

# AXIS 700 Scan-to-Print

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## Introduction

This document applies to the AXIS 700 Network Scan Server with software release 1.10 and subsequent releases until otherwise notified.

This document describes how to use your AXIS 700 as input device for scan-to-print. The document contains the following information:

- Required equipment
- Setting up the AXIS 700 Network Scan Server
- Setting up an Axis Print Server for additional functionality
- Scan-to-print via an LPR/LPD Spooler

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## Required Equipment

- A TIFF enabled printer. Some printers have TIFF support as standard (like most QMS printers) while others (like HP and LexMark printers) offer an optional original or third party SIMM module.
- An installed network card/print server that supports FTP. Most Axis print servers support FTP as well as LexMark's MarkNet and QMS CrownNet network cards. HP's JetDirect series do not support FTP.

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## Setting up Your AXIS 700 for Scan-to-Print

The method used is scan-to-file. Standard settings for a most non-Axis print server are:

1. Specify Destination Name.
2. Specify a Scanning Profile with an image format that is supported by the TIFF module in your printer. The Text profile (300 dpi black-n-white) should work with most printers. You may select the Text/Photo profile if you intend to copy pictures.
3. Set Include Image Information to None.
4. Specify the name/IP number of the printer/print server in the FTP Server field.
5. The default settings can be used for the remaining fields. In some cases you need to enter a '/' in the Directory field.

The screenshot shows a configuration window for the Axis 700. The fields are as follows:

- Destination Name: Printer
- Scanning Profile: Text (with a note: (Can be changed at the moment of scanning.))
- Include Image Information: None
- FTP Server: 172.19.2.179
- User: (empty field)
- Password: (empty field)
- Confirm: (empty field)
- Directory: (empty field)
- File Name: (empty field)

Below the fields are several options:

- Append sequence number to file name
- Start sequence with: (empty dropdown)
- Store sequence number on FTP server
- Append file extension to file name

At the bottom are three buttons: Add To List, Done, and Reset. A note at the very bottom states: "If left blank, the value specified on the Destination Defaults page will be used."

Figure 1. Standard settings for a non-Axis print server

If you use an Axis Print Server, the only difference to the standard setting is that the File Name field MUST be **PRx** where x=1-8, which is the logical printer used. When the File Name field is set the remaining options are disabled which is the case for Axis Print Servers. Typically PR1 means LPT1, PR2 means LPT2 and PR3 means COM1 on a 3-port print server. Similarly PR1 should typically be used for a 1-port print server.

The screenshot shows a configuration window for an Axis print server. The fields are as follows:

- Destination Name: Printer via AXIS 560
- Scanning Profile: Text (Can be changed at the moment of scanning.)
- Include Image Information: None
- FTP Server: 172.19.2.178
- User: (empty)
- Password: (empty)
- Confirm: (empty)
- Directory: (empty)
- File Name: PR1

Below the File Name field, there are several options, all of which are disabled (indicated by a greyed-out right-pointing triangle):

- Append sequence number to file name
- Start sequence with: (empty dropdown)
- Store sequence number on FTP server
- Append file extension to file name

At the bottom, there are three buttons: Add To List, Done, and Reset. A note at the very bottom states: "If left blank, the value specified on the Destination Defaults page will be used."

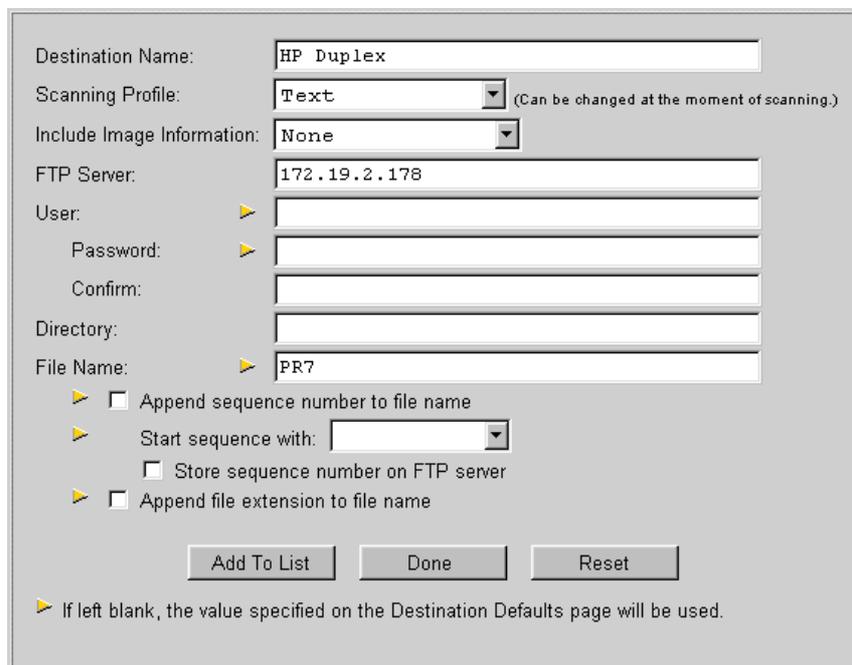
Figure 2. Standard settings for an Axis print server

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## Setting up an Axis Print Server for Additional Functionality

Axis' concept with logical printers makes it possible to direct the printout to up to eight different logical printers. Each of these can be configured independently which makes it possible to change the printing characteristics. In the example below an HP 5Si with an installed Xionics (<http://www.xionics.com>) XipPrint II SIMM module will print the scanned images in duplex via logical printer PR7. For another logical printer the printout could for instance be scaled or set up to use another paper size.

1. Set up the AXIS 700 with **PR7** as the File Name for file destination.



The screenshot shows a configuration window for an Axis Print Server. The fields are as follows:

- Destination Name: HP Duplex
- Scanning Profile: Text (Can be changed at the moment of scanning.)
- Include Image Information: None
- FTP Server: 172.19.2.178
- User: (empty)
- Password: (empty)
- Confirm: (empty)
- Directory: (empty)
- File Name: PR7

Options below the File Name field:

- Append sequence number to file name
- Start sequence with: (empty)
- Store sequence number on FTP server
- Append file extension to file name

Buttons: Add To List, Done, Reset

Footnote: If left blank, the value specified on the Destination Defaults page will be used.

Figure 3. Setting up the AXIS 700 for use with an Axis Print Server

2. Set up the AXIS Print Server.

The web interface has been used in this example and Configuration/Printer7 has been selected. For each logical printer it is possible to specify a string to be sent to the printer before and after the job. In this case an IPCL (Image Printer Control Language) command has been included which controls the XipPrint module. Before the job you need to send (49 49 2A ...) which triggers the duplex mode. After the job you need to perform a form feed to eject the paper, (0F). Then the printer must be reset (1B 45), to not interfere with the next printout. Also make sure the Physical Port is correct. It should be LPT1 in this case.

Physical Port :

Secondary Printer :

Wait On Busy :  YES  NO

Read Back Port :

String Before Print Job :

String Substitutions :

Character Set Conversion :

Printer Language Translation :

String After Print Job :

Hex Dump Mode Enabled :  YES  NO

PostScript Page Size :

PostScript Page Orientation :

PostScript Page Format :

PostScript Font :

Figure 4. Setting up the Axis Print Server

IPCL command used	
Hex notation	Description
49 49 2A 00	TIFF signature
08 00 00 00	Pointer to first IFD = 8
01 00	1 field
99 86	Field ID (0x8699 = 34457)
02 00	Field type = ASCII
07 00 00 00	# of bytes in command string = 7
1A 00 00 00	Pointer to command stream
00 00 00 00	Indicates this is the last IFD in file
1B 45	<esc> E (IPCL reset command)
1B 26 31 44	<esc> & 1 D (IPCL duplex command)
00	Command string must be zero terminated

Figure 5. IPCL commands used

For more information about the IPCL commands please refer to the [XipPrint II](#) documentation.

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## Scan-to-Print via an LPR/LPD Spooler

As the FTP protocol is used there is no specific error handling. This means that the FTP session can time out if for instance the printer goes offline due to an error like paper out.

An alternative method is to use scan-to-file to a directory on a server that for instance is monitored by an LPR/LPD client. The LPR/LPD client will then control the printing process. An example of a suitable LPR spooler is Windows LPR Spooler (<http://ich210.ich.kfa-juelich.de/wlprspl/index.htm>). Similar clients are available for other computer environments.

1. Set up an FTP service on a server/client and create an FTP directory called spool.
2. Enter a File Name without extension in the AXIS 700 for the used scan-to-file destination. Example: AX700

The screenshot shows a configuration dialog box for the AXIS 700. The fields are as follows:

- Destination Name: Print via LPR Spooler
- Scanning Profile: Text (Can be changed at the moment of scanning.)
- Include Image Information: None
- FTP Server: 172.19.2.177
- User: (empty)
- Password: (empty)
- Confirm: (empty)
- Directory: /spool
- File Name: AX700

Below the File Name field, there are four options, each with a right-pointing arrow and a checkbox:

- Append sequence number to file name
- Start sequence with: (empty dropdown)
- Store sequence number on FTP server
- Append file extension to file name

At the bottom, there are OK and Cancel buttons. A note at the very bottom states: "If left blank, the value specified on the Destination Defaults page will be used."

Figure 6. AXIS 700 setup when performing scan-to-print via an LPR/LPD spooler

3. Enter a queue in the Windows LPR Spooler with the same name (**AX700**) as the file name used in the AXIS 700. Under **Queue Properties** also select **Print Unfiltered**. It is also assumed that an Axis Print Server is used with logical printer **PR7**.

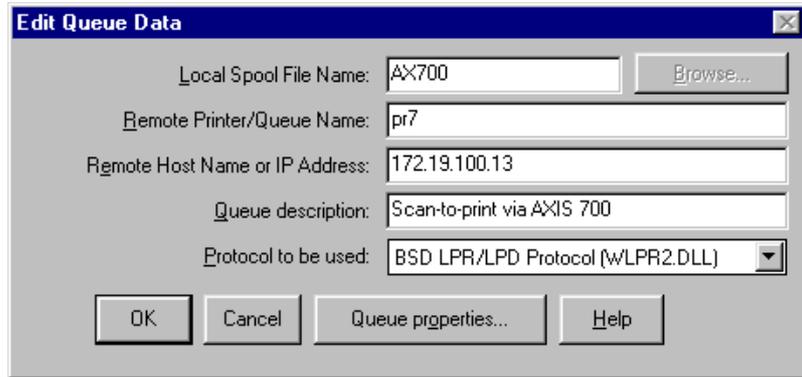


Figure 7. Queue definition for the Windows LPR Spooler

4. Make sure the Windows LPR Spooler's Spool Directory (spool) is the same, as the FTP directory set up for scan-to-file.

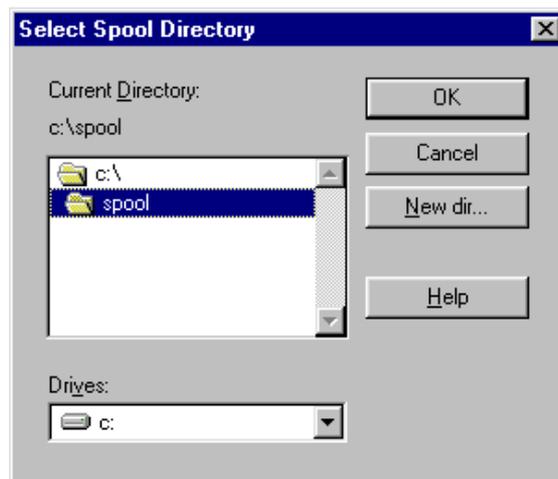


Figure 8. Spool Directory for the Windows LPR Spooler

5. Select a suitable time period for the Windows LPR Spooler to scan your spool directory (Setup/Preferences/Timer Tick). This example uses one second.

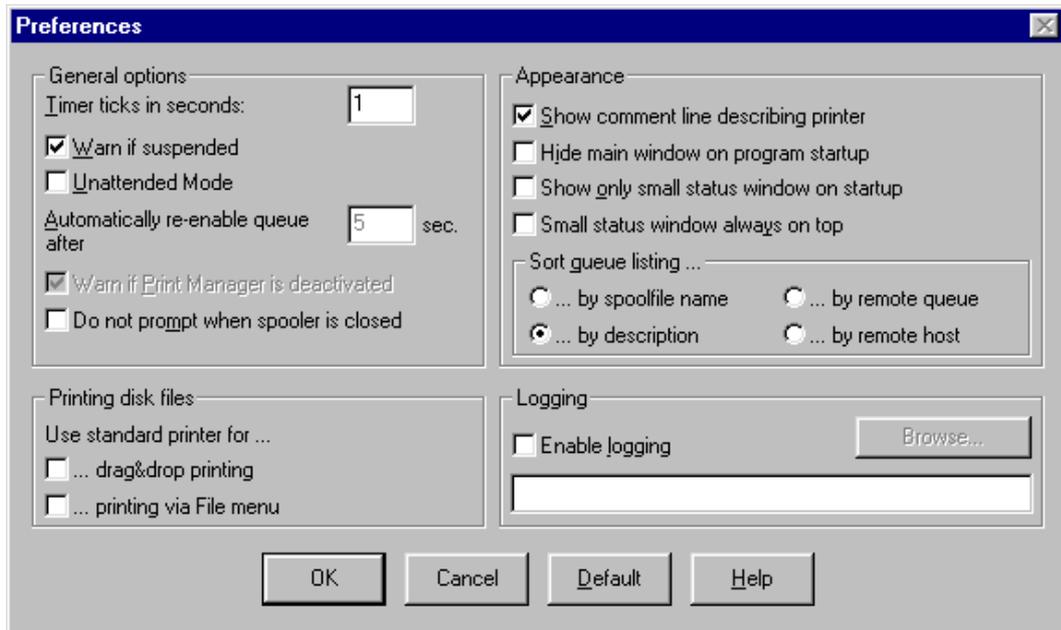


Figure 9. Directory scan time for the Windows LPR Spooler