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PM ETH 10/100

User Manual



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1. Information

This chapter contains information concerning the device and the documentation as well as notes about your safety. You will learn how to benefit from your print server and how to operate the device properly.

1.1 ... About Your Print Server

Print servers are active network components that receive print jobs from connected users or user groups within a network and forward them to printers or other end devices.

Features:

Your SEH print server offers you high performance, high data transfer rates, various management options and comprehensive support of operating systems and protocols.

- ⇒ Highest data rates (depending on print server and printer model)
- ⇒ Installation wizards for all major operating systems
- ⇒ Administration via Browser
- ⇒ Support of many management tools of well-known manufacturers
- ⇒ Automatic printer error notification via email (SMTP) or SNMP Traps
- ⇒ Transparent job history for optimal monitoring

- ⇒ Status and diagnostics information via push button

- ⇒ Comprehensive security options:
 - access protection,
 - encryption,
 - Authentication via certificates etc.
 - Internet Protocol Security (IPsec)
- ⇒ Remote administration via email (POP3):
 - sending of emails to printers,
 - request of service and status information,
 - setting of parameters,
 - Printing of attachments, etc.
- ⇒ Printer panel support (depending on printer model)
- ⇒ Enhanced update functionality: simultaneous update of several print servers
 - automated updates when a new update file is available

- ⇒ Implementation of filters via logical printers
- ⇒ Assignment of IP addresses without DHCP server via IPv6 and ZeroConf
- ⇒ Integrated ThinPrint client for bandwidth-friendly compression of print jobs in SBC environments including decryption of encrypted print data via SSL
- ⇒ Lifetime support

Supported Administration Methods:

- ⇒ InterCon-NetTool for Windows, Linux, and Apple
- ⇒ Installation wizards for NetWare, IP, and Wireless
- ⇒ Windows Printer Wizard
- ⇒ Browser (HTTP, HTTPS, HTML, Bonjour)
- ⇒ SNMP (HP Open View, etc.)
- ⇒ HP Network Printer Installer, Jetadmin, Web Jetadmin
- ⇒ Epson NetTool Direct Print, Internet Print, NDPS Gateway, Web Manager, Status Monitor 2 and 3, WinAssist, MAsAssist
- ⇒ KMNetViewer
- ⇒ FTP/FTPs

Supported Systems:

- ⇒ Windows 95, 98, Me, NT3.x, NT4.x, 2000, XP, Vista, 7
- ⇒ Apple Mac OS 7.x, 8.x, 9.x, 10.x
- ⇒ Novell NetWare 3.x, 4.x, 5.x, 6.x
- ⇒ All UNIX systems, Linux, BS2000, iSeries

Supported Printing Methods:

- ⇒ LPR/LPD Printing, Socket Printing, IPP v1.1
- ⇒ HTTP/HTTPS Printing
- ⇒ AppleTalk Printing
- ⇒ ThinPrint Printing
- ⇒ NetBIOS/SMB Printing

Supported Network Protocols:

- ⇒ TCP/IP
- ⇒ DHCP, BootP, ARP, IPv4, IPv6, IPv6/FTP, IPv6/FTPs, IPv6/TFTP, IPv6/HTTP-HTTPS, IPv6/SSL-TLS, IPv6/Raw TCP, TCP, UDP, ICMP, IGMP, FTP, FTPs, TFTP, LDP, HTTP, HTTPS, ZeroConf, DNS, SLP, SNMPv1, SNTP, SMTP, POP3, SSL/TLS, IPPv1.0, IPPv1.1, Raw TCP,
- ⇒ Apple Bonjour (ZeroConf, mDNS, DNS service discovery, ...) compatible
- ⇒ AppleTalk
- ⇒ AARP, RTMP, ADSP, ATP, NBP, ZIP, ATSP, PAP, DDP, BCP1, BCP2, TBCP
- ⇒ NetWare
- ⇒ IPX, SPX, SPX2, SAP, SNAP, NCP, NCP Burst Mode, NDS, NDPS,
- ⇒ PureIP, RIP, Bindery, R/N Printer
- ⇒ Windows
- ⇒ SMB/CIFS (NetBIOS over TCP/IP) WINS

2. Saving the IP Address in the Print Server

Automatic Methods of IP Address Assignments:

- ⇒ via ZeroConf / Bonjour'
- ⇒ via DHCP'
- ⇒ via BOOTP'
- ⇒ via Auto Configuration (IPv6 Standard)'

Manual Methods of IP Address Assignments:

- ⇒ via the IP Wizard (InterCon-NetTool)'
- ⇒ via ARP/PING'
- ⇒ via Other Methods'

2.1. via ZeroConf / Bonjour

ZeroConf describes the automatic assignment of IP addresses within a network.

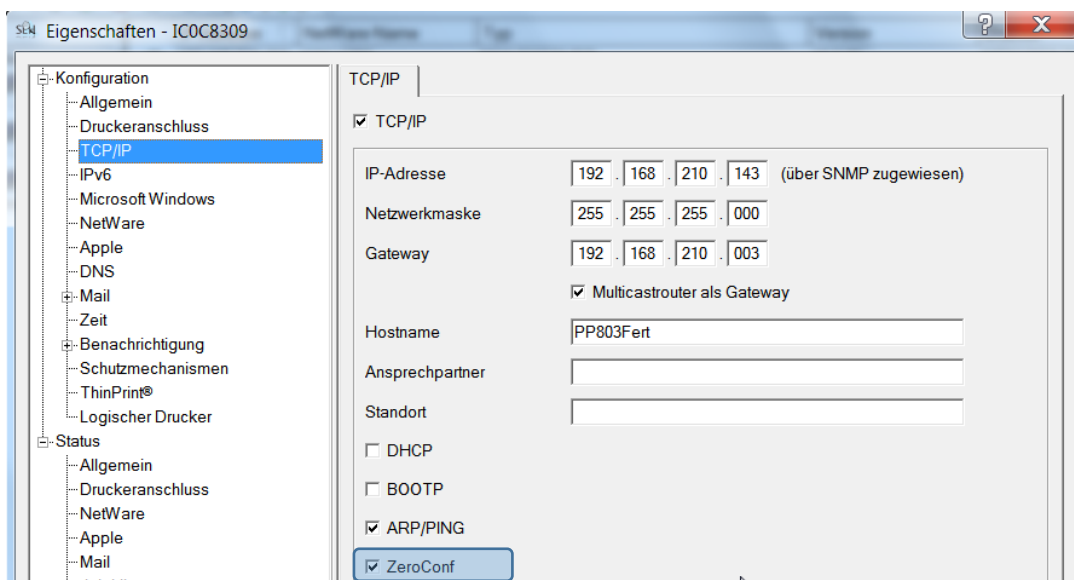
ZeroConf:

What happens when the Print Server is turned on?

If no IP address can be assigned via boot protocols, the print server assigns itself an IP address via ZeroConf. For this purpose, the print server picks an IP address at random from the address range (169.254.0.0/16) which is reserved for ZeroConf and sends a query to the network.

Requirements:

- ⇒ The 'ZeroConf' parameter has been activated



If this IP address has already been assigned elsewhere in the network, the print server will receive a message. The print server then sends another query with a different IP address. If the IP address is available, it is saved in the print server.

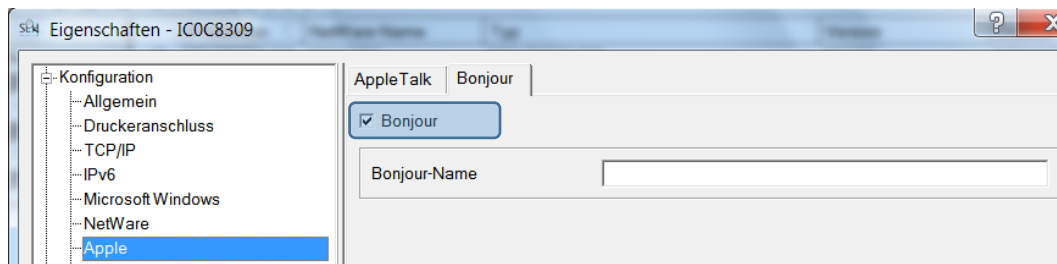
Info: If you wish to use an IP address different from the one assigned via ZeroConf, you can save a freely definable IP address in the print server later on.

Bonjour:

Bonjour allows the automatic recognition of computers, devices, and network services in TCP/IP-based networks.

Requirements:

⇒ The 'Bonjour' parameter has been activated



The domain name service is used for additional Bonjour features in Apple systems. Since there is no central DNS server in Bonjour networks, each device and application has its own small DNS server.

This integrated DNS server (mDNS) collects and administers the information of all participants in the net. In addition to the features of a classical DNS server, the mDNS server also saves the IP address, the service name and the offered services of each participant.

What happens when the Print Server is turned on?

The print server repeats the same procedure (see ZeroConf) for the service name. The service name consists of the default print server name and the name of the connected printer. The print server will then start the printing process and an HTTP service and advertises both services in the network. The print server is now visible in the network and the printing process can begin.

Integration of the Printer Server in Other Networks:

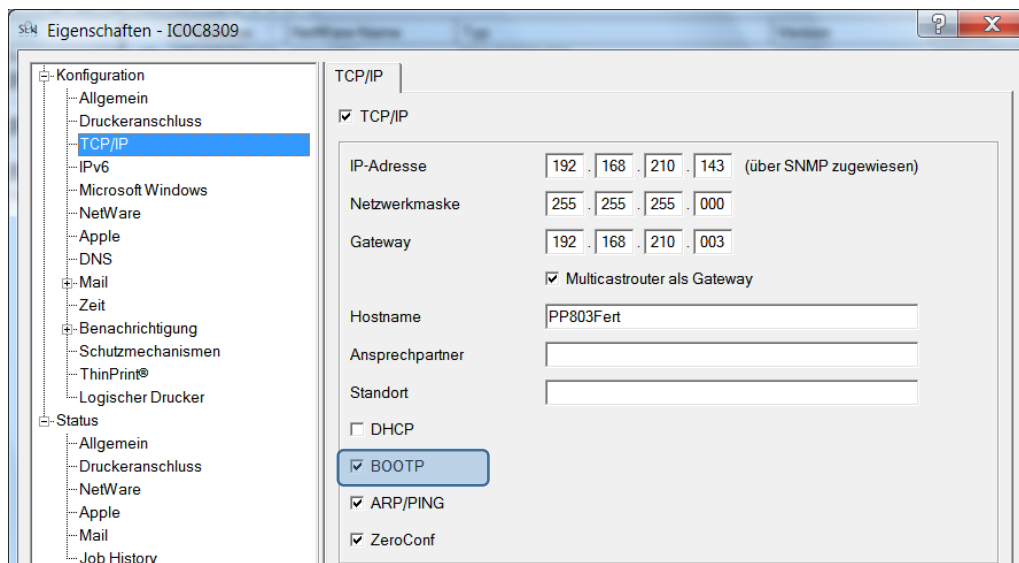
In many cases, the print server is to be integrated into the actual network after the automatic configuration in the 169.254.0.0/16 segment. In Apple systems you can use the Safari browser to call the Print Server Homepage via Bonjour and configure the print server accordingly. In all networks you can do this using the InterCon-NetTool.

2.2. via BOOTP

The print server supports BOOTP, which means that the IP address of the print server can be assigned via a BOOTP server. If the BOOTP boot protocol has been installed in your network, you must edit the '/etc/bootptab' file. This file is located on the host running the BOOTP daemon. The '/etc/bootptab' file contains a permanent copy of the assignment of the host name and the IP address to the hardware address.

Requirements:

⇒ The 'BOOTP' parameter has been activated



What happens when the Print Server is turned on?

Once the print server has been turned on, it asks the BOOTP for the IP address and the host name. The BOOTP host answers and sends a data packet containing the IP address. The IP address is saved in the print server.

What happens when printing?

During the installation of the print server, its host name is displayed on the monitor of the computer intended for printing. The computer finds the IP address of the print server by means of either the local 'etc/hosts' file or the DNS server. The print data can then be sent to this IP address.

2.3. via DHCP

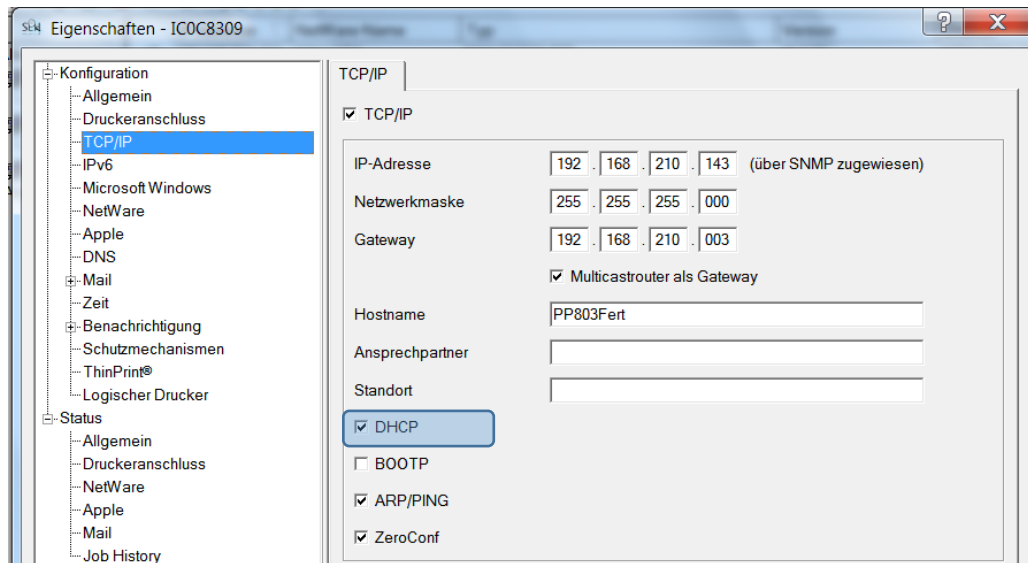
The print server supports DHCP, which means that the IP address of the print server can be assigned dynamically via a DHCP server.

In networks with DHCP servers, the dynamic name registration is done by DNS servers, which can be dynamically configured by the DHCP server. Most systems additionally use a WINS server, which answers name enquires that the DNS server cannot handle.

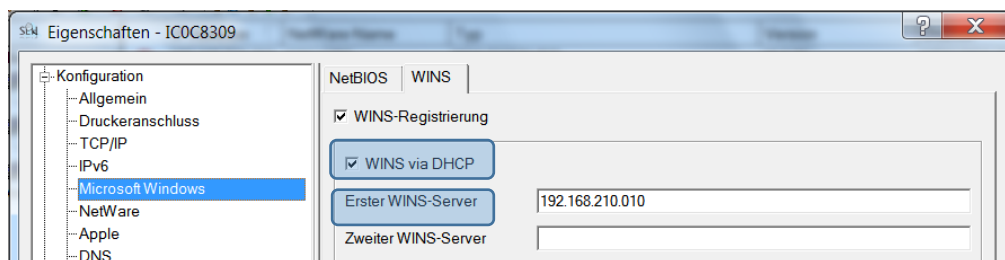
Info: The print server does not support DHCPv6.

Requirements:

- ⇒ The 'DHCP' parameter has been enabled



- ⇒ The parameter 'WINS registration' has been enabled
- ⇒ The parameter 'WINS via DHCP' has been enabled



What happens when the Print Server is turned on?

After the hardware installation, the print server asks a DHCP server for an IP address by means of a broadcast query. The DHCP server identifies the print server on the basis of its hardware address and sends a data packet to the print server.

This data packet contains, among others, the IP address of the print server, the default gateway, and the IP address of the DNS server. The data is saved in the print server.

The print server now transmits a name registration request to the WINS server, along with the IP address and host name assignment. The answer from the WINS server contains the period of validity of the name entry in the WINS database. Once this period has expired, the print server renews its registration with the WINS server so that its IP address and host name remain constantly valid.

What happens when printing?

During the installation of the print server, its host name is displayed on the monitor of the computer intended for printing. In order for you to be able to assign the host name to the IP address, the computer asks the DNS server for the IP address of the print server. If the DNS server cannot answer this request, it forwards the request to the WINS server. Once the computer receives the answer, it sends the print data to the IP address of the print server.

You can also enter the IP address instead of the host name during the print server installation. In this case, you can send print data directly to the IP address. The configuration of a print server on a DHCP server depends on the operating system.

2.4. via Auto Configuration (IPv6 Standard)

The print server can have an IPv4 address and several IPv6 addresses at the same time. The IPv6 standard is used to automatically assign IP addresses in IPv6 networks. When connected to an IPv6 network, the print server will automatically obtain an additional link-local IPv6 address.

What happens when the Print Server is turned on?

The IPv6 standard uses the following mechanism to assign IP addresses automatically. When the print server is started in an IPv6 network, the print server will be addressed via an automatically generated address from the link-local address range (FE8 ...).

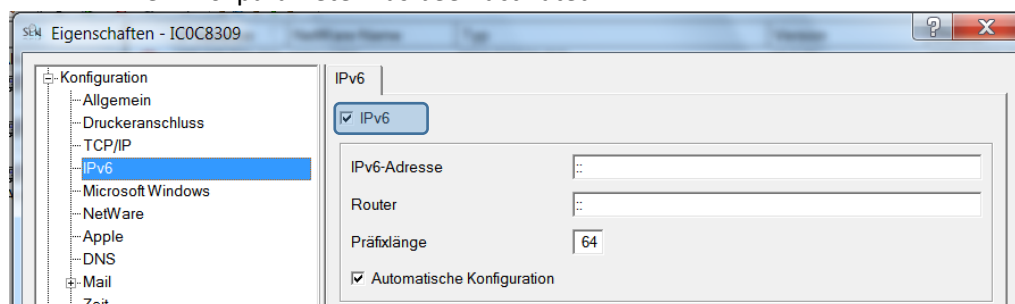
A procedure that uses the MAC address is used to automatically generate IP addresses.

The print server uses the link-local IP address to search for a router. The print server sends so-called 'Router Solicitations' (RS) to the special multicast address FF02::2. The available router will then return a Router Advertisement (RA) containing the required information.

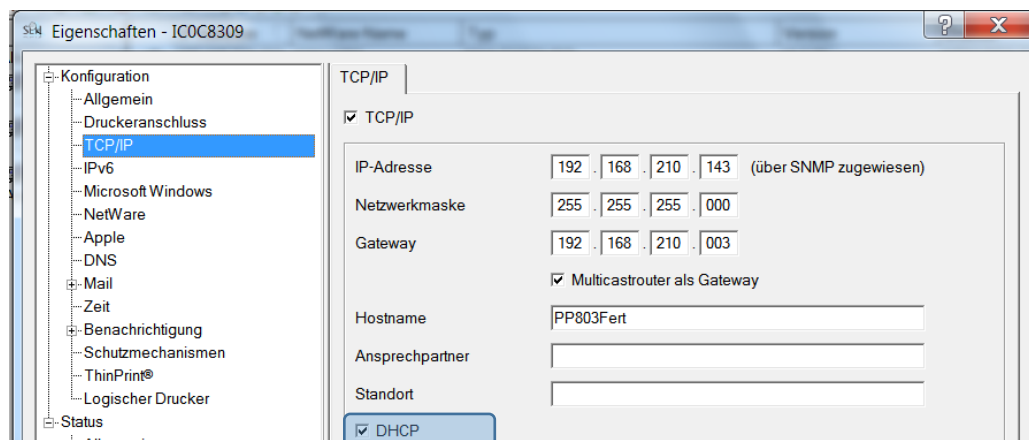
With a prefix from the range of the global unicast addresses, the print server can compose its own address. It simply replaces the first 64 bits (prefix FE80::) with the prefix that was sent in the RA.

Requirements:

⇒ The 'IPv6' parameter has been activated



⇒ The 'Automatic configuration' parameter has been activated.



2.5. via the IP Wizard (InterCon-NetTool)

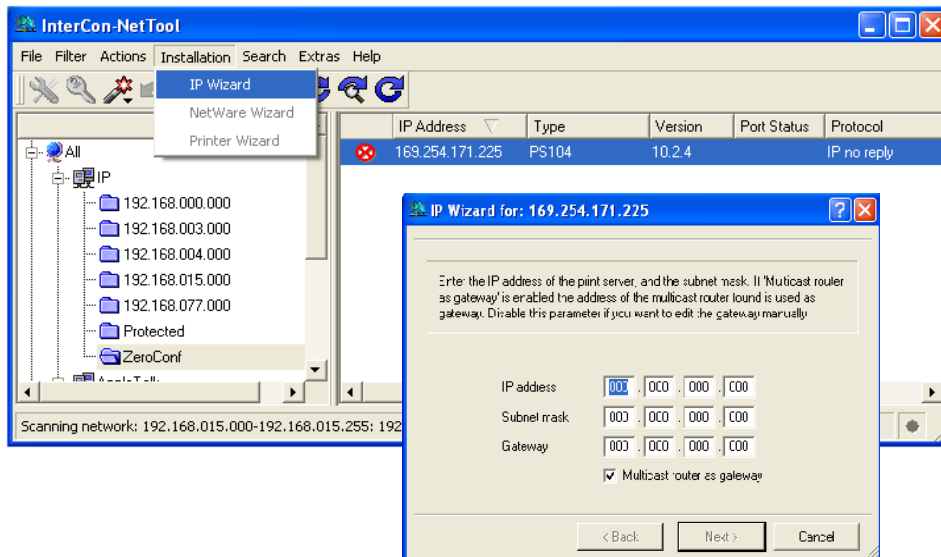
The IP Wizard of the InterCon-NetTool helps you to configure the TCP/IP parameters, e.g. the IP address. You can easily enter the desired IP address and save it in the print server using the IP Wizard.

Requirements:

- ⇒ The InterCon-NetTool is installed on the client. From CD or Link to: http://media.psi-matrixdrucker.de/1115-PRINTSERVER-NetTool-1_8_49.exe
- ⇒ The network scan via Multicast has been enabled in the InterCon-NetTool
- ⇒ The router in the network forwards multicast requests

Proceed as follows:

1. Start the InterCon-NetTool.
2. Select the print server from the print server list by right mouse click.
The print server is displayed in the print server list under 'ZeroConf' with an IP address from the address range (169.254.0.0/16) which is reserved for ZeroConf.
3. The IP Wizard is started.
4. Follow the instructions of the Wizard.



2.6. via ARP/PING

ARP Table:

The assignment of the IP address to the hardware address can be done via the ARP table. The ARP table is an internal system file in which the assignment is temporarily saved (about 15 min). This table is administered by the ARP protocol.

By means of the 'arp' and 'ping' commands, you can save the IP address in the print server. If the print server already has an IP address, the 'arp' and 'ping' commands cannot be used to save a new IP address.

However, an IP address from the address range (169.254.0.0/16) which is reserved for ZeroConf can be overwritten by means of the 'arp' and 'ping' commands.

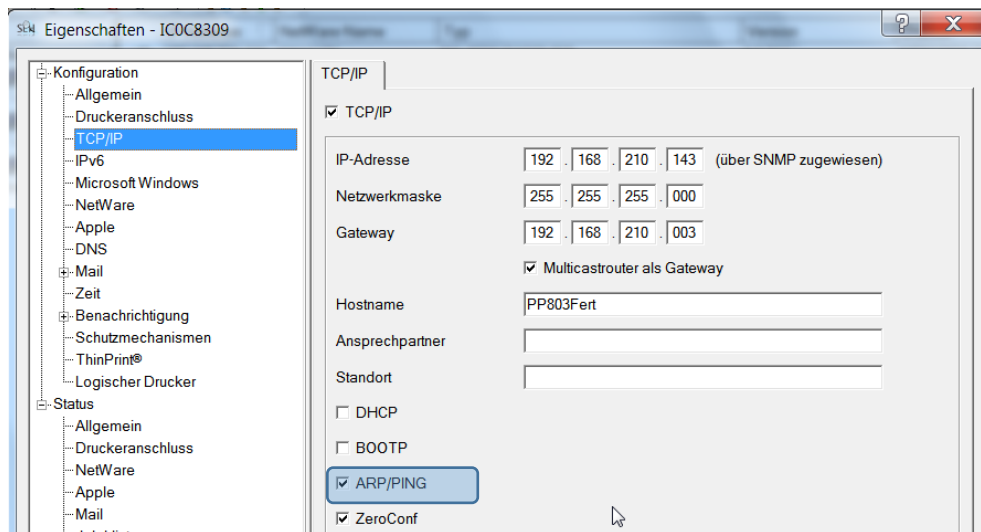
Info: Use the 'arp' and 'ping' commands to save the IP address if your network has no superordinate management of IP addresses (e.g. DHCP, BOOTP).

The 'arp' command is used for editing the ARP table. The 'ping' command transfers a data packet containing the IP address to the hardware address of the print server. If the data packet has been successfully sent and received, the print server permanently saves the IP address.

The implementation of the 'arp' and 'ping' command depends on the system used. Read the documentation for your operating system.

Requirements:

- ⇒ The 'ARP/PING' parameter has been enabled.



Edit the ARP table:

Syntax: arp -s <IP address><hardware address>

Example: arp -s 192.168.0.123 00-c0-eb-00-01-ff

Assign a new IP address to the print server:

Syntax: ping <IP address>

Example: ping 192.168.0.123

3. Print Server Administration

You can administer and configure the print server in a number of ways. The following chapter gives you an overview of the various administration options

- ⇒ via the Print Server Homepage
- ⇒ via the InterCon-NetTool
- ⇒ via the FTP/FTPS Connection

3.1 via the Print Server Homepage

The Print Server Homepage supports all features for the administration of the print server.

The Print Server Homepage is stored in your print server and can be started by means of an Internet browser (Internet Explorer, Opera, Firefox, Safari, ect.). When using other browsers, the full functionality of the Print Server Homepage cannot be guaranteed.

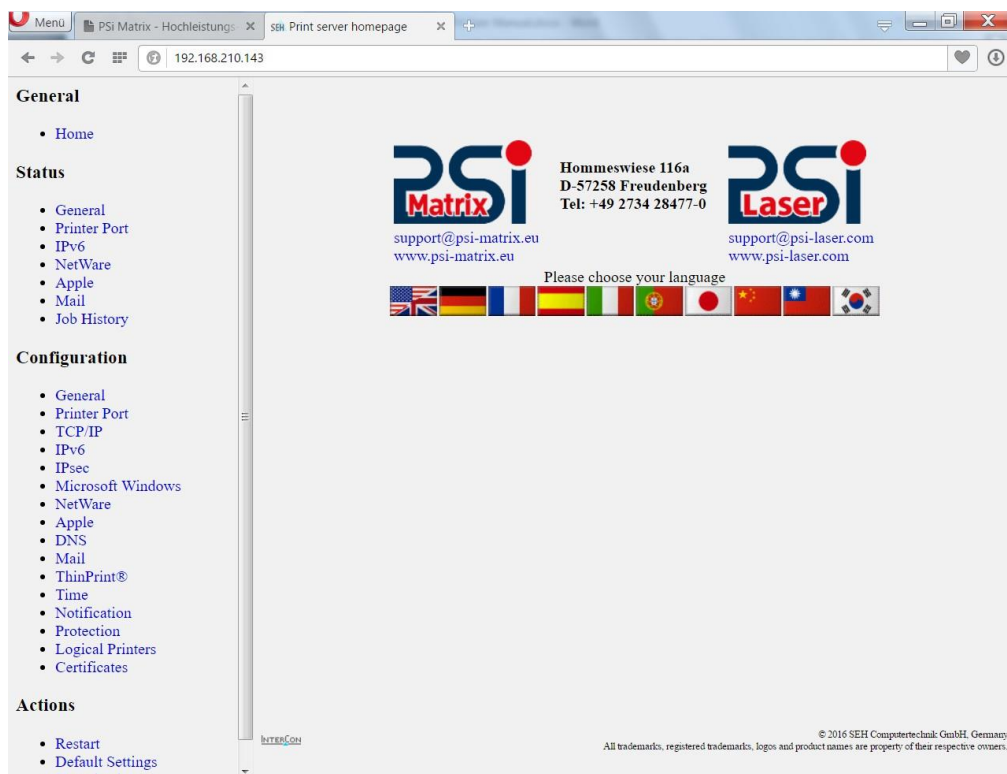
Requirements:

- ⇒ The print server is connected to the network and the printer.
- ⇒ The print server is known to the network via its IP address

Proceed as follows:

1. Open your browser.
2. Enter the IP address of the print server as the URL.

The Print Server Homepage - Home appears.



Structure of the Print Server Homepage:

The available menu items are located in the navigation bar (left hand). After selecting a menu item (simple mouse click), the corresponding page with its content is displayed.

You can set the language of the Print Server Homepage via General–Home. Simply select the relevant flag. You will also see contact information of the manufacturer.

Clicking the General - Manuals link brings you to the SEH web site. Here, you can download the latest manuals as pdf files.

All other menu items refer to the configuration of the print server and are described in this manual

3.2 via the InterCon-NetTool

The software InterCon-NetTool has been developed by SEH Computertechnik GmbH for the administration of SEH network devices (print server, TPG, ISD, etc.). Depending on the network device, you can configure various features via the InterCon-NetTool.

The InterCon-NetTool has been designed for use in Windows, Mac OS X, and Linux networks. The software is installed on all clients that are meant to access a network device in the network.

Basic Function:

After the InterCon-NetTool is started, the network will be scanned for connected network devices. The network range to be scanned is freely definable. All network devices found will be displayed in the 'print server list'.

You can modify the print server list and adopt it to your individual needs. You can mark and configure the devices in the print server list.

Installation and Program Start:

In order to use the InterCon-NetTool, the program must be installed on a computer with Windows, Linux, or Mac OS X operating system. Different installation files are available, depending on the operating system. You will find the InterCon-NetTool installation files on the Psi Product CD or on the Internet at:

http://media.psi-matrixdrucker.de/1115-PRINTSERVER-NetTool-1_8_49.exe

Windows

The installation file is available as '*.exe' for Windows systems.

Proceed as follows:

1. Start the InterCon-NetTool installation file.
2. Select the desired language.
3. Follow the installation routine.

The InterCon-NetTool is installed on the system.

To start the program, double-click the InterCon-NetTool icon. The icon is found on the desktop and the Windows start menu.

(Start --> Programs --> SEH Computertechnik GmbH --> InterCon-NetTool)

The program settings are saved in the 'InterCon-NetTool.ini' file. The file is stored in the directory 'Documents and Settings' with the relevant user name. (Only for multi-user operating systems)

Mac OSX

The installation file is available as '*.dmg' for Mac systems.

Proceed as follows:

1. Open the InterCon-NetTool installation file.
2. The content of the file will appear on the screen.
3. Start the '*.pkg' file.
4. Follow the installation routine.

The InterCon-NetTool is installed on the system.

To start the program; double-click the 'Intercon-NetTool.app' file.

The program settings are saved in the 'InterCon-NetTool.ini' file. This file can be found in the directory /Users/<NAME>/Library/Preferences/InterCon-NetTool.

Linux

Linux commonly offers software programs as packages. The InterCon-NetTool software packet for Linux is made available as '*.rpm' file. The '*.rpm' file can be unpacked and installed using the RPM Package Manager. The RPM Package Manager is a system that is used for package management. It can be used in many Linux and UNIX distributions.

Info: If no suitable Package Manager is available, you can obtain '*.tgz' or '*.deb' installation files upon request from SEH Computertechnik GmbH.

The installation of the files depends on the distribution. '*.tgz' files can be extracted directly without the Package Manager in the root directory. '*.deb' files can be extracted using the Debian Package Manager.
Installation of the '*.rpm' Software Packet

Proceed as follows:

1. Log on to your system as 'root'.
2. Enter the following command via the console:

Syntax:

```
root# rpm -i <complete packet name>
```

Example:

```
root# rpm -i InterCon-NetTool-1_8-28.i386.rpm
```

The InterCon-NetTool is installed on the system.

All packages contain the following directory structure. The files will be installed in the specified directories on the system.

```
./  
./usr/  
./usr/local/  
./usr/local/bin/  
./usr/local/bin/NetTool
```

```
./usr/local/lib/  
./usr/local/lib/NetTool/  
./usr/local/lib/NetTool/tcpmon.ini  
./usr/local/lib/NetTool/lang_cn.qm  
./usr/local/lib/NetTool/lang_de.qm  
./usr/local/lib/NetTool/lang_es.qm  
./usr/local/lib/NetTool/lang_fr.qm  
./usr/local/lib/NetTool/lang_it.qm  
./usr/local/lib/NetTool/lang_jp.qm  
./usr/local/lib/NetTool/lang_kr.qm  
./usr/local/lib/NetTool/lang_pt.qm  
./usr/local/lib/NetTool/lang_zh.qm  
./usr/local/lib/NetTool/InterCon-NetTool.png  
./usr/local/lib/NetTool/license.txt  
./usr/local/lib/NetTool/lang_wt_de.qm  
./usr/local/lib/NetTool/lang_wt_es.qm  
./usr/local/lib/NetTool/lang_wt_fr.qm  
./usr/local/lib/NetTool/lang_wt_it.qm  
./usr/local/lib/NetTool/lang_wt_pt.qm
```

Before you start the InterCon-NetTool make sure that the '*.qm' language files, the license file 'license.txt' and the 'tcpmon.ini' file are in the '/usr/local/lib/NetTool' directory.

Proceed as follows:

1. Enter the following command via the console: Syntax:
User\$ /<complete path name and program name>

Example:

```
User$ /usr/local/bin/NetTool
```

The InterCon-NetTool is started.

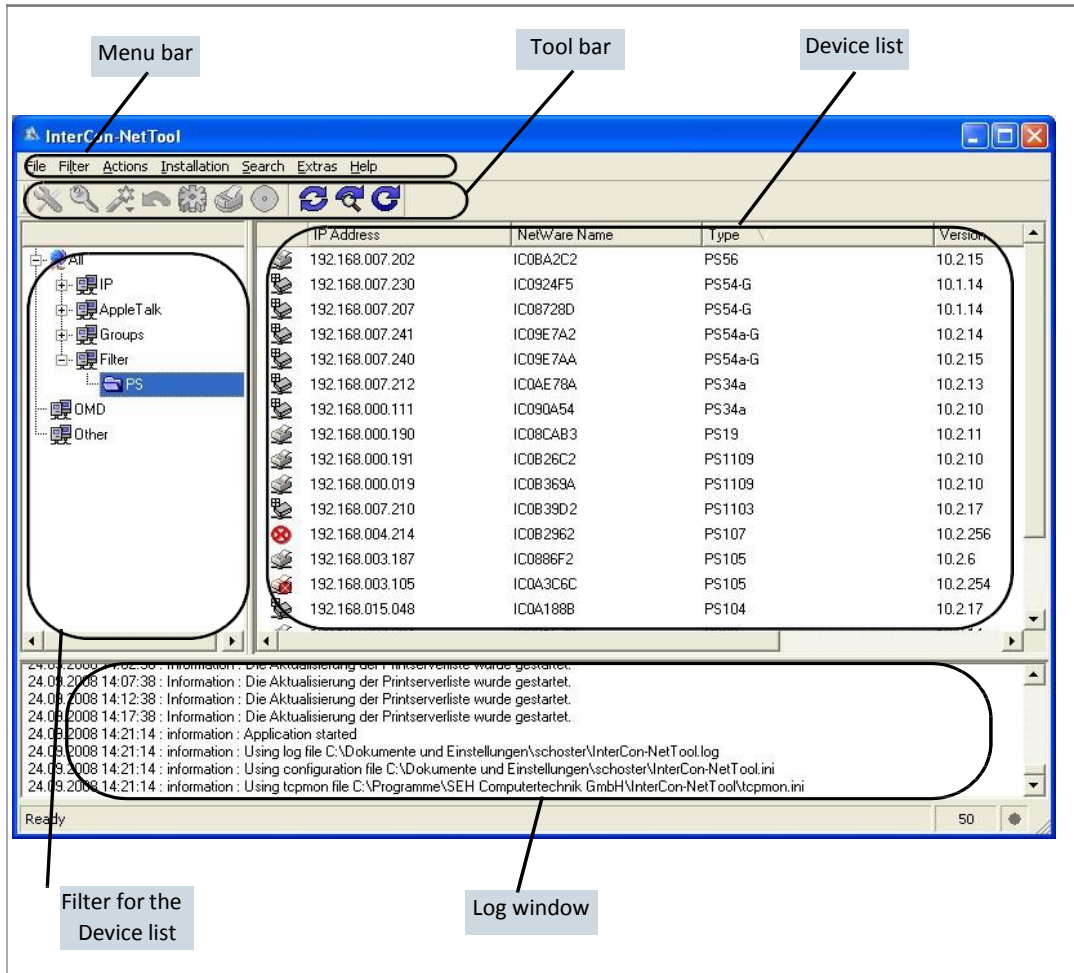
If the path '/usr/local/bin' is part of the environmental variable PATH, the InterCon-NetTool can be started by entering the program name 'NetTool'.

When the InterCon-NetTool is started for the first time, a licensing agreement will appear. Accept the licensing agreement if you wish to use the program.

The program settings are saved in the user's home directory in the '.NetTool' file











3.2.1 Structure of the InterCon-NetTool

After the program start, you will see the main dialog with the following elements. The dialog may vary, depending on which elements you have chosen to be shown or hidden.



The functions of the program elements will be described in the following. Detailed information on how to use the program can be found in the InterCon-NetTool Online Help.

3.2.2 Toolbar:

Icon	Name	Description
	Properties	This opens the 'Properties' dialog.*
	Change password	This opens the 'Change password' dialog.*
	Installation	Starts a Wizard. A wizard helps you to configure certain parameters.
	Restart	This opens the 'Restart' dialog.*
	Default settings	Opens the 'Load default settings' dialog.*
	Print status page	This opens the 'Print status page' dialog.*
	Firmware Update	This opens the 'Firmware Update' dialog.*
	Refresh	Refreshes the print server list.
	Find New	Adds newly connected network devices to the print server list.
	Rebuild	Creates a new print server list.

*The button is active if a device was marked in the list.

Print Server List:

All connected devices are shown in a list in the right-hand section of the main dialog of the InterCon-NetTool. This section is referred to as the print server list.

Icons indicate the status or the kind of network device. Devices that are not available in the network appear dimmed.

The print server list is divided into columns that contain information about the device, the version, etc. You can adapt the information according to your needs. Select Extras – Columns from the menu bar.

You can select various filters in the left-hand section of the main dialog. Filters determine which network devices are shown in the print server list. The filters can be created and configured via the Filter menu.

You can modify the status of the print server list by

- adding network devices
- creating a new list or
- refreshing the list

Select the relevant command in the Search menu.

By activating an automatic refresh, the print server list will be refreshed automatically in a fixed time interval. Select Extras – Settings from the menu bar (category: Auto Refresh).

You can save the print server list as a file. The file ending is '*.lst'. This allows you to preserve a certain status and to restore it promptly. Select File – Save as or Open from the menu bar.

3.2.3 Search Parameters for the Network Scan:

The InterCon-NetTool searches the network for existing print servers and displays them in the print server list. The following search options can be selected for the network scan:

- Searching via the IPX protocol (Novell NetWare)
- Searching via multicast requests (TCP/IP)
- Searching within defined IP ranges (TCP/IP)

In IPX based networks, the devices should be searched for via IPX. SAP search has to be enabled for Novell NetWare 4.x and later (NDS). Bindery search has to be enabled for Novell NetWare 3.x networks.

The default setting is multicast search in local networks. Searching via multicast requests beyond subnetworks is only possible if the routers in the network can handle multicast requests. In networks without multicast support, you can search for network devices within defined IP ranges.

To define the search parameters, select Extras ⇨ Settings from the menu bar (category: Search Options).

Logging Functions:

Logging means that actions carried out by the user or the InterCon-NetTool will be registered automatically and saved in a log file.

The logging functions can either be shown or hidden. Select Extras ⇨ Settings from the menu bar (category: Logging Options).

The contents of the log file can be displayed in a log window. To hide or show the log window, select Extras ⇨ Show Log File from the menu bar. If logging is disabled, the log window will not be displayed.

You can define the log file name, the log directory, and the maximum size of the log file. Select Extras – Settings from the menu bar (category: Logging Options)

3.2.4 Configuring Print Server Parameters:

The InterCon-NetTool offers three methods to configure the parameters of SEH network devices.

Configuration via the 'Properties' Dialog:

Many SEH network devices offer the 'Properties' dialog where you can display and edit the individual configuration parameters of the device. Double-click the print server in the print server list to start the dialog.

Configuration via Wizards:

Wizards in the InterCon-NetTool facilitate the installation and configuration of network devices. Wizards are subprograms aimed at querying required parameter values.

Depending on the print server model and network, you can choose from the following wizards

IP Wizard	The IP Wizard helps you to configure the TCP/IP parameters, e.g. the IP address. You can choose between the manual configuration and the automatic configuration via boot protocols. The IP Wizard is not available for WLAN print servers.
NetWare Wizard	The NetWare Wizard helps you to install the print server in the print server mode in NDS and Bindery networks. In a single step, you can install a print server, a printer, and a print queue. The NetWare Wizard is not available in IP-based networks (Pure IP).
Wireless Wizard	The Wireless Wizard helps you to install WLAN print servers. The Wireless Wizard helps you to configure TCP/IP and WLAN parameters and the details about encryption and authentication. The Wireless Wizard is only available for WLAN print servers.
SEH Printer Wizard	The SEH Printer Wizard is available for installing the print server in Windows networks. This SEH Printer Wizard helps you to install a print server connected to a printer.

Mark the print server in the print server list and start the required wizard via the Installation menu.

Configuration via the 'Actions' Menu:

Depending on the network device, you can use the Actions menu for individual operations (such as an Update). Select the relevant command from the Actions menu

3.3 via the FTP/FTPS Connection

FTP:

The File Transfer Protocol (FTP) allows the exchange of data between the print server and an FTP client in TCP/IP networks.

FTP over SSL:

The print server also supports FTPS (FTP over SSL) for a safe data interchange between the print server and the client. FTPS is an encrypted procedure for file transfers. The encryption of the control channel and the data channel is done via the SSL or TLS authentication.

We recommend using SSL. This way, no unencrypted user names, passwords, and data can be read by unauthorized persons. In order to use FTPS, you must install an FTP client on your computer that supports FTPS

Functionalities:

An FTP/FTPS connection allows the following:

- ⇒ Printing a Status Page
- ⇒ Printing a Service Page
- ⇒ Configuring Print Server Parameters
- ⇒ Resetting Print Server Parameters
- ⇒ Querying the Printer Status
- ⇒ Performing Updates

Requirements:

- ⇒ The 'TCP/IP' parameter has been activated

3.2.5 Configuring Parameters via an FTP Connection

You can configure all print server parameters via FTP. To this purpose, you must download the 'parameters' file to your local computer via FTP and then edit it. For additional information

Proceed as follows:

1. Change to the directory in which you wish to save the file
2. Open an FTP connection to the print server:
Syntax: ftp <IP Address> Example: `ftp 192.168.0.123`
3. Enter an arbitrary user name. Example: `PSi`
4. Enter the print server password or press ENTER if no password has been assigned.
5. Transfer the 'parameters' file from the print server to your local computer:
6. `get parameters`
7. Edit the file using a text editor. The syntax and values can be obtained from the parameter list
8. Send the file back to the print server:
9. `put parameters`
10. Close the FTP connection:
11. `quit`

The print server will be configured using the new values.

4. Print Server Installation

Depending on the selected printing method, the print server can be integrated into various systems and networks. This chapter presents various printing methods and describes several installation procedures. You will also be given more information about additional installation procedures.

Depending on your printing requirements and your network environment, there are various installation methods.

SEH Computertechnik GmbH describes a variety of installation methods and makes them available

- in this document and the system-specific installation instructions

Installation Methods:

System	Printing Method	Information Reference
Windows (95/98/Me/NT 4.x /2000/XP/Vista/7/8/10)	Socket Printing	see: 'Installation in Windows Systems'
Apple Mac OS X	LPD Printing IPP Printing	see: 'Installation in Mac OS X
Linux (KDE, CUPS)	Socket Printing IPP Printing	see: 'Installation in Linux Systems'
Linux (SuSE)	LPD Printing	see: 'Installation in Linux Systems'

Windows

Print Server Installation in Windows (Socket Printing)

Mac

Print Server Installation in Mac OS X (LPD Printing)

Print Server Installation in Mac OS X (IPP Printing)

LINUX

Installing the Print Server in SuSE via YaST (LPD Printing)

Installing the Print Server in KDE via the KDE Control Center (Socket Printing)

Installing the Print Server via CUPS (Socket Printing)

Installing the Print Server via CUPS (IPP Printing)

ThinPrint®

Using the Print Server to print compressed ThinPrint Data

IPv6

Installing the Print Server in IPv6 Networks (LPD Printing)

4.1 Installation in Windows Systems

Depending on the selected printing method, the print server can be imbedded into Windows systems. This section presents various printing methods and describes several installation procedures

- The **LPD protocol** is used for printing in Windows NT 4.0 and NT systems. The LPD protocol is a special protocol used for print data. During LPD printing the server sends the print data to the IP address of the print server by means of the LPR port. The print server receives the print data and routes it to the printer.
- In **Peer-to-Peer networks**, all clients have the same rights and can share their resources with other computers. The print server acts as network connection for a printer, which is independent of a client. The print data is transferred from the individual client to the network. The print server receives the print data and routes it to the printer. Peer-to-Peer printing via NetBIOS is supported by all Windows systems.
- The **Internet Printing Protocol (IPP)** provides printing services via a network. In a client/server system, such as Windows 7/Vista/XP/2000, the client sends a query to the print server. After transmission of the print data, the data is printed.
- During **socket printing**, the print server acts as network connection for a printer, which is independent of a client. Printing is carried out by means of direct TCP/IP ports. The ports are installed with the aid of the SEH Print Monitor. The print data is transferred from the individual client to the network using the SEH Print Monitor. The print server receives the print data and routes it to the printer.

Overview of Installation Procedures:

Operating System	Socket Printing (via TCP/IP Ports)	LPD Printing	IPP Printing	Peer-to-Peer (via NetBIOS)
Windows 10	**	***	*	*
Windows 8	**	***	*	*
Windows 7	**	***	*	*
Windows Vista	**	***	*	*
Windows XP	**	***	*	*
Windows 2000	**	***	*	*
Windows NT 4.0	*	*	***	*
Windows NT 3.51	***	*	***	*
Windows Me	*	***	***	*
Windows 98	*	***	***	*
Windows 95	*	***	***	*

- * Information about the installation procedure can be found in the Installation Manual 'Installation in Windows Systems'. The document is available at www.seh.de.
- ** Information about the installation procedure can be found in the print server documentation. (This document)
- *** Information about the installation procedure can be obtained from the SEH support team

This document describes the print server installation for socket printing in Windows 10/8/7/Vista/XP/2000. The printing of unencrypted and encrypted print data is supported

Requirements:

- ⇒ The print server is connected to the network and the printer.
- ⇒ The print server and the printer are turned on.
- ⇒ The print server is known to the network via its IP address.
- ⇒ The TCP/IP protocol is installed on every client intended for printing.

Procedure:

Follow the instructions if you want to prepare the print server for socket printing in Windows systems.

- ⇒ Installing the Printer Driver
- ⇒ Adding the Printer Port
- ⇒ Configuring the Printer Port

4.2 Windows printer driver

Introduction:

This part of the documentation describes the features of the printer driver for the models PP 40X and PP 80X Family, hereinafter also referred to as PP 80X.

The printer driver is available for Microsoft Windows NT2000 WIN 7/8/10/XP Vista WIN7 SERVER 2003-2012. It allows the printer variants from all Windows applications to print in graphics mode both as text. Here, all printer features such as the video resolution, paper management, printer fonts, macro switch, etc. provided by the driver. It includes the models PP 80X in the languages English and German.

The printer driver is installed under Control Panel -> Printers Microsoft Windows. A detailed description can be found in the respective user manual for Windows. Short Description Printer drivers

General:

The following list describes the features supported by the printer driver. The base is the driver, the Epson LQ emulation and the ISO 8859-15 character table. For additional features, such as the selection of fonts, shaft selection, cutting instructions, page lengths are used PSi own commands. The printer driver is therefore not to use original EPSON printers or compatible printers

Info: In order to install the Printer Driver on Windows Systems which do not allowed install an unsigned Driver please do the following Steps:

For Windows 8x

http://media.psi-matrixdrucker.de/1130-Install_an_unsigned_driver_on_Windows_8.pdf

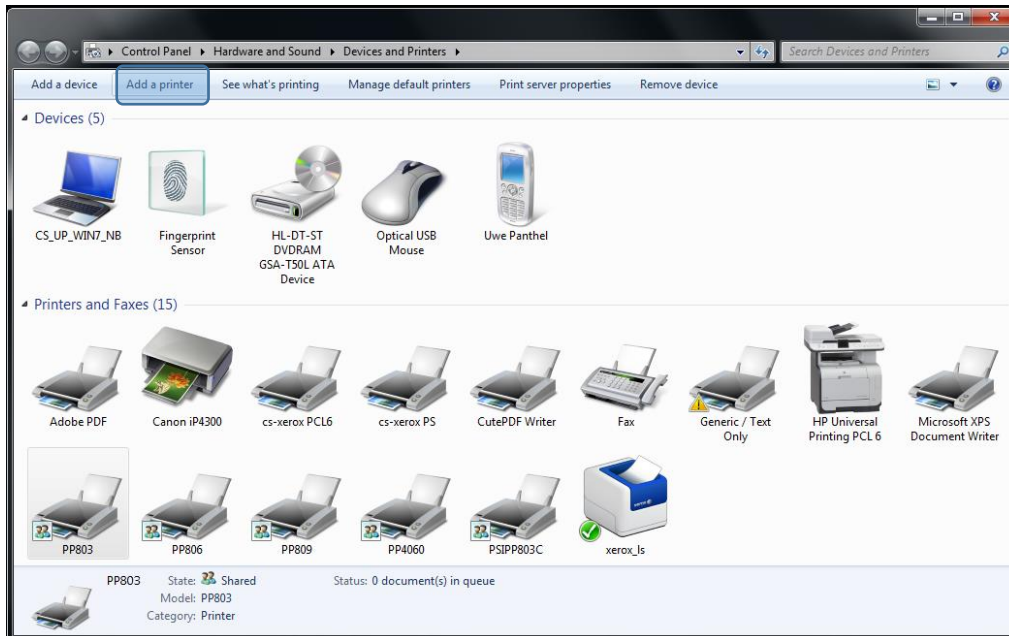
For Windows Server 2012

http://media.psi-matrixdrucker.de/1135-Install_an_unsigned_driver_on_Windows_2012.pdf

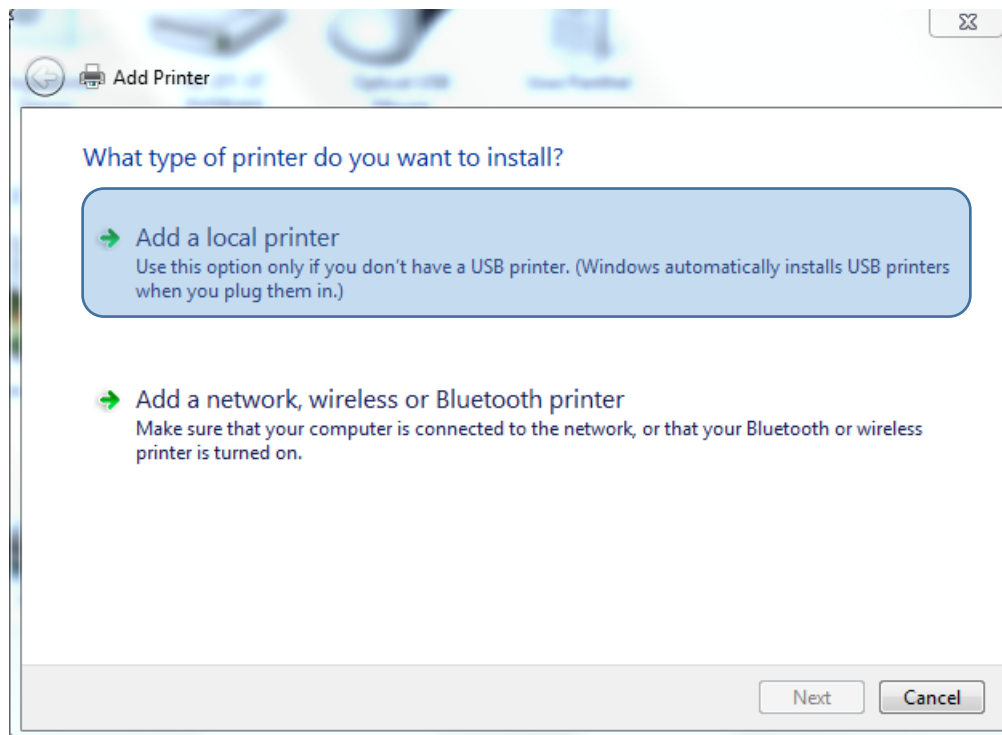
Driver Installation

Open Control Panel\Hardware and Sound\Devices and Printers

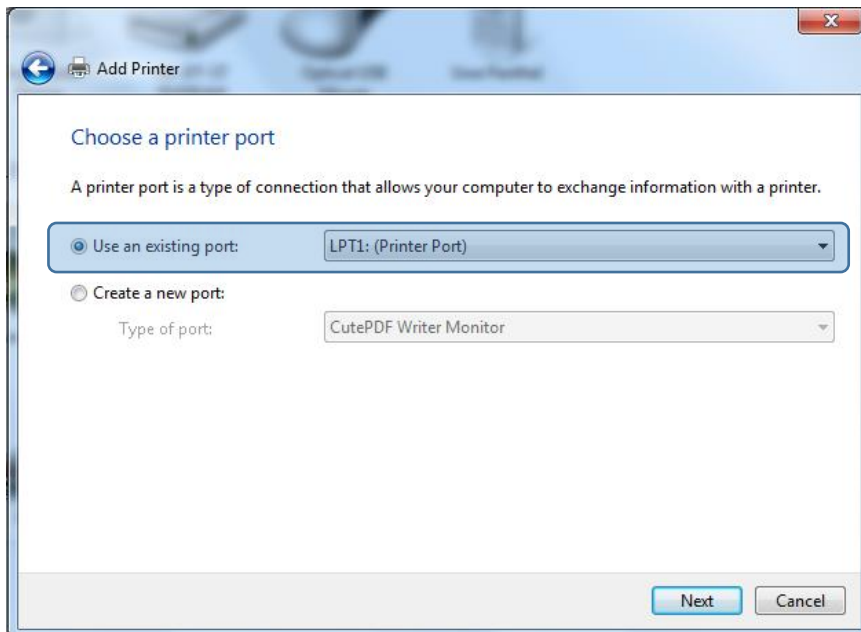
⇒ Add a printer



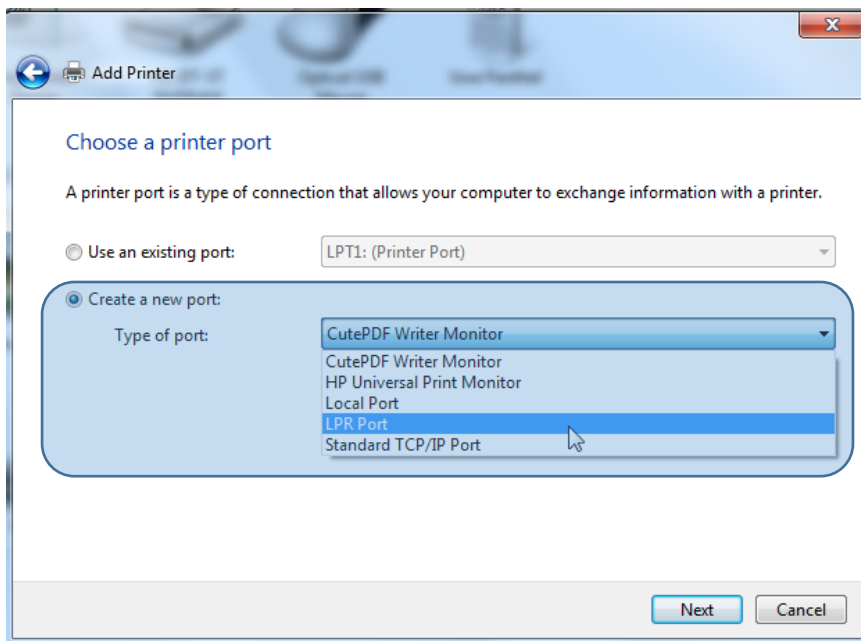
⇒ Add a local printer -> next



⇒ Choose a printer port - > next



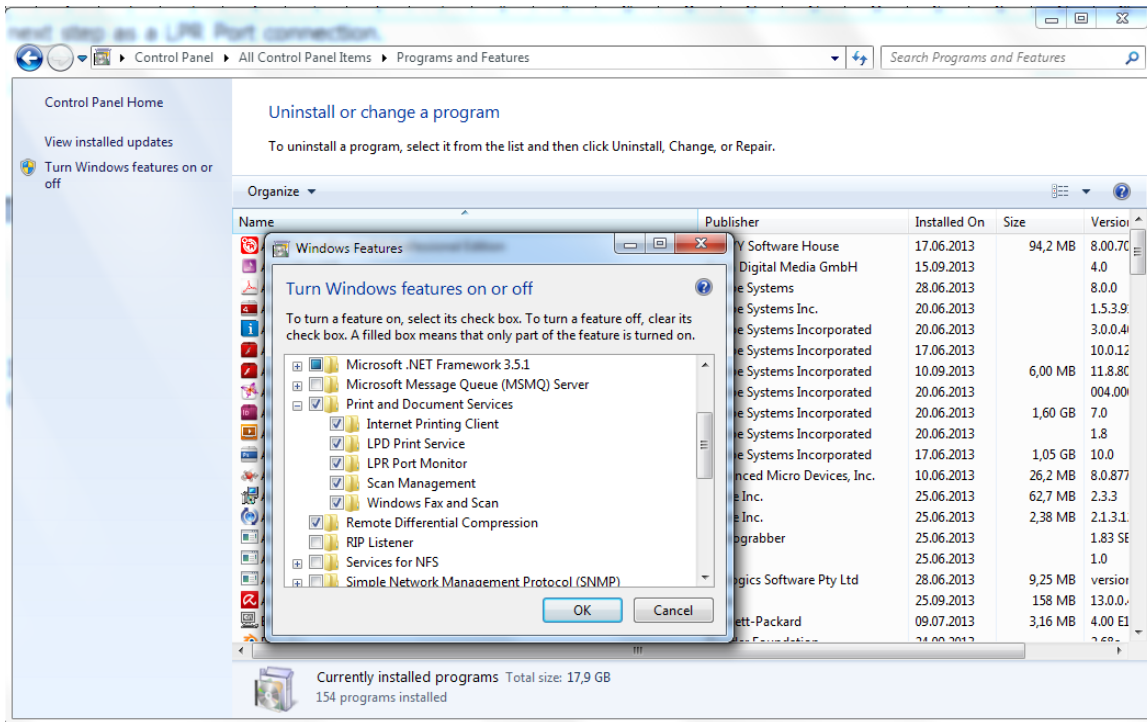
⇒ If necessary, create a new port



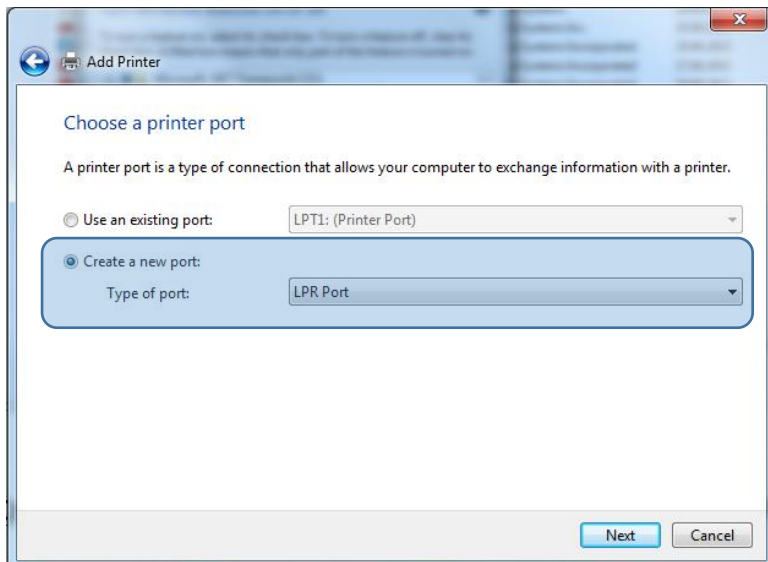
LPR PORT

It may well be that „LPR Port,, is not available, because the choices depend on already installed protocols.

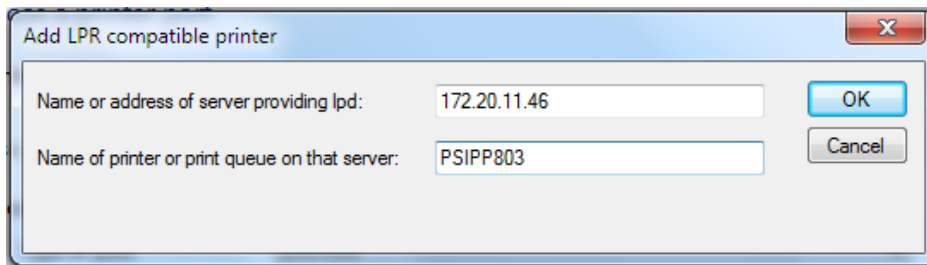
- ⇒ If LPR Port is not available here, this feature of Windows must be installed separately. This is done via Control Panel\All Control Panel Items\Programs and Features:
- ⇒ Turn windows features on or off -> LPR Port Monitor



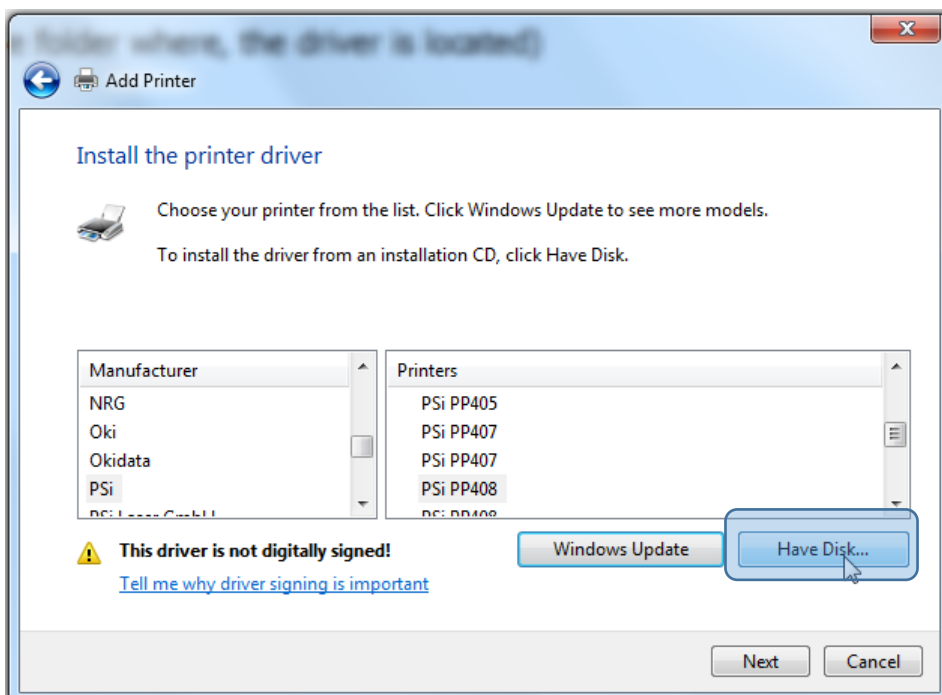
- ⇒ Installed "Create a new port", click Next and select in the next step as a LPR Port connection.



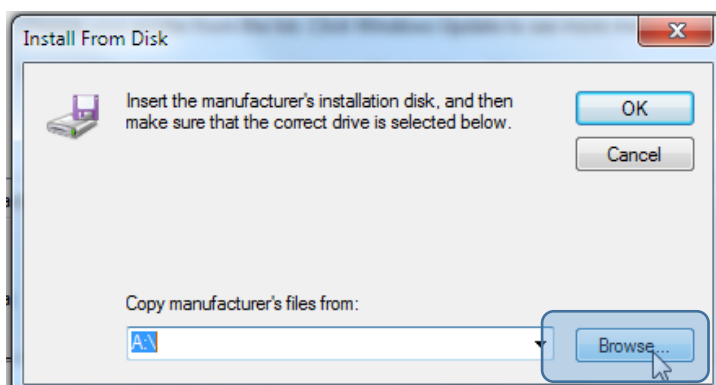
- ⇒ Enter the print server name or IP address 172.20.11.46 and the required queue, in this Example PSIPP803. Confirm with OK. So that you come back to the main menu of the printer installation



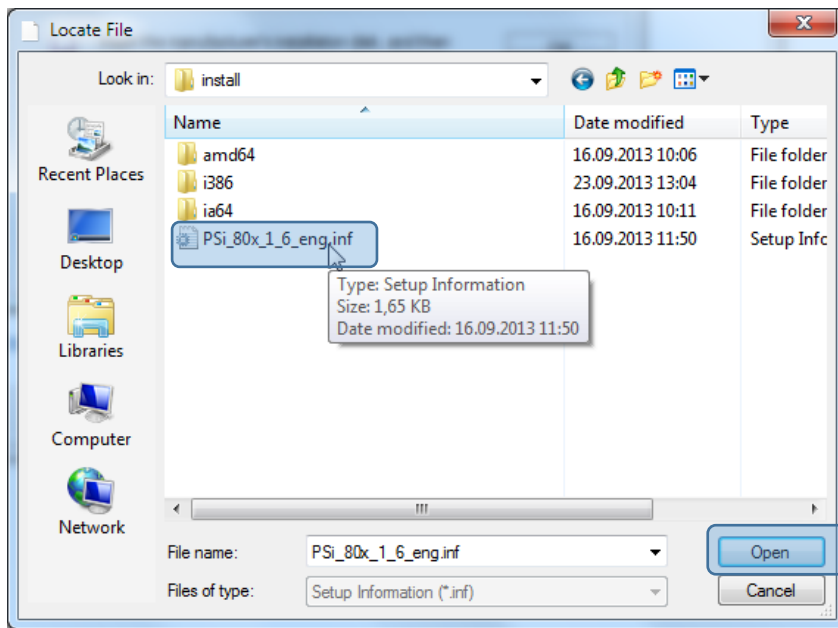
- ⇒ Select disk (file folder where, the downloaded driver is located)



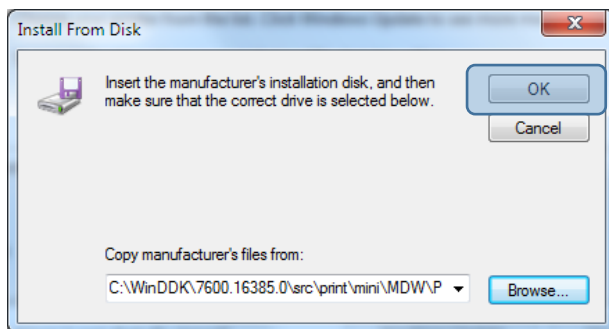
- ⇒ Browse disk



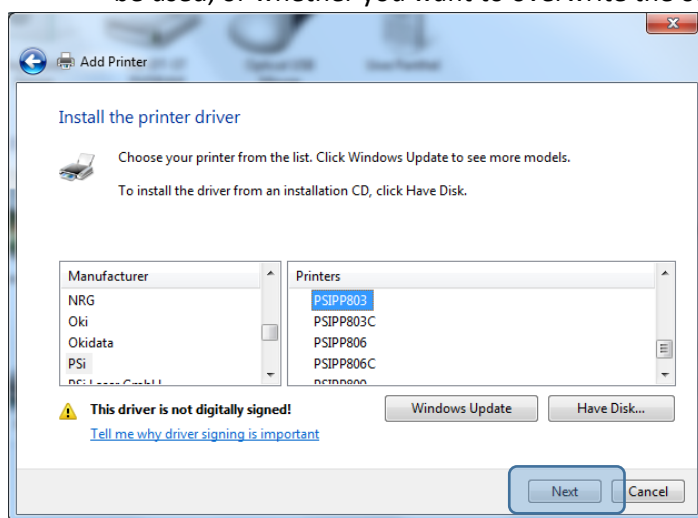
⇒ Open the *.inf file by double click or Open



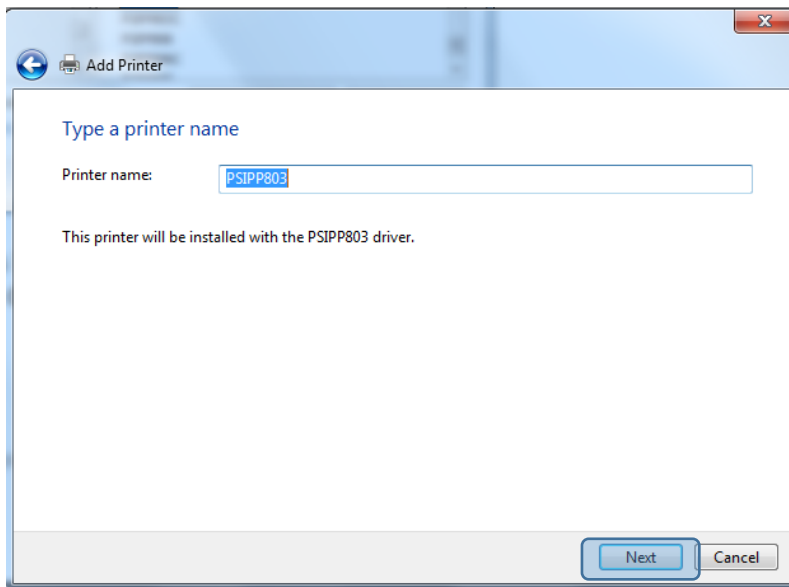
⇒ Confirm with "OK "



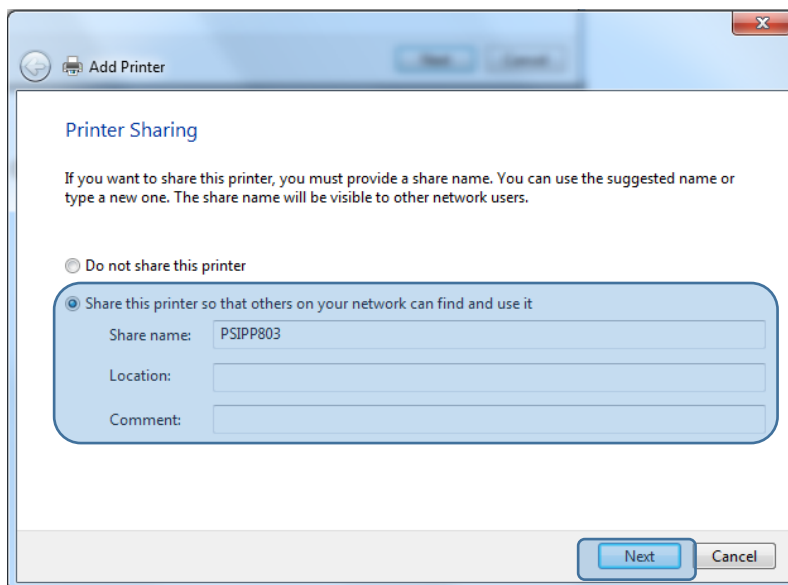
⇒ If this type of printer was already installed, you can decide whether the already installed Driver to be used, or whether you want to overwrite the old with the new version. Next



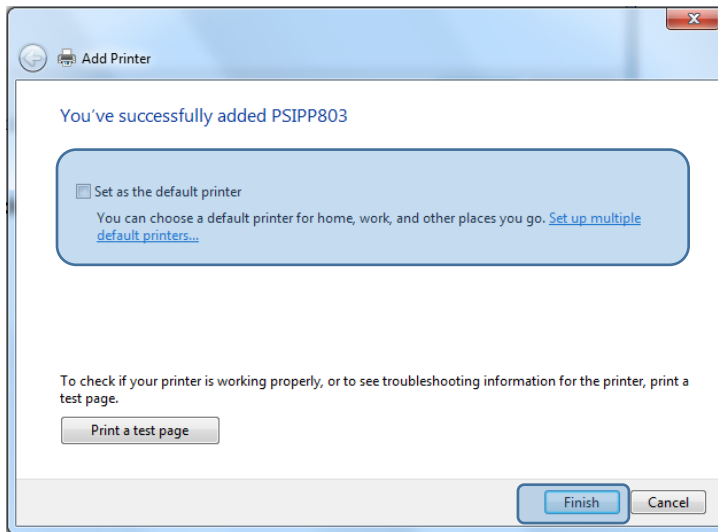
⇒ Enter a name for the printer that will appear later in the Windows Printers folder. Next



⇒ Specify whether the printer is to be shared with other network users. Next



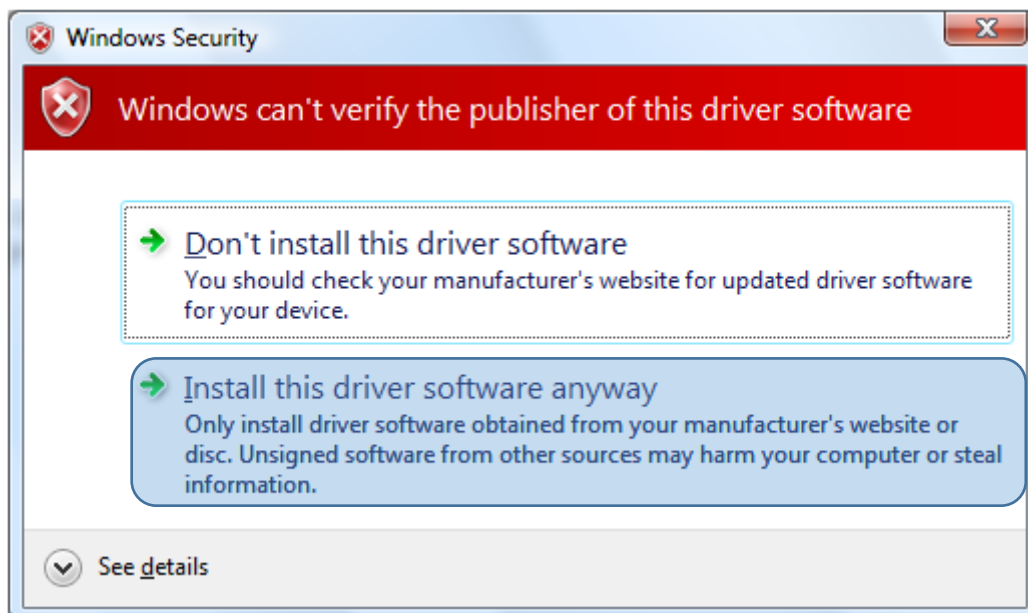
⇒ If the printer is the default printer, then set the hook.



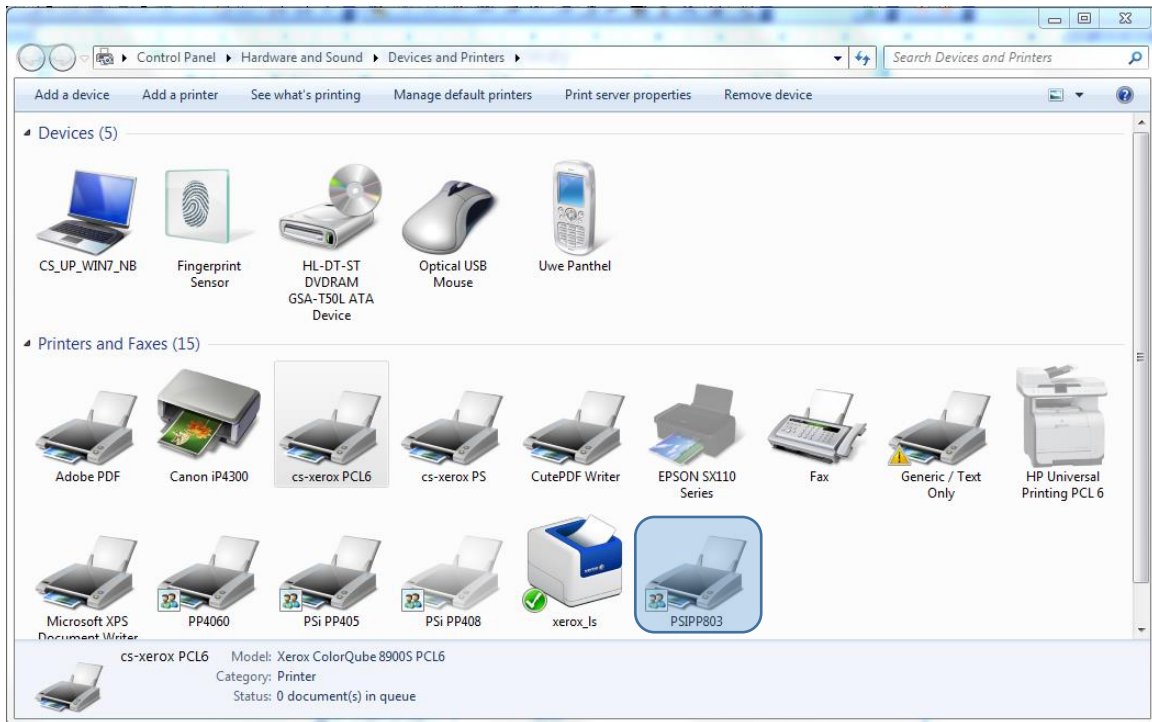
⇒ Print a test page and finish

Finish ⇒ The driver is now installed and registered in the Windows System!

It now appears possible way an indication that the driver is not signed by Microsoft. This is to ignore and continue the installation by feature „Install this driver software anyway“



The driver is now listed in the Printers folder after installation and ready for further use.



For all other Functions and installation, refer to the original documentation of:

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[Installation Manual PS 105](#)

[Installation Guide PS 105](#)

[Quick Installation Guide PS 105](#)

Link to:

[InterCon-NetTool-1.8.54](#)

