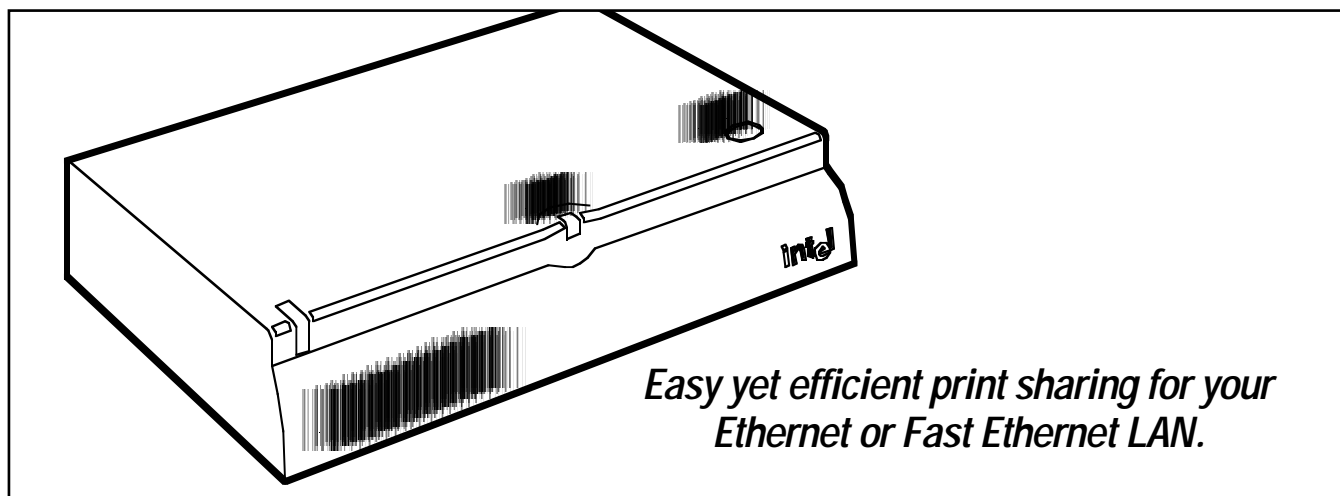# BLACK BOX®
NETWORK SERVICES

INTEL NETPORTEXPRESS PRINT SERVERS

Easy yet efficient print sharing for your Ethernet or Fast Ethernet LAN.

Key Features

▶ *Support for all major operating systems and management consoles.*

▶ *Wizards ease setup and configuration.*

▶ *1- and 3-port models available.*

▶ *10/100 servers for Fast Ethernet and mixed networks and high-performance printers.*

▶ *10-Mbps models let you put a printer anywhere on your Ethernet LAN.*

▶ *Extensive management capabilities.*

▶ *Built-in Web server.*

These low-cost printer servers provide simple, reliable printing solutions for 10-Mbps and mixed 10/100-Mbps networks.

They're designed to give network administrators and users high levels of compatibility and ease of use while helping to reduce the overall cost of maintaining network printers.

The 10-Mbps and 10/100 Intel® NetportExpress™ Print Servers are available with one port (for standalone printers) and three ports (for connecting multiple printers in an economical way). Both models can also be ordered as 3-packs.

The single-port model lets you connect a standalone printer anywhere on your Ethernet LAN. The three-port version—which includes two parallel ports and one serial port—allows you to connect multiple printers with just one device—for a lower cost-per-port connection.

For instance, you can give your users a wide range of capabilities by clustering different types of printers (such as monochrome laser, inkjet color, and lab printers) in one convenient location.

The 10/100 NetportExpress servers seamlessly adjust to 10 and 100-Mbps LANs. And, operating at more than 800 KB per second, the 10/100 print servers deliver twice the throughput of competitors, making them the ideal choice for high-performance networks.

In fact, with the 10/100 print server, your workgroup printer can print a 25-page, graphic-loaded file in just a few minutes. An Intel 486® processor and 2 MB of RAM work together to process a print job faster, freeing up bandwidth for users.

Not only are 10 and 10/100 servers compatible with almost any printer and all major operating systems, but they offer NetWare 5.0 and Linux printing support, too.

What's more, the print servers feature Intel's Web Enterprise Network Manager, a Java application that automatically discovers all print servers on your network. Use this application to graphically group your printers by department or location.
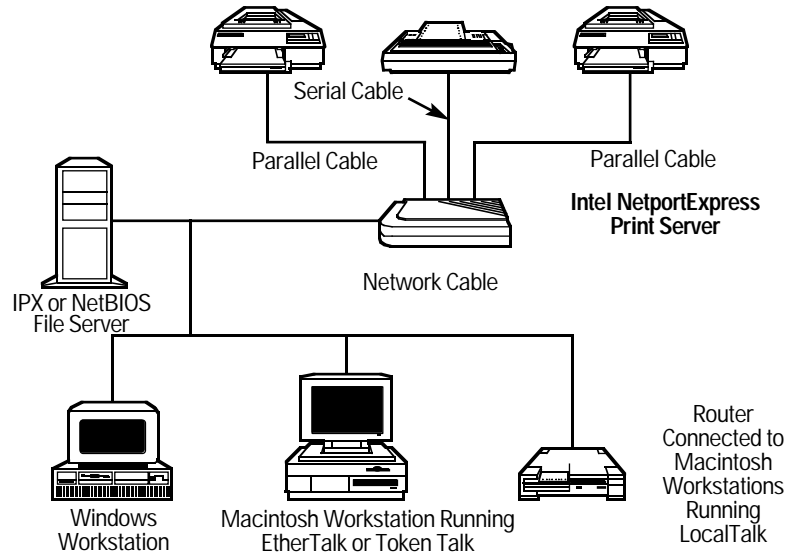
Tired or wasting time installing and configuring adapters? Then you'll appreciate the server's built-in wizards, which simplify these normally complicated tasks.

You can also remotely manage printers and printer servers from Windows and SNMP consoles, such as Intel DeviceView and HP Openview. Or manage from almost anywhere in the world via the Internet. NetportExpress, with the help of an embedded Web server, lets you do just that. All you need is a Web browser. Use the same route when you want to update your firmware, too. Just download newer versions from the Net.

For Token Ring applications, order the Intel NetportExpress PRO Print Server (see for details).

Easy management.

Connect three printers to an AppleTalk network and manage them with Netport Manager software (shown below right).

Serial Cable

Parallel Cable

Parallel Cable

Intel NetportExpress Print Server

Network Cable

IPX or NetBIOS File Server

Router Connected to Macintosh Workstations Running LocalTalk

Windows Workstation

Macintosh Workstation Running EtherTalk or Token Talk
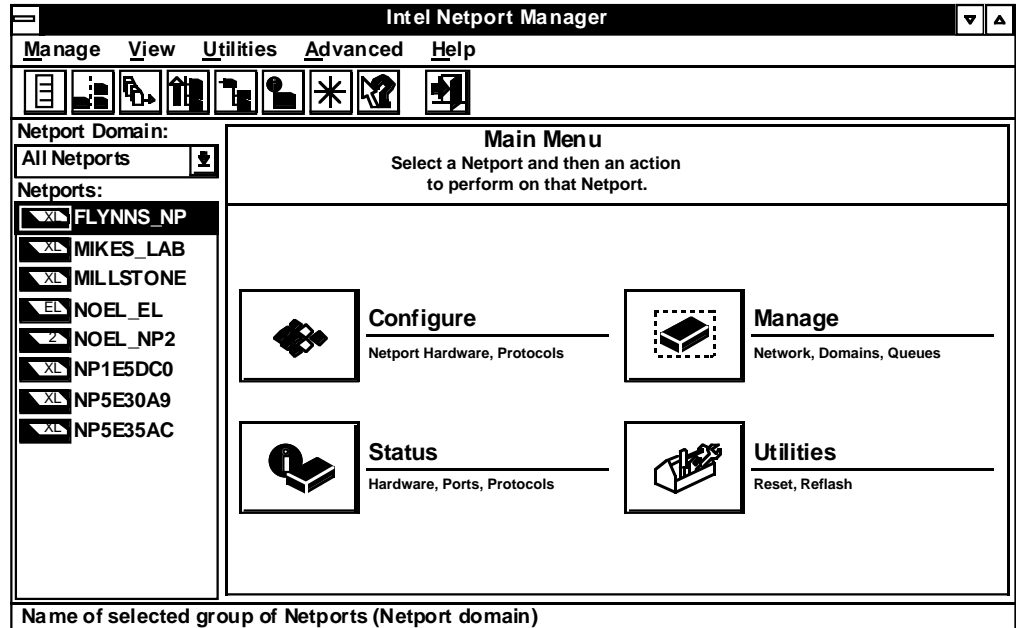

Wizards do the work!

With one simple tool—the Configuration Wizard—you can configure both old and new Intel print servers. Its simple question/answer format enables you to fully configure your print server in a few simple steps.

The Add Printer Wizard is designed primarily for use on any Windows system printing directly to an Intel NetportExpress print server. In general, this method is used on an Windows NT server if workstations are spooling print jobs through the server or on a Windows workstation printing directly in a peer-to-peer manner. This wizard will install the NetportExpress Port Monitor and guide you through the steps to add a printer definition on a workstation.

If you are spooling print jobs to another Windows system (like a Windows NT server), printing through a NetWare queue, or using LPR on a Windows NT machine, the NetportExpress Add Printer Wizard will display a special help message to aid you with setting up a printer definition using the device's standard Windows Add Printer Wizard.

The Add Printer Wizard installs the Intel Port Monitor software on workstations printing directly to the print server. This new software enhances printing reliability by eliminating conflicts when two people try to print at the same time. The software allows the second workstation to wait

| Intel Netport Manager | ▼ | ▲ |

Manage   View   Utilities   Advanced   Help

Netport Domain:
All Netports ⬇

Netports:
- XL FLYNNS_NP
- XL MIKES_LAB
- XL MILLSTONE
- EL NOEL_EL
- 2 NOEL_NP2
- XL NP1E5DC0
- XL NP5E30A9
- XL NP5E35AC

Main Menu
Select a Netport and then an action
to perform on that Netport.

Configure
Netport Hardware, Protocols

Manage
Network, Domains, Queues

Status
Hardware, Ports, Protocols

Utilities
Reset, Reflash

Name of selected group of Netports (Netport domain)

---

while the first workstation is using the printer, then automatically sends the job to the printer when it becomes available.

Manage with a browser.

Web Enterprise Netport Manager (WENM), a Java® application that runs with Microsoft® Internet Explorer® and Netscape Navigator®, allows you to locate, group, and manage your NetportExpress print servers from within a browser.

When WENM is first started, the program queries a local router for the list of available subnets. This information is turned into the default list of IP address ranges to be searched. You can choose to edit these settings or accept the defaults to begin the discovery process.

During discovery, WENM sends a special SNMP packet to each IP address to see if an Intel NetportExpress print server is at that IP address. If there is a valid response from an NetportExpress print server, that IP address is added to the list of print servers and additional packets are sent to determine the print server configuration.

You can even use WENM to configure the print server. When you click on a print server in WENM, a separate browser window is launched with Web Netport Manager, the Web server interface embedded in the print server. Web Netport Manager makes it easy to fully configure the print server and get detailed

status information from the printer and print server.

Install WENM on a workstation, network drive, or Web server—you choose the best location for your needs. Remember that you'll need either Netscape Navigator 4.06 (or later) or Microsoft Internet Explorer 4.0 with Service Pack 1 (or later). The embedded Web Netport Manager interface only requires Version 3 of Navigator or Internet Explorer.

More SNMP control.

Intel® NetportExpress™ 10/100 and 10 print servers now feature expanded SNMP management capabilities.

Private-enterprise MIBs can be fully configured and monitored via SNMP. Want to know when

---

the printer is running low on toner or paper? Then simply have SNMP traps sent to your SNMP console when either happens. (*NOTE:* Some alerts require the use of PCL commands, found on most laser printers and some other types of printers.)

Support for WINS.

The 10 and 10/100 print servers support Windows Internet Naming Service (WINS), which displays a device's logical name across subnets.

You can bring up a subnet's embedded Web server on a PC simply by typing in the name of the print server in your browser—Windows will translate the name automatically into the proper TCP/IP address. WINS support also allows workstations to print to the logical printer name, even if it's on another subnet.

WINS works in conjunction with Microsoft's Dynamic Host Configuration Protocol (DHCP) server, so if a workstation's IP address is changed by DHCP, the name translation will automatically adjust to the new print server IP address.
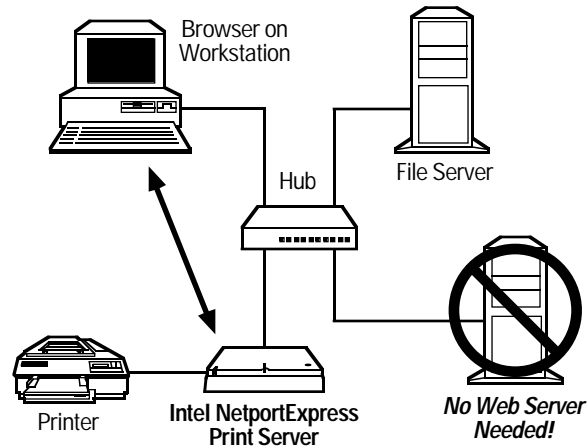
Faster printing.

Click and send. How about click and print? The NetportExpress 10/100 Print Server makes it possible—that is, to print at over 800 KB per second with today's high-speed workgroup printers. The print servers use the following features to accomplish this:

• Extended Capabilities Port (ECP), a mode supported by many newer printers that permits faster data transfer between a print server and the printer, resulting in faster overall printing.

• An embedded Intel 486™ processor.

• 2 MB of RAM.

• A high-efficiency single-chip network controller.

• A sophisticated custom ASIC chip (to handle network DMA and high-speed parallel port printing).

More easy management.

You won't need a Web server to use the Web Netport Manager. You only need an IP address assigned to the NetportExpress Print Server.

Browser on Workstation

File Server

Hub

Printer

Intel NetportExpress Print Server

No Web Server Needed!

Easy installation.

The Intel NetportExpress Print Servers offer easy installation in most network environments. Simply plug in the printer and print server, and configure the print servers from Windows Netport Manager or Web Netport Manager. Then set up a printer driver on your workstation. You're ready to print.

Want to install the server software on a system without a CD-ROM? There are three easy ways:

• Use Windows networking to share a CD-ROM drive that's on another system and install the software from that shared drive.

• Copy the CD-ROM to a network drive and install the software from there.

• Download the latest software from the Internet.

Manually assign an address.

Because many networks use Dynamic Host Configuration Protocol (DHCP) to dynamically assign IP addresses, the NetportExpress print server automatically checks to see if it can get an IP address through DHCP.

But if you don't use DHCP, you can manually assign an IP address with the Netport Manager software. It can find print servers through IPX, NetBEUI, or TCP/IP.

And, once a print server has an IP address, it can be changed through Netport Manager, Web

Netport Manager, Telnet, or SNMP.

If you don't have Windows or a protocol other than TCP/IP on your network, it's still easy to assign an IP address to a NetportExpress print server. By default, the print server tries to locate an address through BOOTP and RARP if it can't be found via DHCP. If you have these on your network, you can use them to assign the print server an IP address.

If you want to assign an IP address to the print server with standard Windows or UNIX commands, you can use a "trick ping" or "gleaning" method. Do this by going to a workstation on the same subnet as the print server and entering several commands. Use Netport Manager, Web Netport Manager, Telnet, or SNMP to configure additional TCP/IP parameters.

No external Web server needed.

Do you need a Web server to use Web Netport Manager? No. All you need is an Web browser and an IP address assigned to the NetportExpress 10/100 or 10 print server.

Then simply enter the IP address of the print server to make the Web Netport Manager interface appear. No plug-ins or downloads are required. An embedded Web server lets you manage network print servers without the need for an external Web server. This is especially useful in situations when you want to troubleshoot your network printer while you're away from your desk (see diagram **above**).

Match the Model to Your Application:

Choose a 10-Mbps model if:

• You want simple, affordable printing on a 10-Mbps LAN.

Choose a 10/100-Mbps model if:

• You plan to migrate to 100-Mbps Fast Ethernet from 10-Mbps Ethernet;

• You have a mixed 10/100-Mbps network;

• You have a Fast Ethernet network;

• You use very high-speed printers.

See page 4 for product specifications and Ordering Information.

Specifications

PCLA215B, PCLA4251B, PCLA2461, PCLA4461:

Compliance — FCC Class A

Memory — RAM: 2 MB; Flash: 1 MB

Management Tool OS Support —
Intel Netport Manger:
Windows 95, 98, NT®;
Configuration Wizard:
Windows 95, 98, NT;
Add Printer Wizard:
Windows 95, 98, NT;
Web Netport Manager:
Netscape Navigator® 4.06 and
above, Microsoft® Internet
Explorer 4.0SP1 and above;
Web Enterprise Netport
Manager: Netscape Navigator 3
and above; Microsoft Internet
Explorer 3 and above

NOS Support — Microsoft
Windows: 3.11, 95, 98, NT;
Novell NetWare:
3.1x, 4.x (NDS and Bindery),
5.x (NDS and Bindery);
UNIX®: Solaris® (x86 and
SPARC®), Sun® OS, HP-UX®,
AIX®, SCO® OpenDesktop,
Unixware®, Linux, BSD,
System V;
Apple® Macintosh®: Mac OS
(parallel ports support
bidirectional printers or proxy
PostScript®); OS/2
environments: LAN Manager,
LAN Server

Printer Ports —
PCLA4251B, PCLA4461:
(1) parallel;
PCLA2151B, PCLA2461:
(2) parallel (1) serial

Indicators — LEDs:
PCLA4251B, PCLA2151B:
(1) Activity, (1) LAN;
PCLA4461, PCLA2461: (1) Activity,
(1) LAN, (1) 100 Mbps

Connectors — PCLA4251B:
(1) DB25 (parallel), (1) RJ-45
(10BASE-T);
PCLA2151B: (2) DB25 (parallel),
(1) DB9 (serial), (1) RJ-45
(10BASE-T), (1) BNC (ThinNet);
PCLA4461: (1) DB25 (parallel),
(1) RJ-45 (10BASE-T, Fast
Ethernet); PCLA2461: (2) DB25
(parallel), (1) DB9 (serial),
(1) RJ-45 (10BASE-T, Fast
Ethernet), (1) BNC (ThinNet)

Temperature —
-10 to +35°C (0 to 95°F)

Humidity —
10 to 95% non-condensing

Power — 100–250 VAC, 50–60 Hz,
autosensing

Size —
PCLA4251B, PCLA4461:
3H x 13.5W x 10.9D cm
(1.2"H x 5.3"W x 4.3"D);
PCLA2151B, PCLA2461:
3.3H x 16.8W x 10.9D cm
(1.3"H x 6.6"W x 4.3"D)

Weight —
PCLA4251B, PCLA4461:
0.2 kg (0.4 lb.);
PCLA2151B, PCLA2461:
0.3 kg (0.6 lb.)

Ordering Information

ITEM	CODE
Intel® NetportExpress® Print Servers	
10-Mbps	
1-Port	PCLA4251B
3-Pack	PCLA4251BPAK3
3-Port	PCLA2151B
3-Pack	PCLA215BPAK3
10/100-Mbps	
1-Port	PCLA4461
3-Pack	PCLA4461PAK3
3-Port	PCLA2461
3-Pack	PCLA2461PAK3
Intel NetportExpress PRO Print Servers	
for Token Ring (*See next page*)	
Internal	PCLA3351
External	PCLA2351

For optimum performance and savings, order…
Category 5 Patch Cable, 100-MHz, 4-Pair,
Straight-Pinned, PVC, Beige,
10-ft. (3.0-m) EVMSL05-0010
(Call for other lengths, custom lengths, or other colors)

INTEL NETPORTEXPRESS PRO PRINT SERVERS

Everything you need for total printer control in your Token Ring network.

Key Features

▶ *Support for all major network operating systems & management consoles.*

▶ *Protects your equipment investment by adding new life to older printers.*

▶ *"Plug-and-play" installation makes it easy to get a printer running on a network.*

▶ *External and internal print servers.*

▶ *One easy-to-use tool for installation and configuration.*

Order the Intel Netport Express PRO Print Server for a Token Ring network of any size. Available in both internal and external models, these printer servers enable you to add, use, and manage printers anywhere on your Type 1 or 3 Token Ring network.

You can connect up to three printers to your Token Ring LAN running Novell NetWare (native NDS), Windows NT™, Windows for Workgroups, Windows® 95, UNIX®, AppleTalk®, IPX™/SPX, TCP/IP, or NetBIOS in multiprotocol/multi-NOS environments.

Forget distance limits or having to attach printers right next to your servers. Plug them in anywhere your network goes—no matter what operating system or printer you have. You can even attach older-model printers regardless of whether they have dedicated expansion slots.

The NetExpress PRO Print Servers are perfect for

• NetWare® only environments (includes native NDS™ support for NetWare 4.1).

• Medium-volume, high-performance printing.

• Small-to-medium size networks.

• Complex printing needs (color, graphics, bitmaps).

Use the included software to configure the server for Novel NDS and Bindery, UNIX, Windows 95, Windows NT, Windows for Workgroups, Microsoft LAN Manager, IBM LAN Server (OS/2), and AppleTalk.

The internal model supports printers with an MIO slot, such as HP LaserJet printers.

The external 3-port print server supports two parallel ports and one serial printer. Attach printers to the external model with standard DB25 M to Centronics® M printer cables (not included).

As part of its setup and operation, you assign either an IPX (NetWare) or NetBIOS file server. And although the print server does not provide standalone TCP/IP printing, you can define a NetWare or NetBIOS file server as the print server's RBL file server and configure the server for TCP/IP or AppleTalk printing.

The NetportExpress Print Server comes with a user manual, Novell Quick Start Guide, TCP/IP Printing Guide, NetBIOS Quick Start Guide, and three utility installation diskettes. The external model is shipped with a power supply and cord, too.

Specifications

Compliance — CE approved; FC Part 15, Class A; UL® listed 8B78

Standards — IEEE 802.5 Token Ring

Management Supported — Windows based Netport Manager application for installation, configuration, and management of all NOSs; DMI and SNMP enabled to work with management consoles like Intel LANDesk® Management Suite or HP® OpenView®

Network Manager — Intel 386 SX or DX CPU or higher; DOS 5.0, Windows 3.1 or 3.11, Windows 95, Windows NT, Windows configured for NetWare or NetBEUI support; 4-MB RAM; VLM 1.10 or later; IPXODI.COM 1.2 or later; LSL.COM 1.21 or later

Network Topology Support — Type 3 Token Ring

Software —
(1) Intel NetportExpress PRO Print Server setup disk; (1) Intel NetportExpress Pro Print Server software disk in UNIX tar format

Speed — 16- and 4-Mbps Token Ring

Connectors —
Internal: (1) DB9, (1) RJ-45;
Printer: MIO;
External: (1) DB9, (1) RJ-45;
Printer: (2) IEEE 1284 parallel, (1) DB9 M

Indicators — LEDs: (1) Rx, (1) Tx

Power —
Internal: From the printer;
External: 115/230 VAC switch-selectable

Size —
Internal: 11.6H x 12.1W x 2.4D cm (5.4"H x 5.6"W x 1.1"D);
External: 15.7H x 11W x 2.8D cm (7.3"H x 5.1"H x 1.2"D)