AXIS 1650 User's Manual

The Network Print & Scan Server for Canon Printers and Multifunctional Products

Including support for
Canon Advanced Printing Technology
Canon Advanced Raster Printing System
as well as Canon BubbleJet Printers

Section 1 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 Radiocommunications (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 www.axis.com. 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 IP JumpStarter, AXIS CAPT Print Monitor, AXIS ScanClient.

Other Trademark Acknowledgments Adobe Acrobat Reader, Canon, Ethernet, Internet Explorer, Microsoft, NetScape, NetSpot Device Installer (NSDI), Windows, are registered trademarks of the respective holders.

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.

Section 2   Table of Contents

Section 3 Preface

Thank you for purchasing the AXIS 1650. This product has been developed to connect your Canon printer anywhere in your network, allowing all network users access to shared printer resources.

About this Manual

This manual is applicable for the AXIS 1650 print server with firmware version **2.12** or later, 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 all default settings. See *"The Test Button"* on page 61.

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.

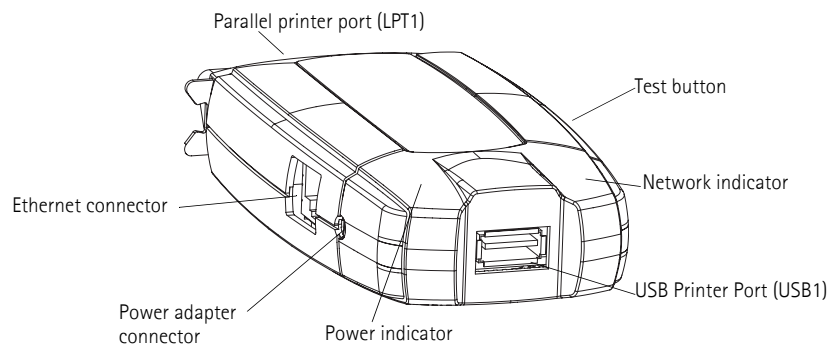If you are connected to the Internet, you can:

- 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 the Axis support Web: www.axis.com/techsup

Section 4   Product Overview

Package Contents

Hardware	Model
Network Print Server	AXIS 1650
	AXIX 1650 Japan
Power Adapter	PS-H
Adhesive Holder & Clip	ACC AXIS Clips Kit
USB Cable	USB cable supports USB Low-speed and Full-speed. 70 cm (28 inches) High-speed not supported.
Network Cable	RJ 45 Shielded CAT5 0.5M
CD	AXIS 1650 CD
Printed Material	AXIS 1650 Quick Installation Guide
	WARRANTY AXIS SERVERS 1YR

Optional accessories (not included in package)	
Cable	Centronics to Mini Centronics Cable

The AXIS 1650 Network Print Server

Parallel printer port (LPT1)
Test button
Ethernet connector
Network indicator
Power adapter connector
Power indicator
USB Printer Port (USB1)

Supported Devices AXIS 1650 is developed to network Canon printers and multifunctional devices. AXIS 1650 supports host-based printing methods such as Canon Advanced Printing Technology, Canon Advanced Raster Printing System and other printer types such as Canon BubbleJet.

If your Canon device also functions as a scanner/fax, you can use your AXIS 1650 as a scanner and/or fax server as well.

Important:
Devices from other manufacturers than Canon are not supported.

Supported Environments	The AXIS 1650 supports printing over **TCP/IP** from the following clients:

- Windows Vista
- Windows Server 2003
- Windows XP
- Windows 2000
- Windows 98
- Windows Me
- Netware

Installation and Integration	The installation of the AXIS 1650 and its integration into the network is performed using one of these software combinations:

- **AXIS IP JumpStarter** (for IP setting) and then **AXIS CAPT Print Monitor** (for printer installation)
- Canon **NetSpot Device Installer** (for IP setting) and then **AXIS CAPT Print Monitor** (for printer installation)
- **AXIS ScanClient** to enable scanning through the AXIS 1650.

> AXIS IP JumpStarter, AXIS CAPT Print Monitor and AXIS ScanClient are available free of charge from the AXIS 1650 CD and from www.axis.com
>
> NetSpot Device Installer is available from www.canon.com

Configuration and Management	Configuration and management of AXIS 1650 is performed using the TCP/IP protocol. The main method is using a **standard web browser**. See "Print Server Management" on page 38.

Printing Protocol:	TCP/IP

Speed	The AXIS ETRAX chip has been specifically designed for LAN products and benefits users with a faster throughput than a direct PC-to-printer connection. With a sustained data throughput of over 1 Mbytes per second (100baseTX) the AXIS 1650 is fast. ECP high-speed communication is supported.

Security:	You can assign a password that restricts unauthorized configuration of the AXIS 1650.

Monitoring:	The AXIS 1650 embedded Web pages allow you to continuously monitor printer status. Additionally, the AXIS 1650 supports SNMP for remote monitoring.

Future proof:	You can upgrade the AXIS 1650 Flash memory over the network. This allows you to quickly update and enhance the operational features of your AXIS 1650 when new print server software becomes available.

Printer Ports
- One Low- and Full-speed USB 1.1 port that also works with USB 2.0. High-speed is not supported.
- One high-speed IEEE 1284 compatible parallel port that plugs directly into the printer´s parallel port.
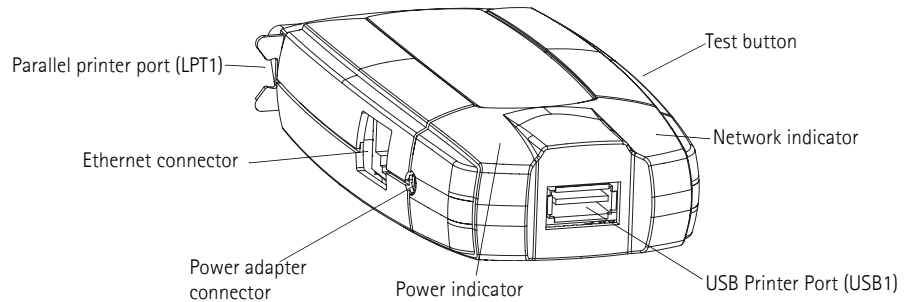
AXIS 1650 is featured with two ports for ease of integration with most Canon printers. There is however no support for handling two connected printers simultaneously.

Section 5   Print Server Installation

Follow these steps to install and configure your AXIS 1650:

1. *Connect the Hardware*, on page 9

2. *Set the IP Address*, on page 10

3. *Windows Installation*, on page 16

Connect the Hardware

1. Make sure that your printer is switched <u>off</u> and that the print server's power adapter is <u>disconnected</u>.

2. Locate the **serial number** (S/N), found on the underside label of the print server, and write it down. You will need this number during the installation.

3. Either connect the printer to the USB port using the USB cable, or connect the printer directly to the LPT port or use a printer cable.

   Note: AXIS 1650 is featured with two ports for ease of integration with most Canon printers. There is, however, no support for handling two connected printers simultaneously.

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

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

6. 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.

7. Optionally, you can mount the print server e.g. on the back of the printer or on a wall, using the supplied clip and holder.

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

Set the IP Address

Before setting the IP address, make a note of the print server's **serial number (S/N),** located on the label and obtain an unused IP address from your network administrator

Method	Platform	Comment
AXIS IP JumpStarter software	Windows	Axis software that allows you to find print servers in your network and assign an IP address to them.
		See *"Set a Static IP Address using AXIS IP JumpStarter"* on page 10
Arp/Ping	Windows	See *"Set a Static IP Address using ARP in Windows 98/Me/2000/XP/2003 /Vista"* on page 12
	Unix/ Linux	See *Set a Static IP Address using ARP in UNIX*, on page 12
Canon's NetSpot Device Installer software	Windows	Canon software that allows you to find print servers in your network and assign an IP address to them.
		See *"When the installation is finished, click OK."* on page 13

It is not possible to obtain a dynamic IP address using DHCP, since DHCP is disabled by default in AXIS 1650. To enable DHCP in the print server, see *DHCP Enabled*, on page 48. You can, however, obtain a DHCP address for the print server via AXIS IPJumpStarter or NetSpot Device Installer. If you choose to obtain a DHCP address for the print server from these programs, the DHCP function will be enabled in the print server.

Set a Static IP Address using AXIS IP JumpStarter

AXIS IP JumpStarter is an application that helps you to locate your Axis print server on the network and assign an IP address to it.

1. Install AXIS IP JumpStarter, available from the AXIS 1650 CD supplied with this product and from www.axis.com.

2. Once installed, run AXIS IP JumpStarter.
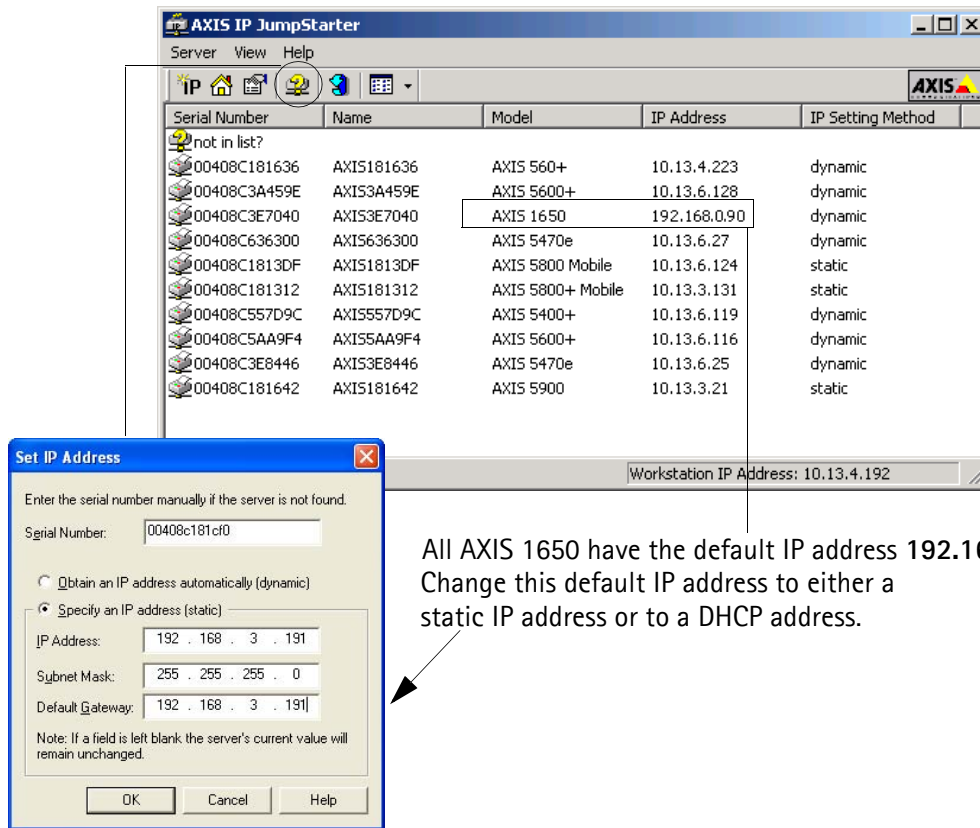
All AXIS 1650 have the default IP address **192.168.0.90** Change this default IP address to either a static IP address or to a DHCP address.

3. Select the print server from the Serial Number list. All connected AXIS 1650 appear with the default IP address **192.168.0.90**. If you are installing several AXIS 1650 print servers, check the Serial Number (S/N) to locate a specific print server.

4. From the **Server** menu, select **Set IP Address**. The **Set IP Address** dialog will appear.

5. Click the radio button that corresponds to your choice of IP setting method (static or dynamic using DHCP). When assigning a static IP address you also have to define the **Subnet Mask** and **Default Gateway**.

6. Click **OK** to save your settings.

7. You may be prompted to enter the server root password (by default set to <blank>), click **OK** and the print server will appear in the list with the assigned IP address.

8. To verify that you have access to the print server's web pages, highlight the print server in the list and select **Server Home Page** from the **Server** menu.

9. You have now finished the procedure of setting the IP address. Continue to *Windows Installation*, on page 16.

Set a Static IP Address using ARP in Windows 98/Me/2000/XP/2003 /Vista

1. Open a Command Prompt.

> Windows Vista:
>
> • Open the command prompt with **administrator rights**
> • Type **arp -a -v** to check if the intended ip address is present in the ARP table as an invalid entry. Type **arp -d <ip address>** to remove the invalid entry from the ARP table

2. Type:

```
arp -s <IP address> <Ethernet address>
ping -l 479 <IP address>
```

Example:

```
arp -s 192.168.3.191 00-40-8c-18-1c-f0
ping -l 479 192.168.3.191
```

3. If the host returns `Reply from 192.168.3.191 ...` or a similar message, the IP address has been set successfully.
   If the host returns 'Request timed out' you need to restart the print server and perform steps 1-2 above again. Restarting the print server is done by disconnecting and then re-connecting the print server's power adapter.

4. Access the print server's Web pages (- See page 39), select **Admin │ Network Settings │ Detailed View │ TCP/IP** and define the **Default Router** and **Subnet Mask**. Make sure **DHCP, BOOTP** and **RARP** are <u>disabled</u>.

You have now set the IP address of the print server. Continue with *Windows Installation*, on page 16.

Note: When you execute the ping command for the first time, you will experience a significantly longer response time than usual.

Set a Static IP Address using ARP in UNIX

Follow the instructions below to set the IP address using ARP.

1. Type the following commands in the shell window:

```
arp -s <ip address> <Ethernet address> temp
ping -l 479 <ip address>
```

Example:

```
arp -s 192.168.3.191 00:40:8c:18:1c:f0 temp
ping -l 479 192.168.3.191
```

2. The host will return `192.168.3.191 is alive` or a similar message. This indicates that the address has been set and that the communication is established.

3. Access the print server's Web pages (- See page 39), select **Admin** | **Network Settings** | **Detailed View** | **TCP/IP** and define the **Default Router** and **Subnet Mask.** Make sure **DHCP, BOOTP** and **RARP** are disabled.

Notes:
- The ARP command varies between different UNIX systems. Some BSD type systems expect the host name and node address in reverse order.
- When you execute the `ping` command for the first time, you may experience a significantly longer response time than usual.

NetSpot Device Installer software

NetSpot Device Installer is software from Canon that allows you to assign an IP address and manage Canon devices connected to your network. NetSpot Device Installer software is available from the CD with your Canon printer and from www.canon.com

Install NetSpot Device Installer
1. In Windows 2000/XP/Vista, log on as an Administrator before installing. Insert the CD supplied with your Canon printer into the CD drive of your computer.

2. In Windows Explorer, double-click the CD drive icon.

3. Double-click **NetSpot_Device_Installer (Windows => nsdisetup.exe).**

4. A license agreement will be shown in the window. Check the contents and click **Yes.**

5. Specify the program destination folder and click OK. The installation will launch.
    If you check "Add to Start menu", you can add NetSpot Device Installer to your Windows Start menu.

6. When the installation is finished, click **OK.**

Follow these instructions to set the IP address using NetSpot Device Installer:

1. Start the program. The main window will open. NetSpot Device Installer will display a list of devices detected on the network.

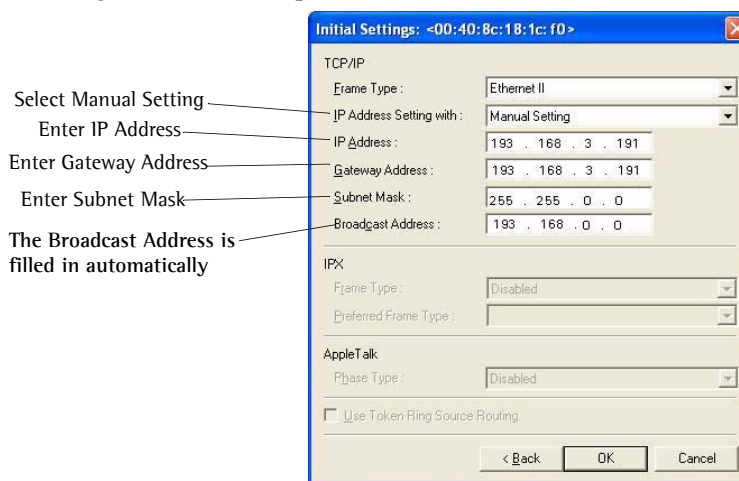2. Select the AXIS 1650 that displays the unit's **MAC address** and **default IP address 196.168.0.90**
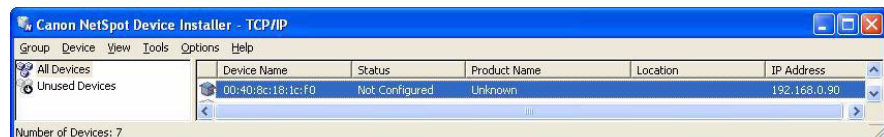
The MAC address is based on the Serial Number (**S/N**) of your AXIS 1650 and is found on the underside label of the print server.

3. From the **Device** menu, select **Initial Settings**.

4. From the **Initial Settings** dialog box, select the **AXIS 1650** print server from the **Product Type** drop-down list and click **Next**.

5. Next, configure the TCP/IP protocol:

Select Manual Setting
Enter IP Address
Enter Gateway Address
Enter Subnet Mask

The Broadcast Address is filled in automatically

6. After you have finished the configuration, click **OK**.
   Note: If you get a message reading "Resetting device", click **OK**.

7. Click **OK**. Your printer's protocol configuration is now finished and your AXIS 1650 has received an IP address. Continue to *Windows Installation*, on page 16.

Notes
- You need to know the Ethernet address of your AXIS 1650 to perform the installation. The Ethernet address is based on the serial number of your AXIS 1650. For example, an AXIS 1650 with the serial number of 00408C181CF0, will have the corresponding Ethernet address of 00 40 8C 18 1C F0. The serial number is located on a label on the backside of the print server.

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

- 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 is changed in the **Print server name** field in **Admin | General Settings**.

- 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 '-'.

- At least one WINS server IP address must be included in the DHCP scope if you are using WINS. Immediately after the IP address has been received, the AXIS 1650 registers its host name and IP address on the WINS server.

- If the host name has not been mapped to the IP address, you can still perform the following instructions to download the IP address. In this case, simply replace the host name entry with the IP address wherever required.

- If you are using host names, you can map a unique host name to the IP address. Refer to your system manuals or to your network administrator for instructions on how to perform name mapping on your system.

Section 6 Windows Installation

Installing Printer Ports

AXIS CAPT Print Monitor is a Windows component that has been developed for network printing. AXIS CAPT Print Monitor is the recommended tool for Canon printers, including CAPT, Canon Advanced Raster Printing System and BubbleJet.

AXIS CAPT Print Monitor allows your AXIS 1650 to be connected in the same simple fashion as a local printer port and once installed, it is automatically initialized upon system start-up.
AXIS CAPT Print Monitor needs to be installed on each workstation for peer-to-peer printing.

Refer to the instructions relevant to your network on how to install a printer using AXIS CAPT Print Monitor:

- *Windows 2000/XP/Server 2003 and Windows Vista,* on page 16
- *Windows 98/Me,* on page 21
- *Remote Printer Port*, on page 22

See also *Using the Standard TCP/IP Port*, on page 23.

AXIS CAPT Print Monitor

Applies to Windows 2000/XP/Server 2003/Vista.
(For information on Windows 98/Me, see page 21)

1. Install the AXIS CAPT Print Monitor on your workstation. The software is available on the AXIS 1650 CD and on www.axis.com

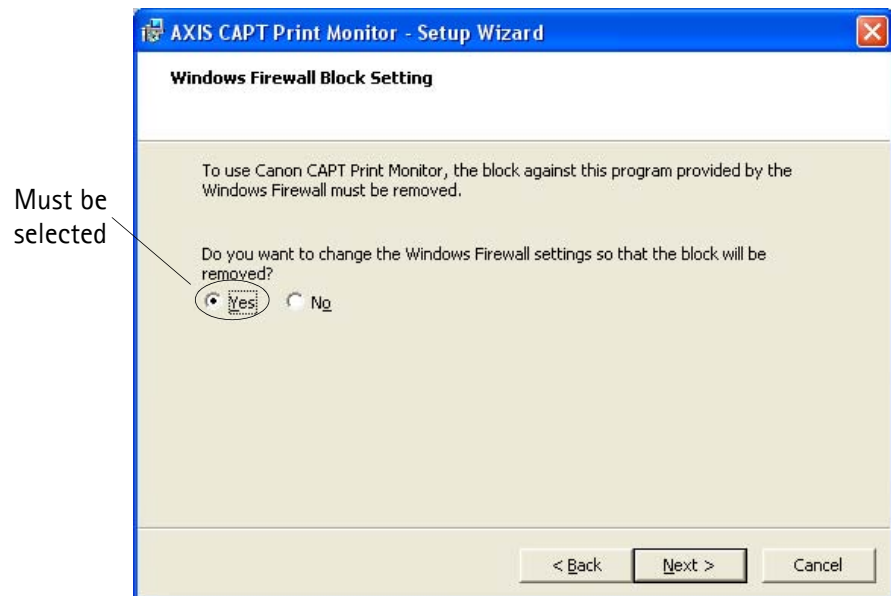2. Launch the software installation and click **Next**.

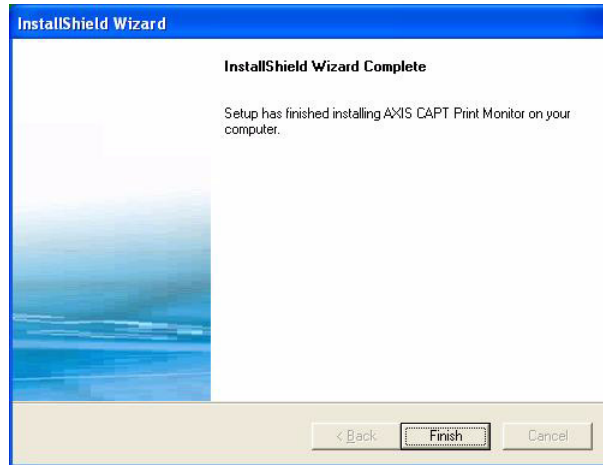3. Read the License Agreement and click **Yes** to accept the terms.

4. **Windows XP/Server 2003/Vista**

   Make sure that the block against the program is removed in the Windows Firewall settings:.

   Must be
   selected

5. Click **Finish** to finish the installation.

6. **Windows Vista:**
    Go to **Start** | **Control Panel** | **Hardware and Sound** | **Printers.**

    Windows XP/Server 2003:
    Go to **Start** | **Settings** | **Printers and Faxes** and click the **Add a Printer** icon to start the Add Printer Wizard.

    Windows XP Home Edition:

    Go to **Start** | **Control Panel** | **Printers and Faxes** | **Add a Printer.** Click **Next.**

    Windows 2000:

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

7. Select **Local Printer attached to this computer.** Make sure the **Automatically detect and install my Plug and Play printer** check box is <u>not</u> checked. Click **Next.**


8. Click the **Create a new port** radio button and select **AXIS CAPT Port.** Click **Next.**


Note: AXIS CAPT Port is used for all Canon printers, including CAPT, Canon Advanced Raster Printing System and BubbleJet.

9. The AXIS CAPT Port pop-up window will appear. Select your AXIS 1650 from the **Available network printers list** and click **OK**.
    Windows Vista: Click the **Update Printer List** button.
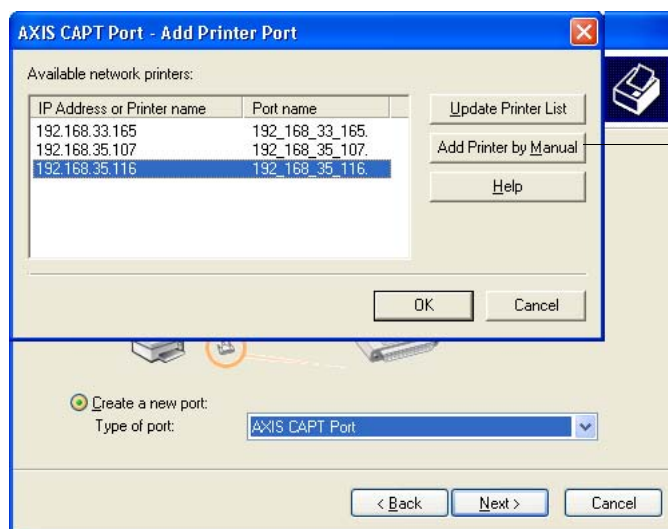
If the AXIS 1650 doesn't appear in the 'Available Network Printers' list, click 'Add Printer Manually' and enter its IP address.

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

11. Choose whether you want to keep the existing driver or to replace it. If you already have the printer's driver installed, you will be asked whether to keep it or to replace it.

12. Click **Next**. Enter a name for the printer and choose whether you want to make it your default printer. Click **Next**.
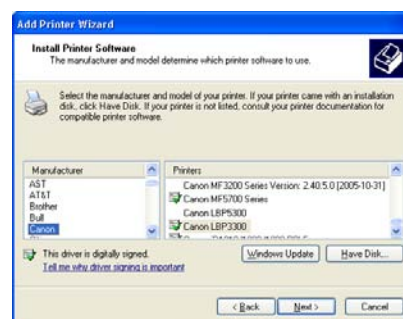
13. Select 'Do not share printer', click **Next** and **Finish**.

14. Print a test page to verify. You have now completed the installation.

Note:

The printer is shared through the print server and not through the local computer.

AXIS CAPT Print Monitor

Windows 98/Me

Follow the procedure below to install TCP/IP Ports from a Windows 98/Me workstation:

1. Install the AXIS CAPT Print Monitor on your workstation. The software is available on the AXIS 1650 CD and on www.axis.com

2. Launch the software installation and click **Next**.
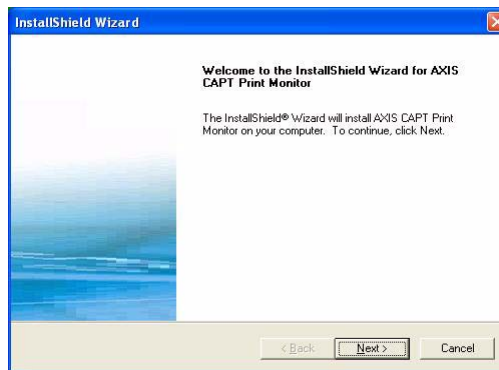
3. Read the License Agreement and click **Yes** if you accept the terms.

4. Click **Finish** to finish the installation.

5. Select **Settings** │ **Printers** from the **Start** menu and double-click the **Add Printer** icon to start the Add Printer Wizard.

6. Select **Local Printer**, as the AXIS 1650 emulates a local printer port and click **Next>**

7. Choose an appropriate printer driver for your printer.
   If the desired driver appears in the manufacturer and models list dialog, highlight your selection and click **Next>.**
   If the desired printer driver is not available, click the **Have Disk...** button. Insert the printer driver CD that was provided with your printer, select the CD drive and click **OK.**

8. Select the desired printer driver from the CD and click **Next>**

9. Select LPT1 as a temporary port and click **OK.** This port will be replaced.

> • The ports will display by default, 'AXIS' followed by the last six digits of the print server's serial number. Example: AXIS560B35.
> • If you wish to install a remote TCP/IP port (and if the TCP/IP port does not appear in the list), select the LPT1 port. Continue with steps 11 and 12 and then follow the Remote Printer Port instructions below.

10. Enter a descriptive name for your printer and click **Next>**

11. Click the checkbox if you want to print a test page and click **Finish**.

Remote Printer Port

The printer has been added to the printers folder and the temporary printer port must be configured:

1. The printer you defined above is now displayed in the printers folder. Right-click the printer object and select **Properties** from the menu.

2. Click the **Details** tab and click **Add Port...** to display the available print server monitors.

3. Click **Other**, select **AXIS CAPT Port** and click **OK**.
   AXIS CAPT Port is used for all Canon printers, including CAPT, Canon Advanced Raster Printing System and BubbleJet.

4. Enter the IP address / host name of your print server. Click **Add**.

5. The port will be added to the list and highlighted. Click **OK** to return to the printer ports dialog and click **Close**.

Using the Standard TCP/IP Port

Follow the instructions below to use the Windows Standard TCP/IP Port to add a network printer in Windows 2000/XP/2003/Vista.

Windows Vista:

Go to **Start** | **Control Panel** | **Hardware and Sound** | **Printers**. Click **Next**.
or in classic view:
Start | **Settings** | **Printers**. Click **Next**.

Windows XP/ Server 2003:

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 <u>not</u> checked. Click **Next**.
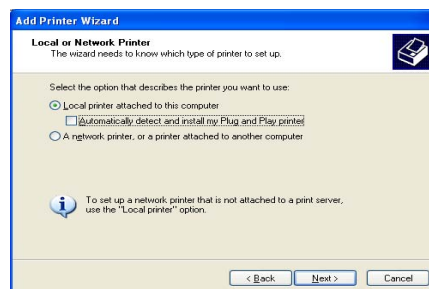
3. Click the **Create a new port** radio button and select **Standard TCP/IP Port** from the list. Click **Next** and the **Add Standard TCP/IP Printer Port Wizard** starts. Click **Next**.
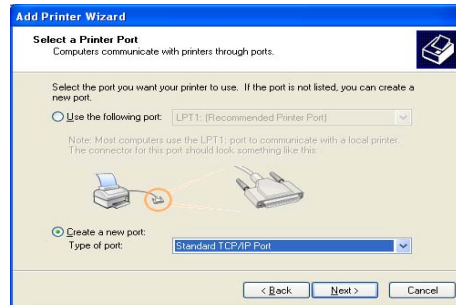
4. In the **Printer Name or IP Address** field, enter the IP address of the print server. *Example: 192.168.3.191.*
    The **Port Name** field will be filled in automatically. Click **Next**.
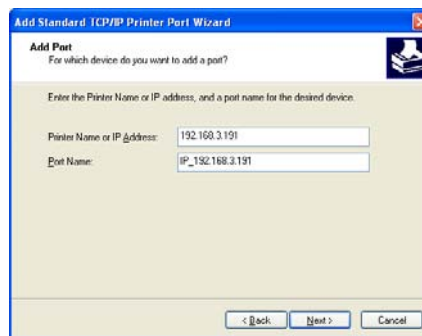

5. Select **Manufacturer and Printer** from the lists. Click **Next**.
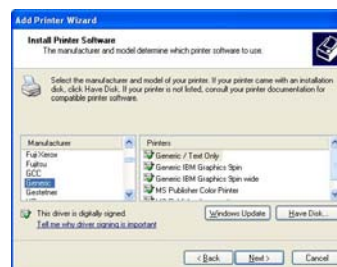
6. If you already have the printer's driver installed, you will be asked whether to keep it or to replace it. Click **Next**. Supply a name for the printer and choose whether you want to make it your default printer. Click **Next**.

7. 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**.
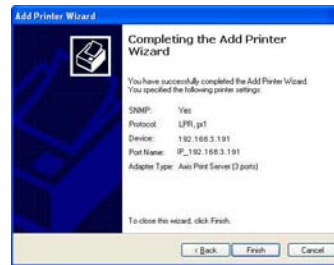
8. Next, from your desktop, go to **Start | Settings | Printers (and Faxes).** Highlight the installed printer and right-click, choose **Properties,** then **Ports | Configure Port.**
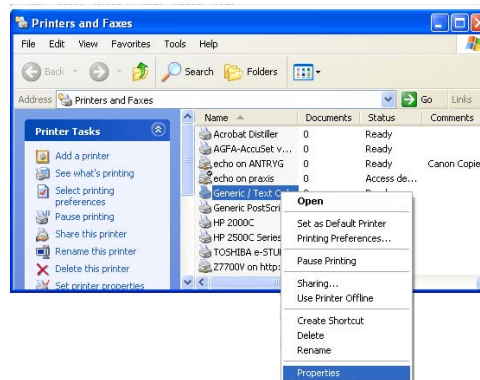
9. In the **LPR Settings – Queue Name** field, you will see the value **"z".** In the **Queue Name** field, type **USB1** or **LPT1**, depending on which printer port you are using. Click **OK and then Apply**.

10. Print a test page to verify. You have now finished the installation.
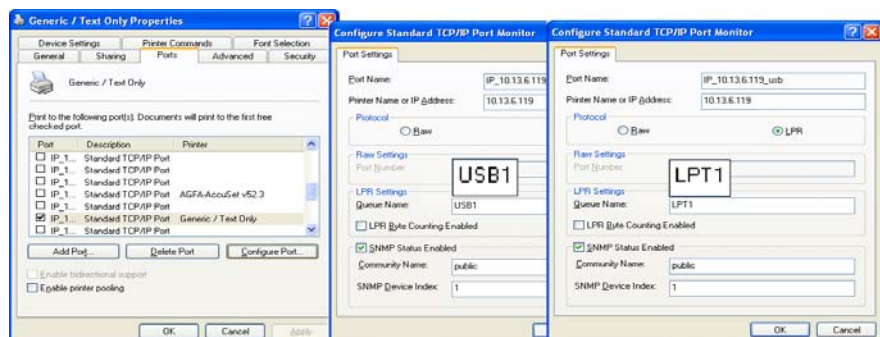
Section 7   Adding Printers in NetWare

This section describes how to continue the installation of the AXIS 1650 in a NetWare environment.

iPrint   Using iPrint in the NetWare environment, users simply point to a Web page that displays all printers available for installation. By clicking a printer, the iPrint client is installed (if not installed previously), the printer's driver is downloaded, and a printer is created on the user's workstation; thus, the user will be able to send documents to the printer from any application on the desktop.

Depending on your NetWare version, go on to *"Setup using NetWare 6.5"* on page 26 or *"Setup using NetWare 6.0"* on page 32.

If you intend to operate your AXIS 1650 in a multi-protocol, mixed environment, you should also proceed to the other relevant sections in this manual.

Setup using NetWare 6.5

Start the iManager. Type *https://<mapped name to file server sys volume>/nps/iManager.html* in the Address/Location field of your browser and press **Enter**.

Example: *https://nakoma.tl.com/nps/iManager.html.*
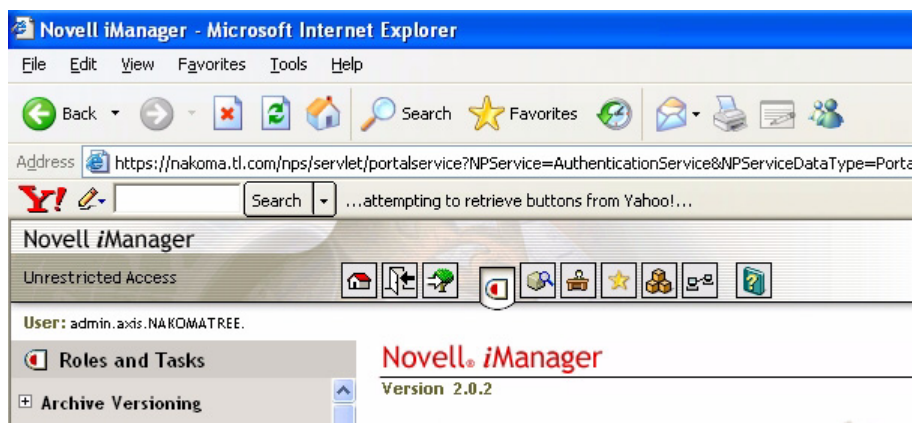
In the **Roles and Tasks** frame of the iManager, expand **iPrint** to make all commands available.

Check Print Manager
and Broker   Make sure that NDPS is installed and that the Print Manager and the Broker both are loaded on your NetWare file server.

You can check the status of NDPS by selecting **Roles and Tasks │ iPrint │ Manage Print Manager,** browse to the file server and select it. Ensure that the status is *NDPS Manager active.*

To check the state of the Broker, select **Roles and Tasks** | **iPrint** | **Manage Broker**. Its state has to be *active* as well.

Create a Printer In the iManager, click **Roles and Tasks** | **iPrint** | **Create Printer**.
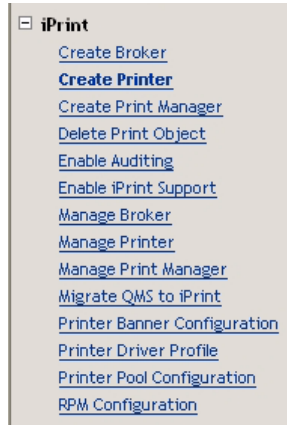
The **Create Printer** dialog appears.

Type a name for the printer to be created (e.g. *CanonMF*).

Keep the default **Container name** (e.g. *axis*).

Select **Print Manager name** (e.g. *NAKOMA_MANAGER.axis*).

Select *Novell gateway* as **Gateway type** and click **Next**.

Configure Novell Gateway for the Created Printer To configure the gateway, enter **Host IP address** or Host name of the AXIS 1650 (e.g. *171.15.114.137*).

As default, *PASSTHROUGH* is suggested as **LPR Printer name**. Change this to *USB1* or *LPT1*, depending on which device port the print server is connected to (or simply select the *Port 9100* radio button for raw printing).

Click **Next**.

Configure Novell gateway for printer CanonMF.axis

○ Host IP address:
171.15.114.137

○ Host name (DNS name):

Note: This is typically the DNS name or IP address of the physical printer.

○ LPR Printer name:
USB1

○ Port 9100

[Next >>] [Cancel]

Select Default Drivers for Your Platforms	For each platform in your network, select the default printer drivers to install (the drivers presented are those registered in the Broker; new drivers can be added from the **Manage Broker** task). Click **Next**.

Select default drivers for printer CanonMF.axis

Select the default print drivers to install for each platform. If a print driver is not in the list, add new drive

Windows XP drivers:	Canon MF5600 Series
Windows 2000 drivers:	Canon MF5600 Series
Windows NT 4 drivers:	[None]
Windows 95/98 drivers:	[None]
Linux/Mac drivers:	[None]

[Next >>]

You will now receive a confirmation that the request succeeded and that printer *CanonMF.axis* was created. Click **OK**.

|	
Manage the Newly Created Printer	Select **Roles and Tasks │ iPrint │ Manage Printer** and specify which NDPS Printer to modify (e.g. *CanonMF.axis*). Click **OK**.

Manage Printer

Specify the object(s) to modify.

NDPS Printer name:
CanonMF.axis

[OK] [Cancel]

To Browse for a Printer	Next to the **NDPS Printer name** field, click the **Browse** icon. Browse to your default container to find the newly created printer (e.g. *CanonMF*), select

it in the **Contents** list and click **Apply**.
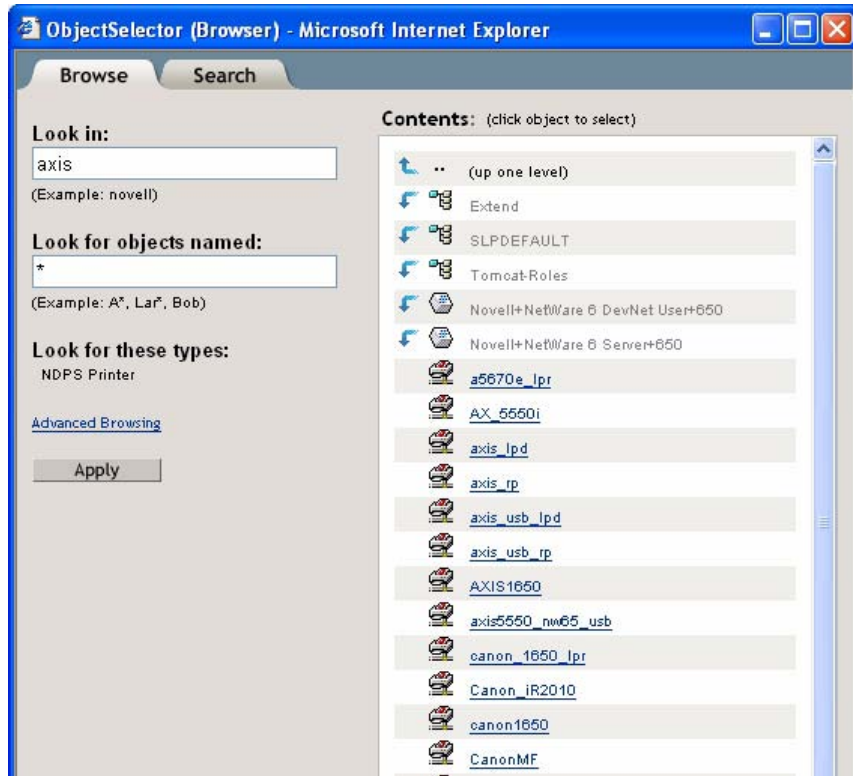
Check Printer Health   Select **Roles and Tasks** │ **iPrint** │ **Manage Printer** │ **Printer Health Monitor** to check the health of the printer.

Click **Back** to return to the **Manage Printer** main page.

Enable iPrint Support   In the **Manage Printer** main page, click the **Client Support** tab.

To enable iPrint support, check *Enable iPrint support*, click **Apply** and **OK**.

Make the Newly Created Printer Available (Optional)   Using the iPrint Map Designer tool, you can quickly make the newly printer available and accessible simply by clicking on its icon in a floor plan, showing where the printers are located.

The tool lets you import own floor plans as background images that can be used to drag-and-drop printers onto actual locations. These maps are then published on a Web server so users can install printers that are closest to their location.

1. Using Microsoft Explorer, start *maptool.html*, which can be found in *<sysvol>\Apache2\htdocs\ippdocs*.

2. Select a map from the **Background** drop-down list.

3. Select a **Printer icon** for the newly created printer and drag it to a suitable position in the design area, i.e. the floor plan.

4. Next to the **Printer List** field, click the **Browse** icon and enter the *IP address* or DNS name of the server where the Print Manager is running (e.g. *171.15.115.112*).

5. From the **Printer List**, select the printer agent you want associated with this printer icon (e.g. *CanonMF*). The Printer URL and Mouse Over Text will automatically be filled in with the printer agent information.

   Printer URL is the URL created for the printer when IPP was enabled for the printer (e.g. *ipp://171.15.115.112/ipp/CanonMF*). You should not need to change the URL.

   The **Mouse over text** will by default display the printer agent's name. You can override this information by entering the text you want to display when a user moves the mouse over the printer icon (e.g. *Canon Multifunction*).

6. In the **Printer caption** field, enter the information to display (e.g. *AXIS 1650/Canon MF*).

7. Click **Save** and save the map (e.g. as *AXIS1650_usb*).
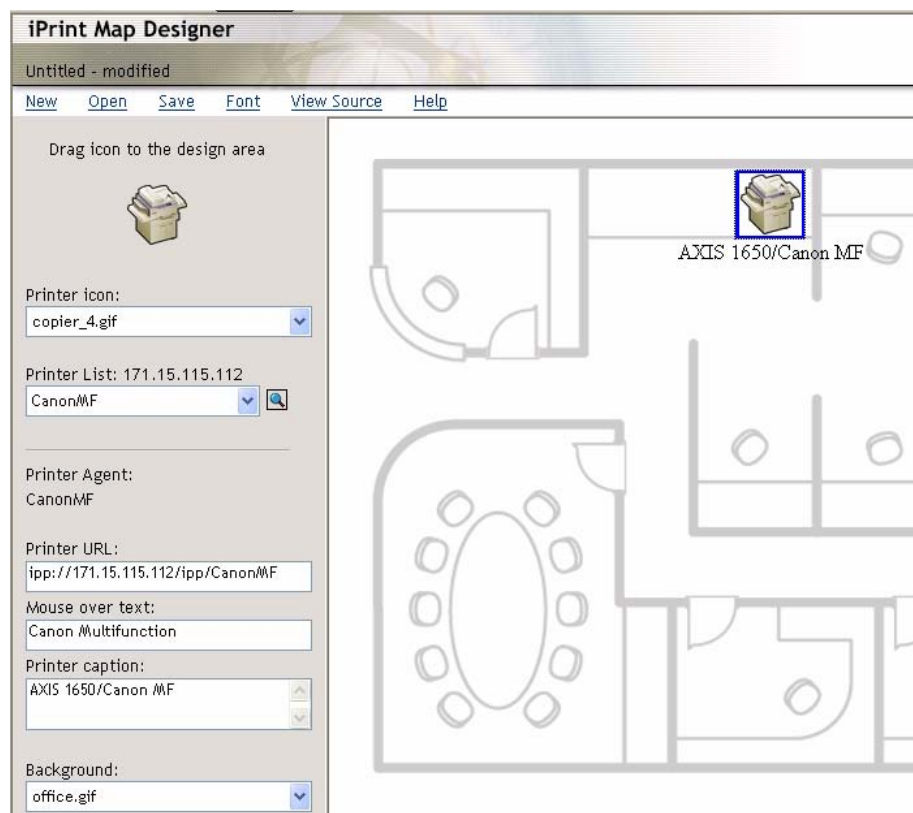
Installing the Printer Locally

The printer is now accessible all over the network and will be installed on any client when needed. In case you need to install the printer locally, use Windows' Add Printer Wizard in the usual manner:

1. Ensure that iPrint Client is installed.

2. **Start** | **Printers and Faxes** | **Add a printer.**

3. Select **Network printer** and **Browse for a printer.**

4. Select **NDPS Printers**, select **NDPS Controlled Access Printers**.

5.   Select **Container** (e.g. *Axis*) and the **printer** (e.g. *CanonMF*).

6.   Wait for the printer to be installed.

7.   Finally, print a test page.

Setup using NetWare 6.0

Setting up iPrint in a NetWare 6.0 environment is rather similar to performing the same task in the 6.5 version.

Launch the iManager   From a workstation, launch your browser and enter the following URL: https://<server_ip_address:port_number>/eMFrame/iManager.html. Note that this URL is case sensitive. The server IP address can also be a DNS name. Example: *https://171.15.115.109:2200/eMFrame/iManager.html*

To have full access to all iManager features, you must log in as Admin of the tree.

Check Print Service Manager and Broker   Make sure that NDPS is installed and that the Print Service Manager and the Broker both are loaded on your NetWare file server.

Create a Printer   In the left frame, expand **iPrint Management** to make all commands available and click **Create Printer**.

In the Create Printer dialog, enter the information needed.

Examples:
Printer name: *CanonMF*
Container name: *axis*
Manager name: *SIXPACK_MANAGER.axis*
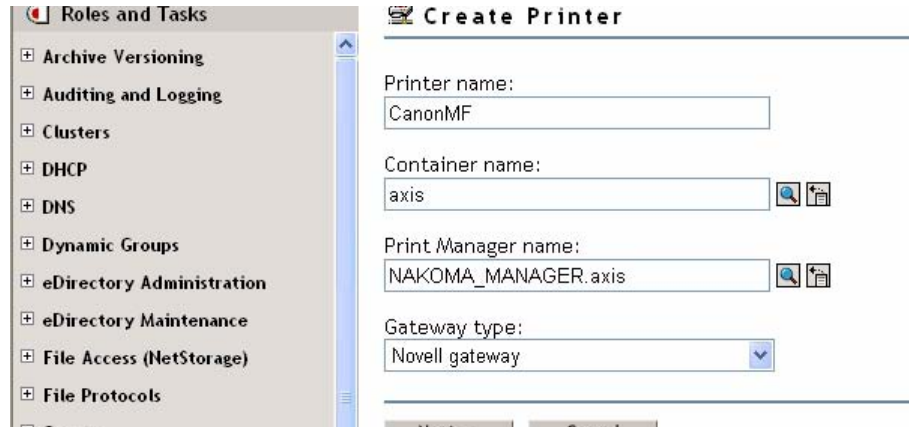**Gateway type:** *Novell LPR gateway (LPR or IP)*

Click **Next**.

Configure Novell LPR Gateway for the Created Printer

To configure the gateway, enter **Host IP address** of the AXIS 1650 (e.g. *171.15.114.137*). Instead of the Host IP address you can use the **Host name** (e.g. *CanonMF.tl.com*).

As **Printer name**, enter the printer port (e.g. *USB1*). Click **Next**.

Select Default Drivers for Your Platforms

For each platform in your network, select the default printer drivers to install (the drivers presented are those registered in the Broker; new drivers can be added from the **Manage Broker** task). Click **Next**.
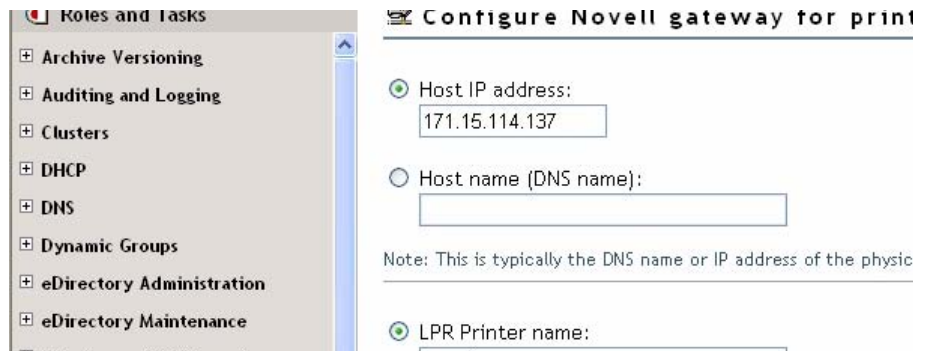
You will now receive a confirmation that the request succeeded and that printer *CanonMF.axis* was created. Click **OK**.

Manage the Newly Created Printer

In the left frame of the iManager, select **iPrint Management │ Manage Printer** and specify which NDPS Printer to modify (e.g. *CanonMF.axis*). Click **OK**.
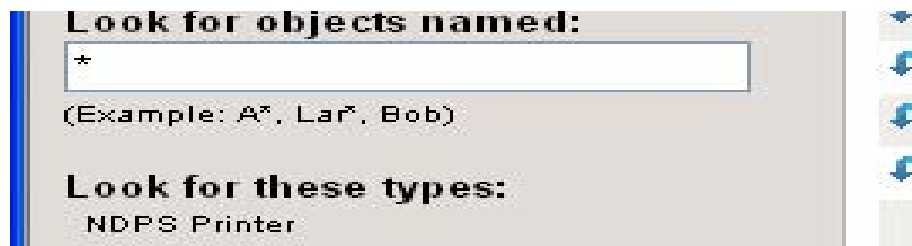
To Browse for a Printer

Next to the **NDPS Printer name** field, click the **Browse** icon. Browse to your

default container to find the newly created printer (e.g. *CanonMF*), select it in the **Contents** list and click **Next**.
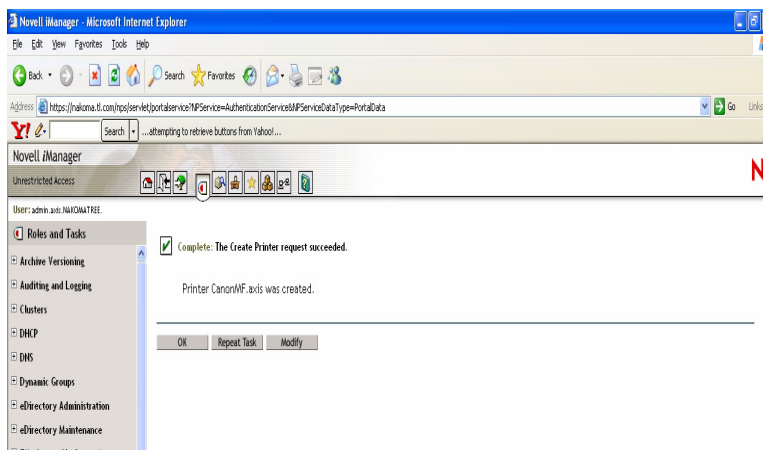
Check Printer Health   Select **Printer Health Monitor** to check the health of the printer.

Click **Back** to return to the **Manage Printer** main page.

Enable IPP Access
In the **Manage Printer** main page, click the **Client Support** tab.

To enable IPP access, check *Enable IPP access*, click **Apply** and **OK**.

Make the Newly Created Printer Available (Optional)
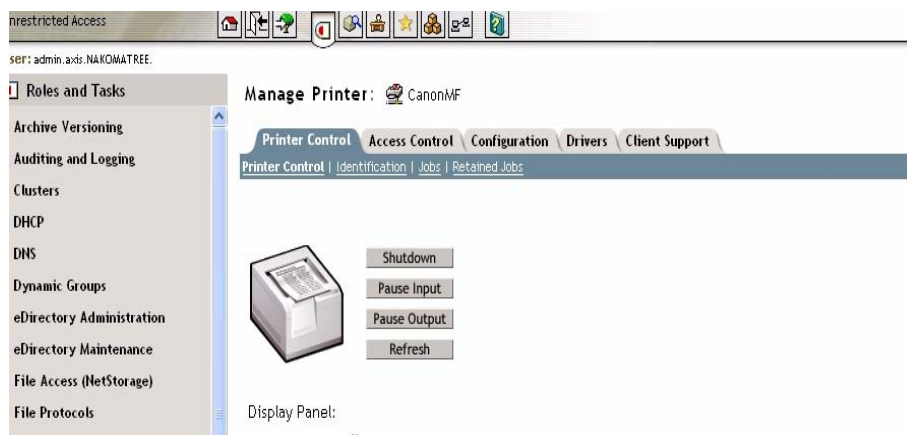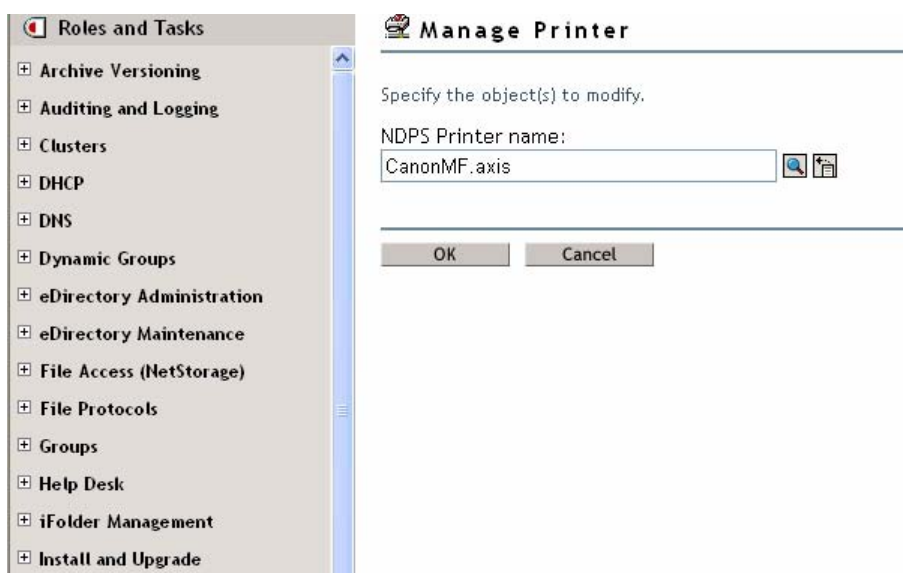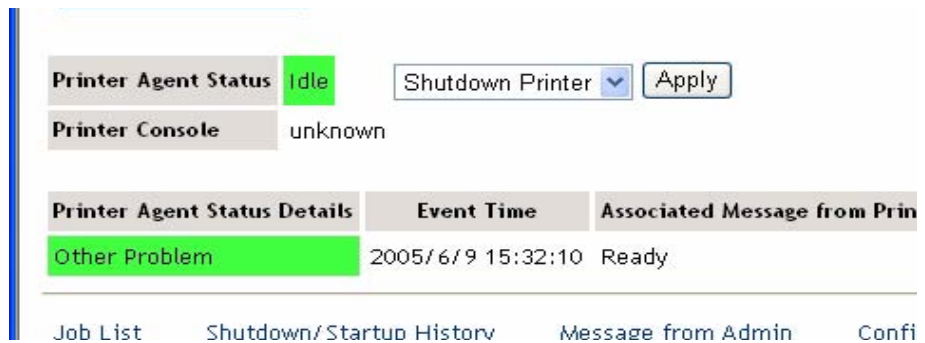Using the iPrint Map Designer tool, you can quickly make the newly printer available and accessible simply by clicking on its icon in a floor plan, showing where the printers are located.

The tool lets you import own floor plans as background images that can be used to drag-and-drop printers onto actual locations. These maps are then published on a Web server so users can install printers that are closest to their location.

1. Using Microsoft Explorer, start *maptool.html*, which can be found in *<sysvol>\login\ippdocs*.

2. Select a map from the **Background** drop-down list.

3. Select a **Printer icon** for the newly created printer and drag it to a suitable position in the design area, i.e. the floor plan.

4. Next to the **Printer List** field, click the **Browse** icon and enter the *IP address* or DNS name of the server where the Print Manager is running (e.g. *171.15.115.109*).

5. From the **Printer List**, select the printer agent you want associated with this printer icon (e.g. *CanonMF*). The Printer URL and Mouse Over Text will automatically be filled in with the printer agent information.

    Printer URL is the URL created for the printer when IPP was enabled for the printer (e.g. *ipp://171.15.115.109/ipp/CanonMF*). You should not need to change the URL.

    The **Mouse over text** will by default display the printer agent's name. You can override this information by entering the text you want to display when a user moves the mouse over the printer icon (e.g. *CanonMF*).

6. In the **Printer caption** field, enter the information to display (e.g. *AXIS 1650 Canon MF*).

7. Click **Save** and save the map (e.g. as *AXIS1650_usb*).
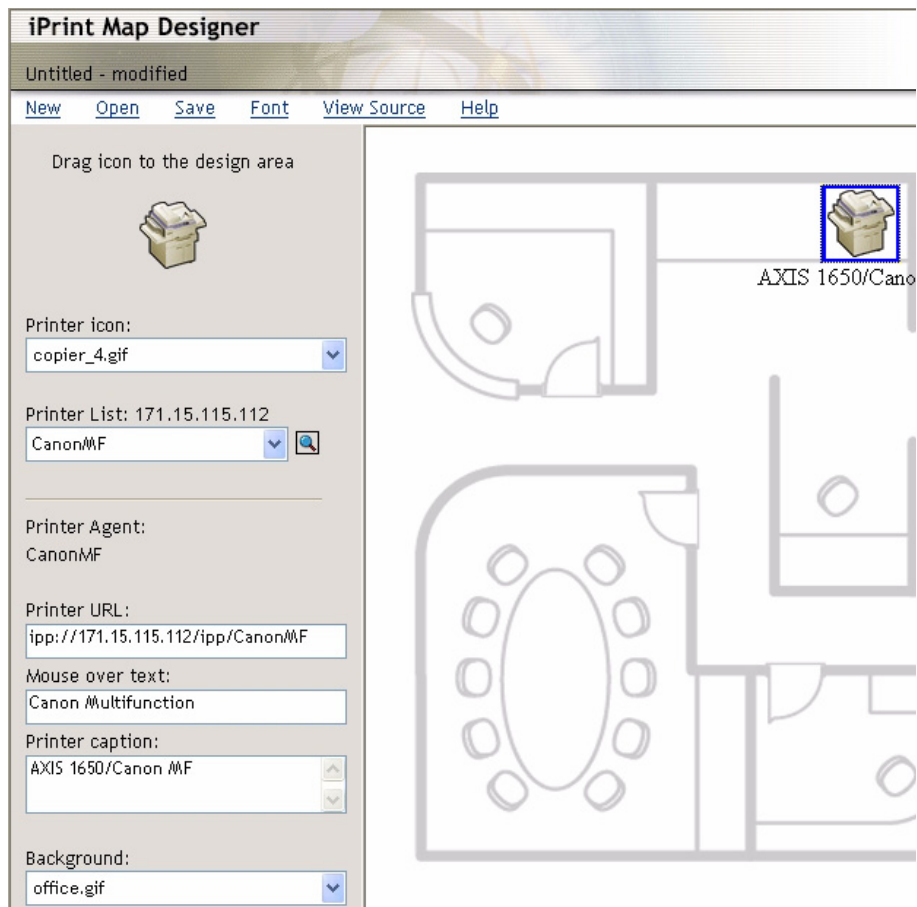
Installing the Printer Locally
The printer is now accessible all over the network and will be automatically installed on any client when needed.

In the HTML-page just created, double-click the new printer icon. A dialog box will appear, waiting for confirmation:

Click **OK** to start installation and iPrint will report progress during all stages of local installation.
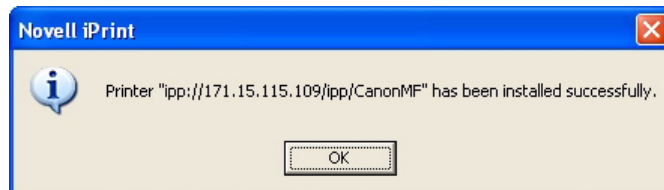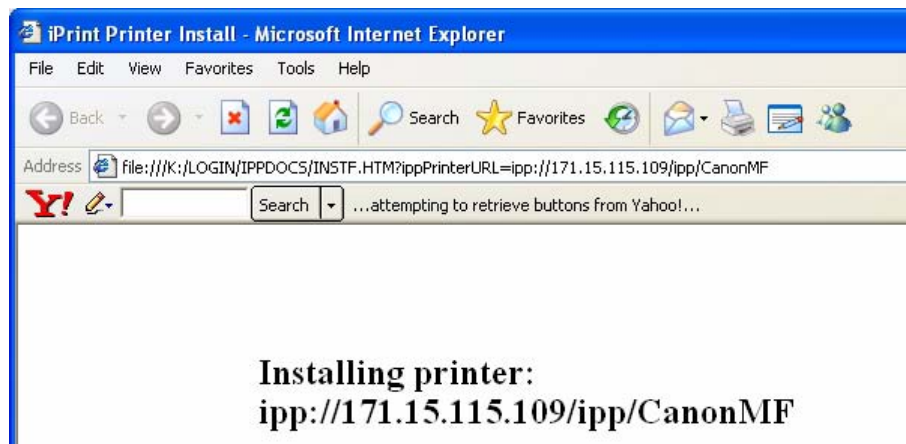
Manual Installation of the Printer Locally	In case you need to install the printer locally, use Windows' Add Printer Wizard in the usual manner:

1. Ensure that iPrint Client is installed.

2. **Start** | **Printers and Faxes** | **Add a printer**.

3. Select **Network printer** and **Browse for a printer.**

4. Select **NDPS printers**, select **NDPS Controlled Access Printers**.

5. Select **Container** (e.g. *Axis*) and the **printer** (e.g. *CanonMF*).

6. Wait for the printer to be installed.

7. Finally, print a test page.

Section 8 Print Server Management and Configuration

The management and configuration tools that are supported by the AXIS 1650 allow you to:

- Change print server parameters
- Receive extended information about print jobs
- Receive printer port status and monitor printers
- Reset the AXIS 1650

Configuration Overview

The method you should use to manage and configure your AXIS 1650 is dictated by your TCP/IP network.

Configuration/Management methods:

- Embedded Web Pages using a Web Browser - See page 38.
- FTP - See page 50.
- SNMP - See page 51.

Print Server Management

All Axis print servers contain an embedded Web server that can be accessed through a Web browser. The embedded Web server provides access to configuration and management pages for the print server and the connected printer.

Once you have established the AXIS 1650 in the TCP/IP environment, as described in *Set the IP Address*, on page 10, you can access the AXIS 1650 Web pages from any standard Web browser.

The Web interface has two modes of operation: User mode and Admin mode.

User Mode   In User mode you can change language of the Web interface, 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 other settings, you must enter the Admin mode. See *"Services Available from the User Mode"* on page 40.

Admin Mode   When in Admin mode, you have access to all the print server's parameters and you can change them after your needs. This mode is intended for network administrators and can be password protected to prevent unauthorized changing of parameters. See *"Services Available from the Admin Mode"* on page 42.

Accessing the Web Pages

Follow these steps to access the AXIS 1650 embedded Web pages:

1. Enter the print server's IP address (or host name) in the **Location/Address** field of your Web browser. Press **Enter**

2. The **Printer Overview** page will appear and you will be in ordinary User mode.

3. To enter Admin mode, click **Admin**.
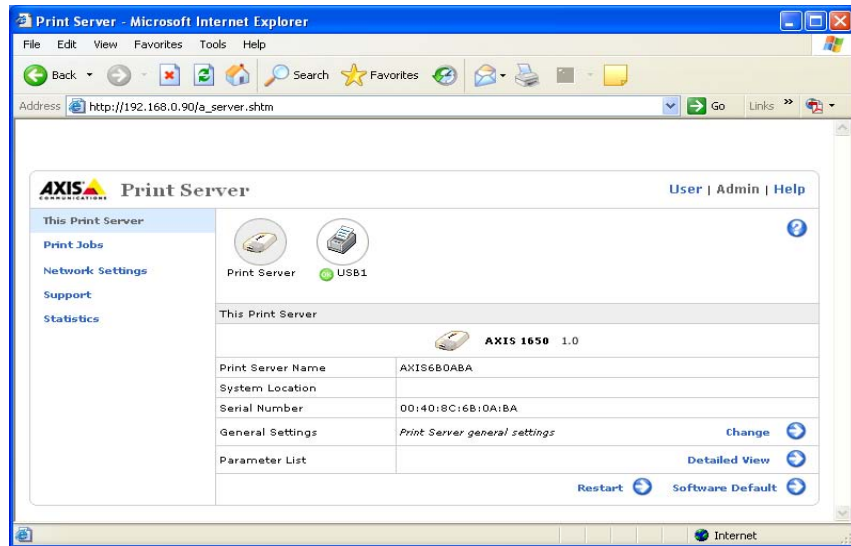
It is highly recommended that you set a password to protect the print server from unauthorized changes. This is done in under **Admin** | **General Settings** | **General** tab => **Root Password**.

Services Available from the User Mode

The following services are available from the User mode.

A click on the question mark will open the print server's help pages.

Click on the Axis logotype to reach Axis' home page.

Printer Overview	The Printer Overview page shows the general parameters of the AXIS 1650 and the connected printer.
Print Server Name	This name identifies the print server to the users. The default name is AXISXXXXXX, where XXXXXX are the last six digits of the print server's serial number.
System Location	This parameter shows where the print server is located, helping you to find the Canon device you are working with.
Serial Number	Every Axis device is uniquely identified by its serial number. The serial number is found on the underside label of your print server.
Language	*English* and *Japanese* is supported in the print server's Web interface. Set language by clicking **Change**.
Printer Page	By clicking the printer icon on the Printer Overview page, the Printer page opens. It shows the status and the supported capabilities of the connected printer.

On some printer models, you can also print a test page from the Printer page. Note: It is only possible to print a test page on Canon printers that support printing standard ASCII characters. It is <u>not</u> possible to print a test page on Canon printers supporting Canon Advanced Printing Technology and Canon Advanced Raster Printing System.

Underneath the printer icon is a colored symbol that indicates the status of the printer:

- **green** indicates that the printer is ready for printing
- **yellow** indicates warning
- **red** indicates error

A dimmed printer indicates that no printer is connected to that port.

Printer Status	The Printer page shows status and capabilities of the printer that is connected to the selected printer port. The capabilities include Detailed Status, Manufacturer, Command Sets and Capabilities. The extent of this information depends on the printer model.
Network Names	Click **Network Names** to see a list of names that the printer is identified with in the supported network environments.

Print Jobs   Select **Print Jobs** to view Printer Usage, showing the accumulated usage of the printer connected to your print server. The Printer Usage log is erased each time the print server is restarted.

- **Printer** - shows the printer model.
- **Port** - shows the port to which the printer is connected.
- **Status** - shows the status of the printer. The available status messages are *ready*, *busy* and *off-line*.
- **Printed Pages** - shows the number of pages that the printer has printed (not shown for all printer models).

View Job Log   Presents the 32 latest print jobs as Document Name, Owner, Page Count, Time and Print Results. Note that the time when the document was printed is only available if the print server has access to a time server.

Print Server Uptime   Shows the time elapsed since last time the print server was restarted.

Scanner   Shown for multifunctional Canon devices with scanning capabilities. If the scanner is in use, its status will change from *Idle* to *Busy* and the User name will be shown.

Help   The Help pages present basic information about the AXIS 1650 and its Web user interface.

Services Available from the Admin Mode

Click on the Axis logotype to reach Axis' home page.

A click on the question mark will open the print server's help pages.

The following services are available from the Admin mode.

This Print Server
This page contains a section that allows you to view and modify the general parameter settings of the AXIS 1650. Management operations, like restarting the AXIS 1650 and resetting its parameters to their default settings are also available.

Print Server Name
This name identifies the print server to the users. The default name is AXISXXXXXX, where XXXXXX are the last six digits of the print server's serial number.

System Location
This parameter shows where the print server is located, helping you to find the Canon device you are working with.

Serial Number
Every Axis device is uniquely identified by its serial number. The serial number is found on the underside label of your print server. See *"Print Server Installation"* on page 9.

General Settings
In this section, you manage the print server's general settings as well as permissions.

To change the print server's general parameters, select **Admin | General Settings => Change**. For additional information, see *"Setting General Parameters"* on page 45.

To change print server permissions and restrictions, select **Admin | General Settings => Change** and select the **Restrictions** tab. For additional information, see *"Setting Restrictions"* on page 46.

Parameter List
Click **Detailed View** to see all parameters and their current settings.

Restart
Restarts the print server. When the power LED lights constantly and the Network indicator starts flashing to indicate network activity, the print server is ready for use again. New configuration settings will then become active. All contact with the printer server will be lost during a restart.

Software Default
A **Software Default** will reset all print server parameters to their factory default settings except:

- Node address (NODE_ADDR.)
- IP address (IP_ADDR.)
- DHCP enabled or disabled (DHCP_ENABLE.)

A **Software Default** differs from a **Factory Default**. A Factory Default is performed by pressing the *Test button*, located on the print server, in a specific sequence. See *"The Test Button"* on page 61.

When the power LED lights constantly and the Network indicator starts flashing to indicate network activity, the print server is ready for use again.

Printer Page   By clicking the printer icon on the This Print Server page, a Printer page opens, allowing you to view the status and the supported capabilities of the connected printer.

On some printer models, you can also print a test page from the Printer page. Note: It is only possible to print a test page on Canon printers that support printing standard ASCII characters. It is <u>not</u> possible to print a test page on Canon printers supporting Canon Advanced Printing Technology and Canon Advanced Raster Printing System.

Underneath the printer icon is a colored symbol that indicates the status of the printer:

- • **green** indicates that the printer is ready for printing
- • **yellow** indicates warning
- • **red** indicates error

A dimmed printer indicates that no printer is connected to that port.

Printer Status   The printer page shows status and capabilities of the printer that is connected to the selected printer port. The capabilities include Detailed Status, Manufacturer, Command Sets and Capabilities. The extent of this information depends on the printer model.

Network Names   Click **Network Names** to see a list of names that the printer is identified with in the supported network environments.

Print Jobs   Select **Print Jobs** to view Printer Usage, showing the accumulated usage of the printer connected to your print server. The Printer Usage log is erased each time the print server is restarted.

- • **Printer** - shows the printer model.
- • **Port** - shows the port to which the printer is connected.
- • **Status** - shows the status of the printer. The available status messages are *ready*, *busy* and *off-line*.
- • **Printed Pages** - shows the number of pages that the printer has printed (not shown for all printer models).

View Job Log   Presents the 32 latest print jobs as Document Name, Owner, Page Count, Time and Print Results. The time when the document was printed is only available if the print server has access to a time server.

Print Server Uptime   Shows the time elapsed since last time the print server was restarted.

Scanner   Shown for multifunctional Canon devices which have scanning capabilities. If the scanner is in use, the status will change from *Idle* to *Busy* and the User name will be shown.

Network Settings

From the **Network Settings** page you can set all parameters that control the network traffic to and from the AXIS 1650. You can enable or disable any of the supported network protocols and fine-tune the parameters.

Changing Network Settings

To change the print server's network settings, select **Admin | Network Settings | Detailed View**. For additional information, see *"Setting Network Protocol Parameters"* on page 47.

Support

From the **Support** page you can receive help to resolve any installation or print problems that might occur. If your problems persist, the Support page allows you to produce a Server Report. The Server Report includes the settings of the AXIS 1650, information about your connected printer as well as the 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 problem description.

Troubleshoot and Upgrade

If you cannot successfully install your print server, please try the troubleshooting instructions to solve your installation problems. The troubleshooter is started by clicking the **Troubleshooting steps** link. If you still cannot print satisfactorily after performing the troubleshooting instructions, please produce a Server Report and contact your local supplier.

Server Report

A Server Report is a document containing technical information about your print server and the connected printer. This report is of great value for support assistance, so please produce a Server Report and mail, email or fax it to your support channel together with a detailed problem description. Click the **Server Report** link to prepare your Server Report and problem description to Axis Communications Support team:

You must have an e-mail account and an e-mail program set up on your computer. It is also important that you include the entire Web page in the mail and not just a link to the page.

AXIS Online Services

Click the print server **product page** to receive information about your print server model. The product page, available on the Axis Web Site, offers you up-to-date information, print server manuals, FAQs, software updates and technical support, etc.

Contact Information

If you need to contact any Axis distributor or local office, please click the **Axis distributor or office** link.

Statistics

The **Statistics** page displays information about the network traffic to and from the AXIS 1650 as well as information about servers and services that are connected or associated with the AXIS 1650.

Network Statistics

Click the **Network Statistics** icon to display a list of statistical information about the data traffic to and from the print server.

Network Connections

Click the **Network Connections** icon to display a list of servers and network services that currently are connected to the print server and the status of each connection.

Setting General Parameters

To change the print server's general parameters, select **Admin | General Settings => Change** in the Web interface.

Note: All print server settings have default values that have been carefully selected by Axis. In most instances, there is no need to change the default values. Observe that all network configuration should involve the Network Administrator.

Print Server Name

This name identifies the print server to the users and will be part of the default name of the connected printer and printer queue name. The default name is AXISXXXXXX, where XXXXXX are the last six digits of the print server serial number.
Example: If the serial number is 00 40 8c 18 16 36, the default print server name is AXIS181636.

System Name

This name identifies the network printer to the users.
Default = <blank>

System Location

This parameter allows you to specify where the network printer is located in your organization. This enables you to find the device you are working with.
Default = <blank>

System Contact

Enter the name of e.g. the System Manager.
Default = <blank>

System Contact Phone Nbr.

Enter the telephone number of e.g. the System Manager.
Default = <blank>

System Comment

Enter comments regarding the network printer.
Default = <blank>

Language

Select the language to be displayed in the print server's embedded Web pages: *English* or *Japanese.*

Root Password

Enter a password in the field. Up to 15 alphanumeric characters can be entered.
Default = <blank>

Network Speed

Set your network speed: *10_HALF_DX, 10_FULL_DX, 100_HALF_DX, 100_FULL_DX* or let the print server sense the correct speed (*AUTO_SENSE*).
Default = AUTO_SENSE

SNMP Enabled

Select *Yes* to permit access using the SNMP protocol, select **No** to reject access using the SNMP protocol.
Default = Yes

Community Name

Specify the community name for SNMP. Up to 32 alphanumeric characters can be entered.
Default = public

Setting Restrictions

To change print server permissions and restrictions, select **Admin** | **General Settings => Change** and select the **Restrictions** tab in the Web interface.

TCP Restriction Enabled
: When set to *Yes*, users specified in the IP Address List are rejected or accepted (depending on how the TCP Restriction Mode is set), to send print jobs over the print server.
Default = No

TCP Restriction Mode
: When set to *Accept*, users specified in the TCP Restriction IP Address List are allowed to use this print server.
When set to *Reject*, users specified in the TCP Restriction IP Address List are not allowed to use this print server.
Default = Accept

TCP Restriction IP Address List
: Here you specify the users which are allowed (or not allowed, depending on how TCP Restriction Mode is set) to use the print server. IP addresses or ranges of IP addresses can be specified:
Example IP addresses: 10.13.16.150, 10.13.16.151
Example IP address range: 10.13.16.160-0.13.16.170
Default = <blank>

Note: If your print server is connected to a CAPT 1.0 printer you will receive an error message stating *Network Error* if you are not allowed to print with this print server

SNMP Restriction Enabled
: When set to *Yes,* users specified in the SNMP Restriction IP Address List are rejected or accepted (depending on how the SNMP Restriction mode is set).
Default = No

SNMP Restriction Mode
: When set to *Accept*, only users specified in the SNMP Restriction IP Address List are permitted to specify/browse the settings for the device using the SNMP protocol.
When set to *Reject*, only users specified in the SNMP Restriction IP Address List are rejected from specifying/browsing the settings for the device using the SNMP protocol.
Default = Accept

SNMP Restriction IP Address List
: Users specified here are rejected or accepted. IP addresses or ranges of IP addresses can be specified as follows:
Example IP addresses: 10.13.16.150, 10.13.16.151
Example IP address range: 10.13.16.160-10.13.16.170
Default = <blank>

SLP Restriction Enabled
: When set to *Yes*, users specified in SLP Restriction IP Address List are rejected or accepted (depending on how the SLP Restriction Mode is set).
Default = No

SLP Restriction Mode
: When set to *Accept*, only users specified in the SLP Restriction IP Address List are permitted to specify/browse the settings for the device using the SLP protocol.
When set to *Reject*, only users specified in the SLP Restriction IP Address List are rejected from specifying/browsing the settings for the device

using the SLP protocol.
Default = Accept

SLP Restriction IP Address List
Users specified here are rejected or accepted.IP addresses or ranges of IP addresses can be specified as follows:
Example IP addresses: 10.13.16.150, 10.13.16.151
Example IP address range: 10.13.16.160-10.13.16.170
Default = <blank>

Setting Network Protocol Parameters

To change the print server's network settings, select **Admin | Network Settings | Detailed View** in the Web interface.

Frame Type
AXIS 1650 uses frame type Ethernet II for network packages.

LPD Banner Page Mode
Check the appropriate box to specify if the LPD banner page is to be printed.
Off disables the LPD banner page.
Auto prints the LPD banner page first or last depending on your operating system.
Last forces the printer to print the LPD banner page last, independently of operating system.
Default value = Off

Note: LPD Banner Page Mode is not available for Canon printers supporting Canon Advanced Printing Technology or Canon Advanced Raster Printing System.

IP Address
Specify the IP address of your print server in the format w.x.y.z. You should acquire a unique and unused IP address from your Network Administrator in order to prevent conflicts with other network devices.
Default value = 192.168.0.90

Note: If DHCP, BOOTP or RARP is enabled, your manual settings might be overridden when you restart the print server. To make sure that this will not happen, you are advised to disable BOOTP and RARP when you are setting the IP address manually, DHCP is disabled by default.

Important: If you change the IP address you will lose contact with the print server. You must enter the new IP address of the print server in the address/location field of your Web browser to continue to configure and manage the print server via the Web browser.

Subnet Mask
Specify the subnet mask used for determining when the traffic should be sent via a router. This number, in combination with the IP address, identifies on which network the print server is located. The normal class C subnet mask value is usually 255.255.255.0.
Default value: 0.0.0.0, indicates that all network segments are accessible.

Default Router
Specify the IP address of the default router. All traffic directed outside the local network, defined by the subnet mask, is sent to the default router. Any re-routing via other routers is done automatically. The setting 0.0.0.0 indicates that no default router is set. If that is the case, the print server

anticipates that there is a router available that automatically senses and redirects the print server's packets to destinations outside the local network segment.
Default value: 0.0.0.0

DHCP Enabled

Set to *Yes* to enable DHCP (Dynamic Host Configuration Protocol). DHCP automatically downloads the IP address to each print server at startup. Depending on how your network has been configured, other Internet related parameters (such as the default router, subnet mask, etc.) might also be set automatically. It is recommended that you verify the settings when the server has been restarted and then enter any missing parameters manually.
Default value = No (disabled)

BOOTP Enabled

Set to *Yes* to enable BOOTP (BOOTstrap Protocol). BOOTP downloads the IP address to each print server at startup. Depending on how your network has been configured, other Internet related parameters (such as the default router, subnet mask, etc.) might also be set automatically. However, we recommend that you verify the settings when the server has been restarted and then enter any missing parameters manually.
Default value = No (disabled)

RARP Enabled

Set to *Yes* to enable RARP (Reverse Address Resolution Protocol). RARP downloads the IP address to each print server at startup. This method only operates over single network segments. Other Internet related parameters (such as the default router, subnet mask, etc.) must be entered manually as RARP only sets the IP address.
Default value = No (disabled)

DNS Server Address

Specify the IP address of the DNS (Domain Name Server). DNS uses NetBIOS names to allow clients to locate resources on TCP/IP networks.
Default = 0.0.0.0

DNS Dynamic Update

Select *Yes* to enable DNS (Domain Name Server). DNS uses NetBIOS names to allow clients to locate resources on TCP/IP networks.
Default value = No

DNS Host name

Specify DNS Host name. This name will be used in all environments as the identifier of this print server.
Default value = <blank>

DNS Domain Name

Specify the name of the domain to which the print server belongs. Domain refers to a set of computers on a network that have been assigned a common name. A domain might contain several workgroups.
Default = <blank>

WINS Enabled

Select *Yes* to enable WINS (Windows Internet Name Service) over TCP/IP. WINS uses NetBIOS names to allow Windows based clients to locate resources on TCP/IP networks.
Default value = Yes

WINS Server Address

Specify the IP address of the primary WINS server. The WINS server is used for identifying a computers by its host name instead of by its IP address.
Default value = 0.0.0.0

WINS Host Name

Specify the WINS host name, which will be used as the identifier of your

	print server. *Default = <blank>*
Scope ID	Specify the NetBIOS scope to which the print server belongs. The scope ID is a character string value that is appended to the NetBIOS name and used for all NBT communication. The scope ID defines a group of computers that recognizes a registered NetBIOS name and all NetBIOS traffic will be confined within this group. *Default value = <empty>* which specifies the default scope.
SNTP Server Address	Specify the Time server's IP address or network name. *Default = <blank>*
SNTP Update Interval	The interval between requests to the Time Server for a time update. *Default = 1hours*
Time Zone	Specify the time zone for your print server location. Note: This setting is only visible in the English firmware version. *Default = GMT*
Daylight Saving	Set to *Yes* if you have Daylight saving. Note: This setting is only visible in the English firmware version. *Default = No*
SLP Enabled	Set to *Yes* to enable SLP communication to and from the print server. *Default = Yes*
SLP Scope List	Specify the name of the SLP scope to which the print server belongs. The scope refers to a set of computers on a network that have been assigned a scope name. *Default = DEFAULT*

Print Server Management Using FTP

Having assigned an IP address to your AXIS 1650, as described in *"Set the IP Address"* on page 10, you can change the AXIS 1650 parameter settings using the File Transport Protocol (FTP).

Editing the *config* file

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

1. Log in to the AXIS 1650 by typing:
   `ftp <IP address>` or `ftp <host name>` in a Command prompt.

2. Enter the user id (the default entry is `root`; if the default password has been changed then it must also be entered).

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 AXIS 1650 by typing:
   `put config CONFIG`

> It is important that the destination file is specified in capital letters. Otherwise the edits are temporary and will be lost once the AXIS 1650 has been rebooted.

Example

How to get and put the *config* file using FTP from a Command prompt.

```
> ftp npserver
connected to npserver.
220 AXIS 1650 FTP Print Server v1. June 1 2005 ready.
Name (npserver:thomas): root
331 User name ok.
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.
>
```

FTP Help

By typing `help` in step 3 in the FTP instructions described above, a list of available commands will be displayed.

Print Server Management Using SNMP

You can use SNMP (Simple Network Management Protocol) to monitor and configure the AXIS 1650 remotely. All major functions for print servers are supported.

General Information SNMP refers to a set of standards for network management, including a protocol, a database structure specification, and a set of data objects. The AXIS 1650 SNMP implementation runs in TCP/IP networks.

The management is handled by NMS (Network Management System) software running on a host on your network. The NMS software communicates with network devices by the means of messages, which are references to one or more objects.

A message can be a question or an instruction to a device, or an alarm triggered by a specific event in a device. Objects are contained in MIBs (Management Information Base), where MIB-II is a standard database.

The AXIS 1650 supports the following MIBs:

- relevant parts of MIB-II
- relevant parts of the Host Resource MIB
- relevant parts of the Printer MIB
- relevant parts of the CANON-MIB
- relevant parts of the PPM-MIB

Section 9   Scanning with AXIS 1650

If your Canon device also functions as a scanner, you can use your AXIS 1650 as a scanner server, too.

This section describes how to scan via an AXIS 1650 using **AXIS ScanClient**. For general information on scanning, see your Canon device manual. The examples here show Windows XP and a Canon MF3110 with MF Toolbox 4.7.

Before continuing with this section, see to it that you have a working printing environment and the scanning software for the Canon device installed (see your Canon device manual as well as the previous sections of this Manual).

AXIS 1650 gives you a choice between two scanning methods:

- • Scanning invoked from your computer - see page 55.
- • Scanning invoked from the Canon device - see page 58.

Both methods need **AXIS ScanClient** installed on the client computer.

AXIS ScanClient will open a channel between your computer and the scanner. The channel will be open for five minutes to give you time to walk to the scanner and place the object to be scanned on the flatbed. During these five minutes you have exclusive rights to the scanner (but print jobs function as usual).

Installing AXIS ScanClient

Locate **AXISScanClient_SetUp.exe** on the AXIS 1650 CD or on www.axis.com.

1. Start the SetUp program by double-clicking its icon.

2. Select installation language and click [OK].

3. Installation is about to begin. Click [Next].
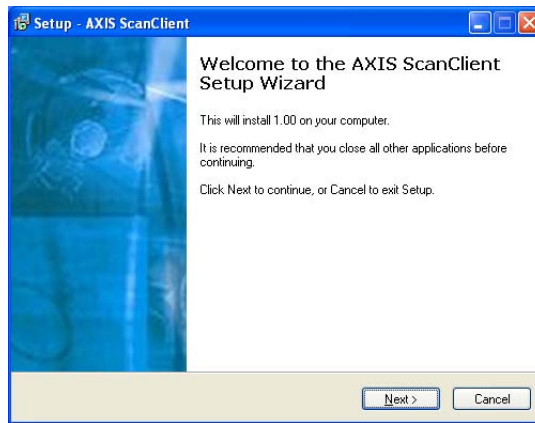
4. Read and accept the License Agreement. Click [Next].

5. Select **Destination Location** (default location is C:\Program Files\AXIS Communications\AXIS ScanClient). Click [Next].

6. Select **Start Menu Folder** (default folder is AXIS ScanClient). Click [Next].

7. Check the values and click [Install] to start the installation process.
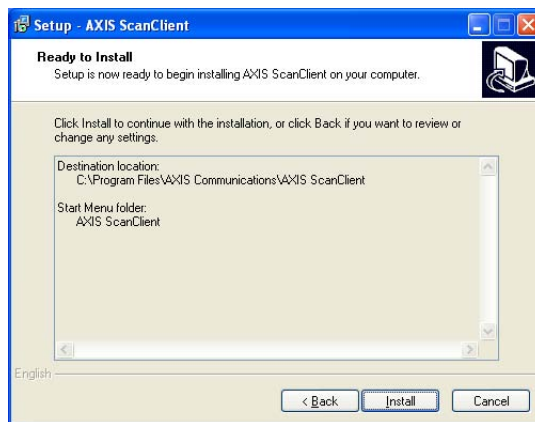

8. After a short while AXIS ScanClient has been installed on your computer. Click [Finish] to complete the installation.

Using AXIS ScanClient

Connect to the   1. Start **AXIS ScanClient** (Start | Programs | AXIS ScanClient). The client will
Scanner   search the network for scanning devices. Mark the one you would like to
                             use by clicking on it in the list (you can also select a scanner by entering
                             its IP address). Click **Connect**.
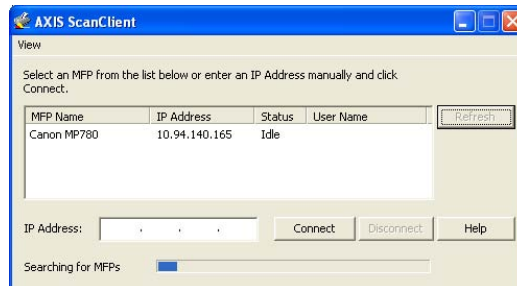
2. If the scanner is busy, **AXIS ScanClient** will show who is using it, otherwise
    you will be connected as indicated on the message line.
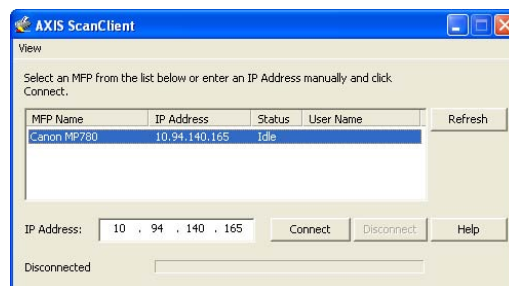
Click [Help] for information on how to connect and disconnect.

Disconnect from the   End a scanning session by clicking [Disconnect] on the **AXIS ScanClient**.
Scanner
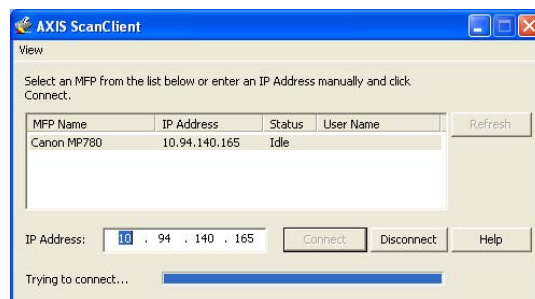
The message line will change to Disconnected.

Note: The scanning session will automatically end and the channel will be
             disconnected by default after 5 minutes of inactivity. The length of this
             timeout setting can be changed under **View > Settings** in AXIS
             ScanClient.

Invoking a Scan from your Computer

Start a Scan from   Connect to the scanner with AXIS ScanClient - see page 54 - and place
your Computer   the object to be scanned on the scanner flatbed.

1. On your computer, start the receiving program (e.g. **Canon MF Toolbox —
    Scan Function**). Click [Save] to open the Save dialog.
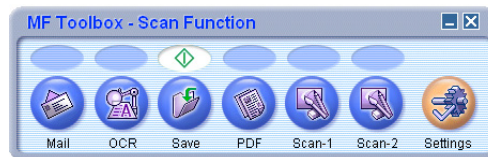
2. In the Save dialog, click [Start] to start scanning.
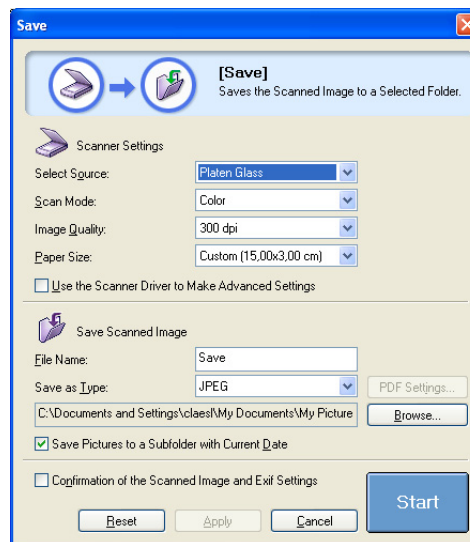
3. When ready, close the Save dialog and the Canon MF Toolbox.

4. Disconnect from the scanner - see page 54, and remove the scanned object
    from the flatbed.

Scanning from Other   Using the method described above, you can scan from many kinds of
Programs   image software, for instance Microsoft's Scanner and Camera Wizard,
    Adobe Photoshop, Gimp, Adobe Acrobat and others that can use TWAIN
    or WIA drivers.

Example 1   Example using Microsoft's Scanner and Camera Wizard:

1. Connect to the scanner with **AXIS ScanClient** - see page 54 - and place
    the object to be scanned on the scanner flatbed.

2. Go to **Start** | **Settings** | **Control Panel**.

3. Click on **Scanners and Cameras**.

4. Right-click the device you would like to use (example: WIA Canon MF3110) and select **Get picture using Scanner Wizard**.
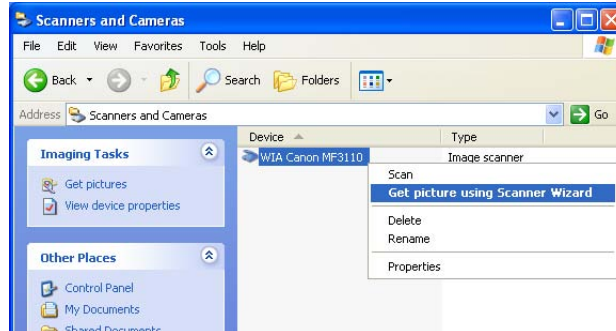
5. The Scanner and Camera Wizard starts. Click [Next].

6. Select scanning parameters and start scanning.
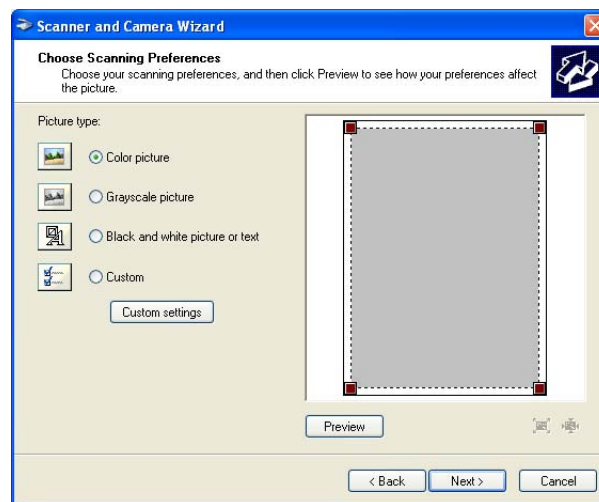
7. When scanning is ready, disconnect from the scanner – see page 54 and remove the scanned object from the flatbed.

Example 2   Example using Gimp:

1. Connect to the scanner with **AXIS ScanClient** – see page 54 and place the object to be scanned on the scanner flatbed.

2. Start **Gimp**.

3. Select **File** | **Acquire** | **TWAIN...**

4. Select source (e.g. MF3110).

5. Select scanning parameters and start scanning.

6. When scanning is ready, disconnect from the scanner - see page 54 and remove the scanned object from the flatbed.

Invoking a Scan from the Canon Device

First time only:
Prepare your
Computer

These five steps are just needed prior to the <u>first</u> scanning invoked from the Canon device to a certain client computer. By setting these parameters, the scanning software will be able to work automatically.

1. Connect to the scanner with **AXIS ScanClient** - see page 54.

2. Go to **Start** | **Printers and Faxes**.

3. Click on **Scanners and Cameras**.

4. Right-click the device you would like to use (example: WIA Canon MF3110) and select **Properties**.
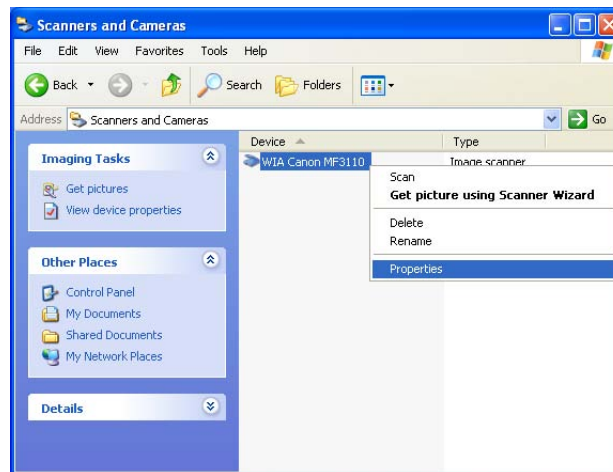
5. Select **Events** and select the event **Canon MF3110 Scan Button**.

   Under **Actions**, select the option **Start this program** and select **MF ToolBox Ver4.7** in the list.

   Click [OK].
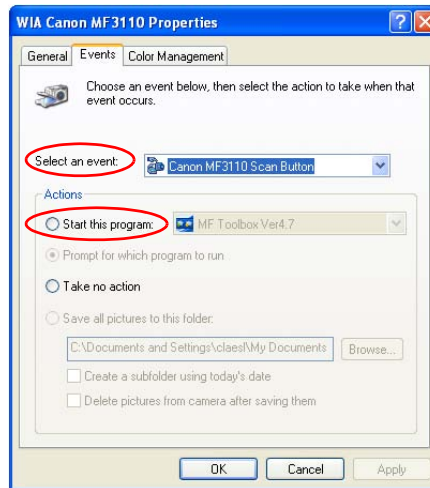
Now you have prepared your computer to automatically take care of scannings invoked from the Canon device.

Start a Scan from the Canon Device

Connect to the scanner with **AXIS ScanClient** - see page 54 and place the object to be scanned on the scanner flatbed.

1. If the Canon device is in Energy Save mode, press its [Energy Saver key].

2. Press [Scan] on the Canon device.

3. Press [Start] on the Canon device.

4. The Canon device will start to scan.

5. When ready, remove the scanned object from the flatbed and walk back to your computer.

6. Close the receiving program on your computer and disconnect from the scanner - see page 54.

Note: When waking up from Power Off or Energy Save mode the Canon device needs some time (from 30 seconds to a few minutes) to adjust the light and the scanner to produce optimum scans. Press [Start] repeatedly until scanning starts.

Section 10   Faxing with AXIS 1650

If the AXIS 1650 is connected to a multifunctional Canon device with fax capabilities supported by Axis, follow these instructions to:

- install the fax driver for your MFP
- configure the port settings for faxing

Notes:
- The following information applies to AXIS 1650 with firmware version 2.10 and above.
- Make sure that the printer and print server have been installed according to the AXIS 1650 Set-up Instructions.

Install the fax driver for your MFP

In order to set up the faxing functionality, a fax driver must be installed for your MFP.

1. Run the Windows '**Add Printer wizard**'.
2. Follow the on-screen instructions to install the fax driver.
3. When asked for a Printer Port, select the printer port created in the printer driver installation for Axis 1650. See *"Windows Installation"* on page 16.
4. When the installation is complete, you will find a separate Fax object in your **Printers and Faxes** list.

Configure the port settings for faxing

Once the fax driver has been installed, follow these instructions to configure the port settings for faxing:

1. Go to **Start** | **Settings** | **Printers and Faxes**.
2. Select the connected Canon Fax device from the list, right click and select **Properties**.
3. Select the **Ports** tab and select **Configure Port**.
4. In the **Configure Standard TCP/IP Port Monitor** dialog, select the **LPR** radio button and type '**fax**' in the **LPR Settings > Queue name** field.
5. Click **OK**.
6. The port settings are now configured for faxing.

Section 11   The Test Button

Factory Default   The test button is located on the front right hand side of the print server and is used to perform a Factory Default:

1. Remove the power adapter to switch off the print server.

2. Press and hold down the test button, while you reconnect the power adapter.

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 power adapter.

Important:

> • A factory default will reset all print server parameters and settings to their default values except Node address (NODE_ADDR.)
> • The IP address (INT_ADDR.) will be reset to default **192.168.0.90**

Canon BubbleJet Printers   If the AXIS 1650 is connected to a **Canon BubbleJet** printer, the test button can be used for the following operations:

• **Print a server report and parameter list**
  Press the test button to print a server report and parameter list showing the current AXIS 1650 settings.

• **Perform a Factory Default**
  See description above.

Server report   The server report includes the settings of the print server, information on the connected printer as well as the current network settings.

Parameter list   This list provides comprehensive details of the parameters and their current status.

Section 12 Upgrading the Firmware

The print server's *firmware* is stored in its Flash memory. This memory retains its data content even after the power is removed. Flash memory allows data to be erased and re-written, which is why you can install firmware updates in your print server as they become available, without having to replace any parts. New firmware can simply be loaded into the AXIS 1650 over the network.

> Firmware is internal print server software that determines its functionality.

You can obtain all print server firmware free of charge from the following locations:

- www.axis.com
- your local dealer

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.
> - Before upgrading the print server, ensure that it is not printing jobs. You have to wait until the print job is finished before you can proceed.

Upgrading 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 `1650_x_xx.bin`.
- The print server must have a valid IP address.

This example uses these sample values:

Print server model: AXIS 1650
IP address of print server: 10.13.4.105
New firmware version name: 1650_2_00.bin
Location of firmware and upgrade procedure: C:\Axis
(Create a new directory named e.g. 'Axis' on your hard drive and download the firmware to that location).

1. From www.axis.com/techsup/firmware, download the firmware and save it to a new directory on your computer, e.g. **C:\ Axis**

2. Open a command prompt from Start => Run. Type **cmd** in the Run Window and click OK.

3. The DOS Command Prompt window will open. Make sure you are working from the c: directory (type **c:** and press **Enter**).

4. Type **cd Axis**

5. Type **dir** and press Enter. The Axis directory you have created will display a list of all files.

6. Connect to the print server using ftp: Type **ftp 10.13.4.105** (this example uses print server IP address 10.13.4.105)

7. Enter the user name, the default user is **root** (if the default password has been changed then it must also be entered). Press **Enter**.

8. Change to binary transfer mode: type **bin** and press **Enter**.

9. Type **hash** and press **Enter**.

10. Use the 'put' command to upload the upgrade file to the flash location: Type **put 1650_2_00.bin FLASH**. A stream of hash marks will appear.

11. You will receive a message stating "Transfer complete. Flash programming finished OK. "

12. The print server will restart in five seconds running the new software.

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

Notes:

- If the upgrading process fails, just repeat the instructions presented above.
- If you lose contact with the AXIS 1650 after an upgrading failure, just restart the AXIS 1650 to restore contact.
- If the network LED flashes at regular half second intervals, the AXIS 1650 cannot process any print jobs. In order to leave this state, you must repeat the instructions above.

Section 13 Internet Connection Firewall in Windows XP SP2

If you have upgraded to Windows XP SP2, you need to open UDP port 10260 in the Internet Connection Firewall when using Broadcast communication.

> UDP port 10260 is opened automatically in Internet Connection Firewall, if allowed during the installation of AXIS CAPT Print Monitor in Windows XP/2003, see *"Windows Installation" on page 16.*

To open the Internet Connection Firewall:

1. Go to **Start** | **Control Panel** | **Security Center.**

2. Select **Firewall:**

3. Make sure **On** is selected.
   "Don't allow exceptions" and "Off" must be unchecked!

4. Click **Exceptions** and highlight **AXIS CAPT Port**.
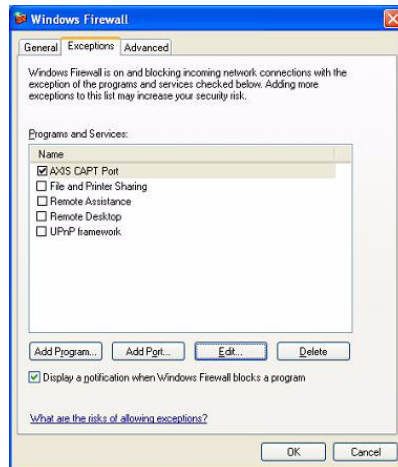
5. Click **OK**.

Note: If you accidentally delete the AXIS CAPT Port and want to recreate it, go to **Exceptions | Add Port** and configure the port.
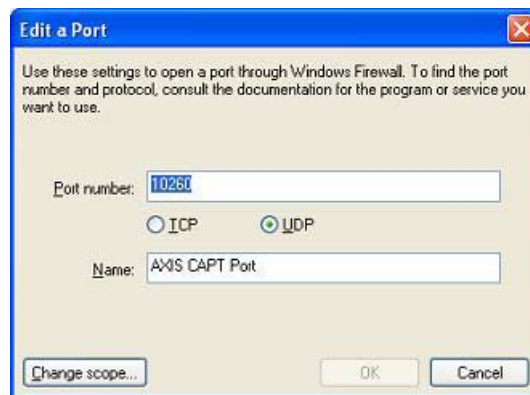
Section 14   Technical Specifications

Supported Devices   AXIS 1650 is developed to network Canon printers and multifunctional products. If your Canon device also functions as a scanner, you can use your AXIS 1650 as a scanner server, too.

AXIS 1650 supports Canon Advanced Printing Technology, Canon Advanced Raster Printing System as well as Canon BubbleJet printers.

> Important: AXIS 1650 does not support devices from other manufacturers than Canon.

Supported Systems

Microsoft Windows   Windows 98, Windows 2000, Windows Me, Windows XP, Windows Server 2003, Windows Vista.

Print Methods: LPR, Raw TCP, CAPT over TCP/IP in Microsoft Windows.

Novell NetWare   6.X. NDPS supported over IP. Support for iPrint using IPP protocol.

WWW   Netscape Communicator 4.7 and above, Internet Explorer 4.0 and above.

Supported Protocols   Windows TCP/IP, WINS.

TCP/IP   LPD, FTP, BOOTP, ARP, RARP, DHCP, ICMP, IGMP, IP, TCP, UDP, HTTP, SLP, SNMP, Raw TCP, DNS, DDNS.

Network Management   Print server/job/printer status presentation and management via standard Web browser or ftp.

Supported Languages   English and Japanese.

Logical Connection   Supports NWay that provides auto-detection of network speed.
Use Ethernet II frame type, full duplex.

Wired Network Attachments   RJ-45 connector (Category 5 shielded twisted pair cable) for 10baseT Ethernet or 100base TX Fast Ethernet.

Printer Ports   • One Low- and Full-Speed USB 1.1 port, and works with USB v 2.0 (Low-Speed and Full-Speed).
The USB cable shipped with the product supports Low-Speed and Full-Speed. *High-Speed is not supported.*
• 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	Height x Width x Depth 1.1in (29 mm), 2.4in (62 mm), 4.6in (117 mm) Weight 0.18lb (81g)
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 C-tick AS/NZS CISPR22 FCC part 15, subpart B, Class B, demonstrated by compliance with EN ICES-003 Class B. Power supply: UL, EN60950
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 performing Factory Default

All specifications are subject to change without prior notice.

Index