accessible. Ping can also help you to determine IP address conflicts with your print server and troubleshoot TCP/IP problems on the network. Follow the instructions below to diagnose your problem.

1. Start a Command window/Terminal.

2. Type "ping x.x.x.x", where x.x.x.x is the IP address you want to check — for example the IP address of your Axis print server.

3. Subsequent replies will provide an explanation of the cause of the problem. Replies from DOS can be interpreted as defined in the table below:

Ping Reply	*Interpretation and recommendation*	
	Print server connected	*Print server disconnected*
bytes = 32 time = 2 ms...... - or something similar	The print server is responding correctly. There are probably no conflicts with the IP address — disconnect the print server and ping again to verify.	The IP address is already in use and cannot be used again. You must obtain a new IP address for your print server. .
destination host unreachable	The print server is not accessible. Check your network settings.	–
request timed out	The IP address is not in use. You are either pinging the wrong IP address or your print server does not have the correct IP address.	This IP address is not used by anyone and is available for use for your print server. Set the IP address again, power on the print server and then try accessing the unit.
no response from ping command	The print server is not accessible. Check your network settings.	–

Axis Support Server Report

In order to obtain optimal support from Axis support technicians, please follow these instructions when filling in and submitting a support question:

1. Go to the print server's Web pages by typing the print server's IP address in the **Address/Location** field of your Web browser.

2. Go to **Admin** | **Support**. Click the **Server Report** link. A new window will open.

3. Save the Server report as an HTML file (with an .html file extension) and go to the Axis Web site.

4. Choose **Support** and report your case, attaching the Server Report.

Please visit the Axis Web site for more support and additional help through the FAQ database.

Section 8   Updating the Firmware

Upgrading the Firmware

You can upgrade the print server's firmware using one of the following methods:

- From the print server's internal Web pages (TCP/IP)
- FTP (TCP/IP)

Upgrading from the Print Server's Internal Web Pages

Follow these instructions to upgrade the firmware of your print server from its internal Web pages (flash loading over the Web):

1. Open your Web browser, enter the IP address of your print server and press **Enter**. (See *"Using a Web Browser for Print Server Management"* on page 42 for detailed instructions on accessing your Axis print server on the Web).

2. From the **Admin** mode, click the **Firmware Upgrade** button. From here you can upgrade your print server with the latest available firmware.

Upgrading over the Network using FTP

To upgrade over the network using FTP you will need a file with the new print server firmware. The name of this file is in the form `product_version.bin`.

Ensure that **FTP Enabled** is set to *yes*. To check this parameter, browse to the print server and select **Admin** | **Network Settings** | **Detailed View** | **TCP/IP Network**.

You must assign an IP address to the print server before you can use this upgrading method. Follow the procedures below to upgrade the print server:

Caution!

> Be careful not to interrupt the file transfer. If the transfer is interrupted, the print server may have to be re-initialized by your dealer.

FTP is a standard protocol to move files in a TCP/IP network and it is the same procedure to load new program files into a print server. The procedure to upgrade the print server software is as follows:

Obtaining the new firmware

You can obtain all the print server firmware as well as the latest utility software from the following locations:

- http://www.axis.com => Support => Firmware
- your local dealer

Upgrading the firmware using FTP

The objective of this example is to upgrade an AXIS OfficeBasic Parallel print server to firmware version 7.00.
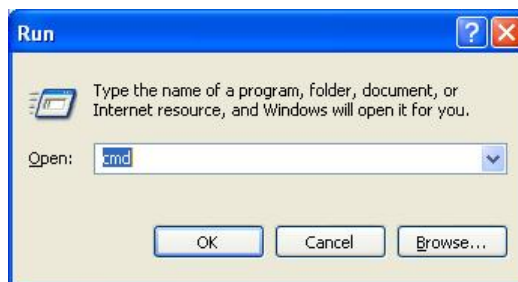
The description below from a typical Windows session uses the following *sample values:*

- Print server model: AXIS OfficeBasic Parallel (rev 2)
- IP address of print server: 10.13.4.105
- New firmware version name: **ob_v2.bin**
- Location of firmware and upgrade procedure: c:\Axis

1. From www.axis.com, download the firmware and save it to a new directory on your computer, e.g. c:\Axis (if the directory does not exist, create it).
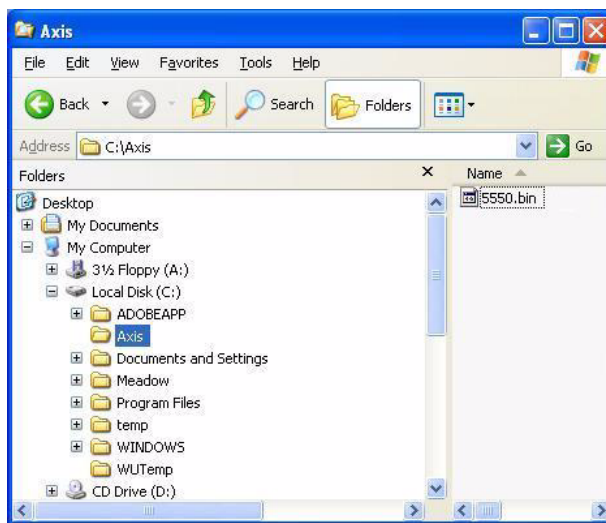
2. Open a command prompt from **Start** | **Run**. The Run window will appear. Type **cmd** and click **OK**. (Windows 98: Type **command** and click **OK**.)

The DOS Command Prompt window will open.

3. Make sure you are working from the correct directory:
    type **cd c:\Axis** and press **Enter**.

4. Connect to the print server using ftp:
    type **ftp 10.13.4.105** followed by **Enter**.
    (Example using print server IP address 10.13.4.105)

5. Enter the user name, the default user is *root*. Press **Enter**. If the default
    password has been changed then it must also be entered. When you enter
    the password, it will not be echoed to the screen, nor will the cursor move.

6. Change to binary mode transfer.
    Type **bin hash** (or **binary hash**) and press **Enter**.

7. Use the **put** command to upload the upgrade file to the flash location:
    (Example using firmware named ob_v2.bin):
    Type **put ob_v2.bin FLASH** followed by **Enter**. (Note that FLASH is written
    in capital letters!) A stream of hash (#) marks will appear.

    Wait 30 seconds... You will receive a message stating *Transfer complete.
    Flash programming finished OK.* The print server will restart in five seconds
    running the new software.

    When you see a new **ftp prompt** the procedure has been completed
    successfully.

8. Type **bye** followed by **Enter** to end the ftp session.

Section 9   The Test Button

The test button is located on the front right hand side of the print server and is used for:

- Printing a test page to check the connection to the printer.
- Printing a parameter list to see the print server's current settings.
- Performing a Factory Default of the print server.

To change any of the parameters, use one of the methods described in *"Print Server Management Methods"* on page 41.

The Test Page   Press the test button **once** to print a test page. The test page contains basic information about the print server. It is recommended that you print a test page every time you connect the print server to a printer.

The Parameter List   Press the test button **twice** to print a parameter list showing the current print server settings. This list provides comprehensive details of all the parameters and their current status. Refer to *"The Parameter List"* on page 60.

Performing a Factory Default   Follow the instructions below to restore the factory default values:

1. Remove the external power supply to switch off the print server.

2. Press and hold down the test button while you reconnect the external power supply.

3. Continue to hold down the test button until the network indicator remains constantly lit. This should take about 20 seconds.

4. Restart the print server by disconnecting and reconnecting the external power supply.

Important:

A factory default will reset all print server parameters and settings to their default values.

Section 10 Technical Specification

Supported Printers	All printers **except** host-based printers and copiers, such as CAPT, GDI, PPA
Supported Systems	
Microsoft Windows	98, Me, NT, 2000, XP and 2003 Print Methods: NetBEUI, LPR, Raw TCP
Additional Systems	All computers supporting the TCP/IP suite of protocols
Apple	Mac OS 7, 8, 9, Max OS X version 10.X
Apple EtherTalk	Print Method: AppleTalk Phase 2
Supported Web Browsers	Any standard Web browser (Netscape 6.x or higher and MS Internet Explorer 5.x or higher)
Supported Protocols	
Windows	NetBIOS/NetBEUI orTCP/IP
TCP/IP	LPR, FTP, ARP, RARP, DHCP, ICMP, IGMP, IP, TCP, UDP, HTTP, TFTP, SLP, Raw TCP, Auto-IP, DDNS, Bonjour
Apple EtherTalk	AAPR, ATP, DDP, NBP, PAP, RTMP, ZIP
Supported Languages	English, French, German, Italian, Japanese and Spanish
Logical Connection	
Ethernet	Use of IEEE 802.2, IEEE 802.3, SNAP and Ethernet II frame types simultaneously
Fast Ethernet	Supports NWay that provides autodetection of network speed. Use of IEEE 802.2, IEEE 802.3, SNAP and Ethernet II frame types simultaneously, full duplex

Wired Network Attachments	
Ethernet	RJ-45 connector (Category 5 twisted pair cable) for 10baseT Ethernet or 100base TX Fast Ethernet
Printer Ports	
AXIS OfficeBasic USB	One Low-Speed/Full-Speed USB 1.1 port, which also works with USB v 2.0 (Low-Speed/Full-Speed)
	Note: The USB cable shipped with the product supports Low-Speed/Full-Speed. IMPORTANT! Hi-Speed is <u>not</u> supported
AXIS OfficeBasic Parallel	One high-speed IEEE 1284 compatible parallel port
Power Consumption	Maximum 5.6 W. Power provided by Power Adapter type PS-H: 5.1V DC 2000 mA
Dimensions	
AXIS OfficeBasic USB	Height x Width x Depth 1.1in, 2.4in, 5.1in (29 mm, 62 mm, 130 mm) Weight: 0.17lb (77g)
AXIS OfficeBasic Parallel	Height x Width x Depth 0.9 in, 2.4 in, 4.8 in (24 mm, 61 mm ,121 mm) Weight: 0.22 lb (100 g)
Environmental	
Temperature	40 - 105 °F (5 - 40 °C)
Approvals	
EMC	EN 55 024:1998 EN 55 022:1998 + A1 (CISPR 22:1997 + A1) Class B EN 61000-3-2:2000 EN 61000-3-3:1995+A1 VCCI:2002 Class B, ITE (CISPR 22:1997 + A1:2000, Class B C-tick AS/NZS 3548 FCC part 15, subpart B, Class B, demonstrated by compliance with EN 55022:1998 (CISPR 22:1997) Class B

Safety	EN 60950, approved power supplies for all countries
Hardware	32-bit 100 MHz AXIS ETRAX 100LX RISC Controller, 2 MB Flash memory, 8 MB RAM
Front Panel	2 LED indicators for Power and Network Test button for information printouts

> All specifications are subject to change without prior notice.

Section 11   The Parameter List

These are the default parameters in a new, unconfigured print server. A complete list of all Axis print server parameters can be found on www.axis.com

AXIS OfficeBasic USB

(AXIS OfficeBasic USB Network Print Server V7.00 Sep 21 2004. S/N: 00408C60C354)

Parameter settings:

--- General Menu

NODE_ADDR.   : 00 40 8C 60 C3 54

NETWORK_SPEED. : AUTO_SENSE (AUTO_SENSE, 10_HALF_DX, 10_FULL_DX, 100_HALF_DX, 100_FULL_DX)

PS_NAME.   : AXIS60C354

ROOT_PWD.   : pass

BASE_URL.   : www.axis.com

CHARSET.   : ISO-8859-1 (SHIFT_JIS, ISO-8859-1, UTF-8)

LANG.   : English (English, French, German, Spanish, Italian, Japanese)

AXIS_PRINT_SYSTEM. : YES

SYS_LOC.   :

SYS_CONT.   :

--- LLC Menu

LLC_RESPONSE. : 1300

LLC_REC_ACK. : 20

LLC_INACTIVITY. : 15

--- TCP/IP Network Menu

INT_ADDR.   : 10 91 2 40

DEF_ROUT.   : 10 91 0 1

NET_MASK.   : 255 255 0 0

DHCP_ENB.   : YES

AUTOIP_ENB. : YES

BOOTP_ENB. : YES

RARP_ENB.   : YES

WINS_ENB.   : YES

WINS_ADDR1. : 10 0 5 50

WINS_ADDR2. : 10 0 5 18

NBT_SCOPE_ID. :

DNS_ENB.   : YES

DNS_ADDR1.   : 193 13 178 7

DNS_ADDR2.   : 193 13 178 2

DOMAIN_NAME. : se.axis.com

SLP_ENB.   : YES

SLP_SCOPE_LIST. : DEFAULT

RENDEZVOUS_ENB. : YES

RENDEZVOUS_SRVNAME_USB1. :

SMTP_SERVER. :

FTP_ENB. : YES

DEF_IP_FRAME_TYPE. : EthernetII (EthernetII, SNAP)

--- TCP/IP Printing Menu

TCP_ENB.   : YES

LPD_BANN.   : OFF (OFF, AUTO, LAST)

DEFAULT_RAW_TCP. : 9100 (9100, CLOSED)

--- SNMP Menu

SNMP_V1_ENB. : YES

READ_COM.   : public

WRT_COM.   : pass

TRAPADDR.   : 0 0 0 0

TRAP_COM.   : public

SYS_NAME.   :

SNMP_AUT.   : DISABLE (DISABLE, ENABLE)

TRAP_PRT.   : DISABLE (DISABLE, ENABLE)

--- NetBIOS/NetBEUI Menu

LSLM_ENB.   : YES

NB_FR_TYPE. : FR_802_2 (FR_AUTO, FR_802_2, FR_DIX)

LPRINT_1.　　: AX60C354.US1

--- AppleTalk Menu

ATLK_ENB.　　: YES

ATK_ZONE.　　:

ZONER_EN.　　: YES

ATK_FONT.　　: DEFAULT　(DEFAULT, 35N, ALL)

AUTO_DT_PRIN1. : YES

APRINT_1.　　: AXIS60C354_USB1

ATYPE_1.　　　: LaserWriter

BINARY_TYPE_1. : TBCP　(TBCP, BCP, NONE)

--- USB1 Menu

U1_MGM_INFO. : AUTO　(DISABLE, AUTO)

U1_COMMENT.　:

U1_BIDIR.　　: AUTO　(DISABLE, AUTO)

U1_READT.　　: 3

U1_BUFFER_SIZE. : 0

U1_PORT_STATUS_OVERRIDE. : NO

AXIS OfficeBasic Parallel

(AXIS OfficeBasic Parallel (rev 2) Network Print Server V7.00 Sep 10 2004. S/N: 00408C629D69)

Parameter settings:

--- General Menu

NODE_ADDR.　　: 00 40 8C 62 9D 69

NETWORK_SPEED. : AUTO_SENSE　(AUTO_SENSE, 10_HALF_DX, 10_FULL_DX, 100_HALF_DX, 100_FULL_DX)

PS_NAME.　　: AXIS629D69

ROOT_PWD.　　: pass

BASE_URL.　　: www.axis.com

CHARSET.　　: ISO-8859-1　(SHIFT_JIS, ISO-8859-1, UTF-8)

LANG.　　　: English　(English, French, German, Spanish, Italian, Japanese)

AXIS_PRINT_SYSTEM. : YES

SYS_LOC.　　:

SYS_CONT.   :

--- LLC Menu

LLC_RESPONSE. : 1300

LLC_REC_ACK. : 20

LLC_INACTIVITY. : 15

--- TCP/IP Network Menu

INT_ADDR.   : 10 91 2 40

DEF_ROUT.   : 10 91 0 1

NET_MASK.   : 255 255 0 0

DHCP_ENB.   : YES

AUTOIP_ENB. : YES

BOOTP_ENB. : YES

RARP_ENB.   : YES

WINS_ENB.   : YES

WINS_ADDR1. : 10 0 5 50

WINS_ADDR2. : 0 0 0 0

NBT_SCOPE_ID. :

DNS_ENB.   : YES

DNS_ADDR1.   : 193 13 178 7

DNS_ADDR2.   : 193 13 178 2

DOMAIN_NAME. : se.axis.com

SLP_ENB.   : YES

SLP_SCOPE_LIST. : DEFAULT

RENDEZVOUS_ENB. : YES

RENDEZVOUS_SRVNAME_LPT1. :

SMTP_SERVER. :

FTP_ENB. : YES

DEF_IP_FRAME_TYPE. : EthernetII (EthernetII, SNAP)

--- TCP/IP Printing Menu

TCP_ENB.   : YES

LPD_BANN.   : OFF (OFF, AUTO, LAST)

DEFAULT_RAW_TCP. : 9100 (9100, CLOSED)

--- SNMP Menu

SNMP_V1_ENB. : YES

READ_COM.   : public

WRT_COM.   : pass

TRAPADDR.   : 0 0 0 0

TRAP_COM.   : public

SYS_NAME.   :

SNMP_AUT.   : DISABLE (DISABLE, ENABLE)

TRAP_PRT.   : DISABLE (DISABLE, ENABLE)

--- NetBIOS/NetBEUI Menu

LSLM_ENB.   : YES

NB_FR_TYPE. : FR_802_2 (FR_AUTO, FR_802_2, FR_DIX)

LPRINT_1.   : AX629D69.LP1

--- AppleTalk Menu

ATLK_ENB.   : YES

ATK_ZONE.   :

ZONER_EN.   : YES

ATK_FONT.   : DEFAULT (DEFAULT, 35N, ALL)

AUTO_DT_PRIN1. : YES

APRINT_1.   : AXIS629D69_LPT1

ATYPE_1.   : LaserWriter

BINARY_TYPE_1. : TBCP (TBCP, BCP, NONE)

--- LPT1 Menu

L1_CENTR.   : HISPEED (IBM_PC, STNDRD, FAST, HISPEED, HINOACK)

L1_BSYTM.   : 60

L1_MGM_INFO. : AUTO (DISABLE, AUTO)

L1_COMMENT. :

L1_BIDIR.   : AUTO (DISABLE, AUTO)

L1_READT.   : 3

Section 12 Glossary

AppleTalk
A local area network protocol for communication between Apple Computer products and other computers and peripherals.

ARP
Address Resolution Protocol. A protocol within the TCP/IP suite of network protocols that allows a host to find the physical address of a node on the same network. ARP cannot be used across routers.

Auto-IP
A method to automatically set an IP address in the absence of a DHCP server.

Bonjour
Bonjour enables automatic discovery of computers, devices, and services on IP networks without the need to enter IP addresses or configure DNS servers.

config File
This is a file that resides in the print server's memory and contains all the parameters that determine the print server's functionality. By editing the *config* file (changing the parameter settings), you can configure the print server to meet the printing needs of your network.

DHCP
Dynamic Host Configuration Protocol. DHCP enables a host (e.g. print server) to automatically obtain an unused IP address. It also provides validation data that defines for how long the IP addresses will remain valid.

To fully benefit from this method, the print servers described in this manual also support the DDNS, which is available in Windows 2000 networks.

DNS
Domain Name System. Resolves host names into IP addresses.

Dynamic DNS
Dynamic Domain Name System. Allows hosts to dynamically change IP addresses in in DNS, e.g. when the host is given a new IP address by DHCP.

Firmware
Firmware is the print server's internal software.

Factory Default
A Factory Default is performed by pressing the test button on the print server in specific sequences. A Factory Default will restore all settings to their default values.

Flash Memory
The print server firmware is stored in Flash memory.

FTP	File Transfer Protocol. A TCP/IP protocol used for logging in to network servers and for transferring files.
HTML	Hypertext Markup Language. A standard hypertext language used for creating World Wide Web pages and other hypertext documents.
HTTP	Hypertext Transfer Protocol. The TCP/IP protocol for Web based communication.
IP	Internet Protocol. The TCP/IP network layer protocol that regulates packet forwarding by tracking IP addresses, routing outgoing messages and recognizing incoming messages.
LAN	Local Area Network.
LED	Light Emitting Diode.
LPT	LPT (line print terminal) is the usual designation for a parallel port connection to a printer or other device on a personal computer.
NetBIOS/NetBEUI	Network Basic Input Output System, a network protocol with special functions for local area networks. NetBIOS Enhanced User Interface is an enhanced version of NetBIOS.
PCL	Printer Control Language – A PCL driver is a small program that works between the operating system and the printer.
Peer-to-Peer Printing	When selecting Peer-to-peer printing, all print jobs are sent directly to the print server, rather than through a file server (client/server).
RISC	Reduced Instruction Set Computing. A processor designed to increase performance, using a limited set of assembly language instruction.
SNMP	Simple Network Management Protocol. Standard management protocol for network attached devices.
Software Default	A Software Default is performed by clicking the Software Default button in the print server's Web interface. A Software Default will restore all settings to their default values, except NODE_ADDR., INT_ADDR. and DHCP_ENB.
TCP	Transmission Control Protocol. The connection-oriented, transport-level protocol used in the TCP/IP suite of protocols.

TFTP   Trivial File Transfer Protocol (TFTP) is an Internet software utility for transferring files that is simpler to use than the File Transfer Protocol (FTP) but less capable. It is used where user authentication and directory visibility are not required. TFTP uses the User Datagram Protocol (UDP) rather than the Transmission Control Protocol (TCP).

URL   Uniform Resource Locator. A way of specifying the location of information on the Internet.

USB   Universal Serial Bus.

WINS   Windows Internet Name Service. A NetBIOS Name Server that maps NetBIOS names to dynamically assigned IP addresses.

Wizard   A special form of user assistance that automates a task through a dialog with the user. Wizards help the user to accomplish tasks that are complex and require experience, and even for the experienced user can help to speed up an operation.

Index