

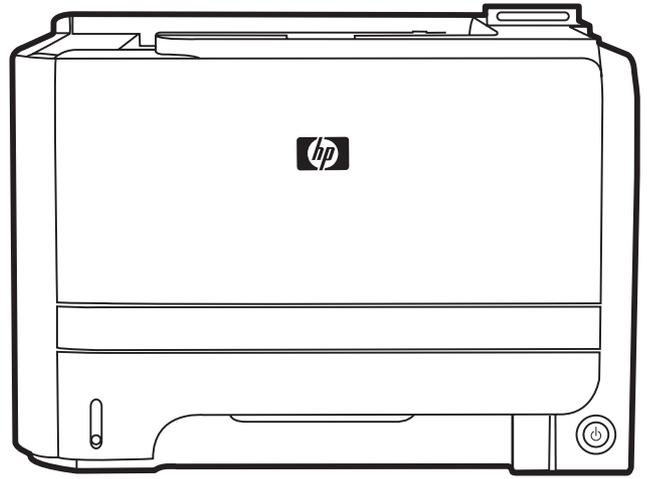
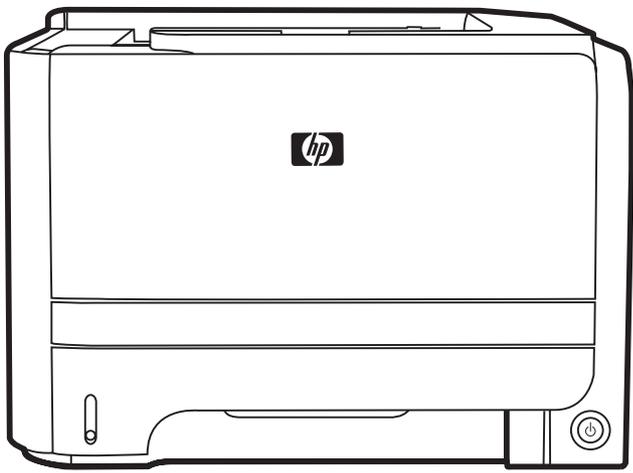
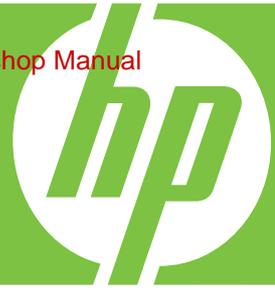
HP LaserJet P2030 Series/P2050 Series Printer Service Repair Workshop Manual

Product: 2008 HP LaserJet P2030 Series/P2050 Series Printer Service Repair Workshop Manual

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Service Manual



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HP LaserJet P2030 Series and HP LaserJet
P2050 Series Printers
Service Manual



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1 Product basics

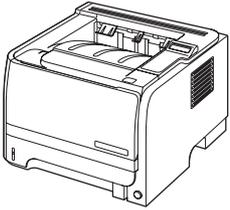
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- [Product features](#)
- [Product walkaround](#)
- [Supported product software](#)
- [System minimum requirements](#)
- [Connectivity](#)

Product comparison

HP LaserJet P2050 Series Printers

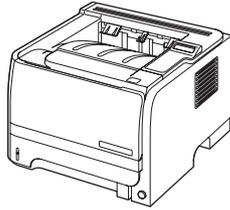
HP LaserJet P2055d printer

CE457A



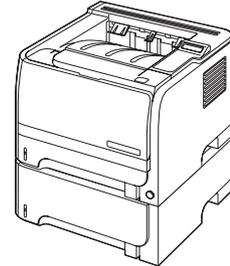
HP LaserJet P2055dn printer

CE459A



HP LaserJet P2055x printer

CE460A

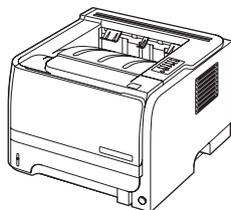


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| <ul style="list-style-type: none">• Prints up to 35 pages per minute (ppm) on Letter size paper and 33 ppm on A4 size paper• Contains 64 megabytes (MB) of random access memory (RAM) and is expandable to 320 MB.• HP print cartridge, rated for up to 2,300 pages• Tray 1 holds up to 50 sheets• Tray 2 holds up to 250 sheets• 125-sheet face-down output bin• Straight-through output path• 2-line control-panel display• Hi-speed USB 2.0 port• One open dual inline memory module (DIMM) slot | <p>Has the same features as the HP LaserJet P2035d model printer, plus the following:</p> <ul style="list-style-type: none">• Gigabit networking port• HP Jetdirect print server/networking solution• Contains 128 MB RAM and is expandable to 384 MB. | <p>Has the same features as the HP LaserJet P2035dn model printer, plus the following:</p> <ul style="list-style-type: none">• 500-sheet input tray (Tray 3) |
|--|--|--|
-

HP LaserJet P2030 Series Printers

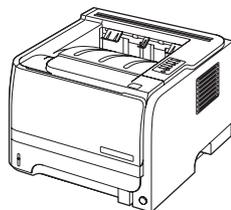
HP LaserJet P2035 printer

CE461A



HP LaserJet P2035n printer

CE462A



-
- Prints up to 30 pages per minute (ppm) on Letter-size paper and 30 ppm on A4-size paper
 - Contains 16 megabytes (MB) of random access memory (RAM).
 - HP print cartridge, rated for up to 2,300 pages
 - Tray 1 holds up to 50 sheets
 - Tray 2 holds up to 250 sheets
 - 125-sheet face-down output bin
 - Straight-through output path
 - Hi-speed USB 2.0 port
 - Parallel port
- Has the same features as the HP LaserJet P2035 model, with the following differences:
- 10/100 networking port
 - No parallel port
-

Product features

HP LaserJet P2050 Series Printers

Feature	Description
Performance	<ul style="list-style-type: none">• 600 MHz processor
User interface	<ul style="list-style-type: none">• 2-line display• HP ToolboxFX (a Web-based status and problem-solving tool)• Windows® and Macintosh printer drivers• Embedded Web server to access support and order supplies (for network-connected models only)
Printer drivers	<ul style="list-style-type: none">• HP PCL 6 (included on CD)• HP PCL 5c Universal Print Driver for Windows (HP UPD PCL 5c) (available for download from the Web)• HP postscript emulation Universal Print Driver for Windows (HP UPD PS) (available for download from the Web)• XML Paper Specification (XPS) Driver (available for download from the Web)
Resolution	<ul style="list-style-type: none">• FastRes 1200—produces 1200-dots-per-inch (dpi) print quality for fast, high-quality printing of business text and graphics• ProRes 1200—produces 1200-dpi printing for the best quality in line art and graphic images• 600 dpi—provides the fastest printing
Fonts	<ul style="list-style-type: none">• 45 internal scalable fonts available for PCL and 35 for HP postscript emulation• 80 device-matching screen fonts in TrueType format available with the software solution
Accessories	<ul style="list-style-type: none">• 500-sheet input tray• HP Jetdirect external print server
Connectivity	<ul style="list-style-type: none">• Hi-Speed USB 2.0 connection• Gigabit networking connection (HP LaserJet P2055dn and HP LaserJet P2055x only)
Supplies	<ul style="list-style-type: none">• The supplies status page contains information about toner level, page count, and estimated pages remaining.• The product checks for an authentic HP print cartridge at installation.• Integration with HP Sure Supply Web site for replacement-cartridge reordering
Supported operating systems	<ul style="list-style-type: none">• Microsoft® Windows® 2000, Windows® Server 2003, Windows® XP, and Windows Vista™• Macintosh OS X V10.3, V10.4, and V10.5• Novell NetWare (TCP/IP only) (HP LaserJet P2055dn and HP LaserJet P2055x only)
Accessibility	<ul style="list-style-type: none">• The online user guide is compatible with text screen-readers.• The print cartridge can be installed and removed by using one hand.• All doors can be opened by using one hand.• Media can be loaded in Tray 1 by using one hand.

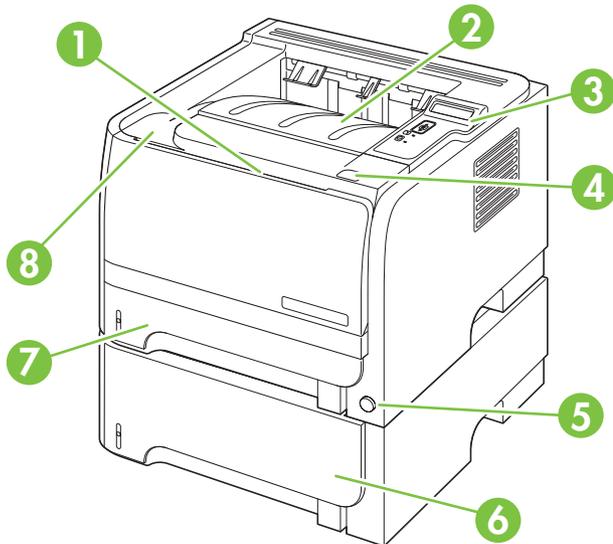
HP LaserJet P2030 Series Printers

Feature	Description
Performance	<ul style="list-style-type: none">• 266 MHz processor
User interface	<ul style="list-style-type: none">• 2-button, 6 LED control panel• Windows® and Macintosh printer drivers• Embedded Web server to access support and order supplies (for network-connected models only)
Printer drivers	<ul style="list-style-type: none">• Host-based printer drivers for Windows and Macintosh, included on the product CD• HP UPD PCL 5c printer driver (available for download from the Web)• XML Paper Specification (XPS) printer driver (available for download from the Web)
Resolution	<ul style="list-style-type: none">• FastRes 1200—produces 1200-dots-per-inch (dpi) print quality for fast, high-quality printing of business text and graphics• 600 dpi—provides the fastest printing
Fonts	<ul style="list-style-type: none">• 45 internal scalable fonts• 80 device-matching screen fonts in TrueType format available with the software solution
Connectivity	<ul style="list-style-type: none">• Hi-Speed USB 2.0 connection• Parallel connection (HP LaserJet P2035 printer only)• 10/100 networking port (HP LaserJet P2035n printer only)
Supplies	<ul style="list-style-type: none">• The supplies status page contains information about toner level, page count, and estimated pages remaining.• The product checks for an authentic HP print cartridge at installation.• Integration with HP Sure Supply Web site for replacement-cartridge reordering
Accessories	<ul style="list-style-type: none">• HP Jetdirect external print server
Supported operating systems	<ul style="list-style-type: none">• Microsoft® Windows® 2000, Windows® Server 2003, Windows® XP, and Windows Vista™• Macintosh OS X V10.3, V10.4, and V10.5
Accessibility	<ul style="list-style-type: none">• The online user guide is compatible with text screen-readers.• The print cartridge can be installed and removed by using one hand.• All doors can be opened by using one hand.• Media can be loaded in Tray 1 by using one hand.

Product walkaround

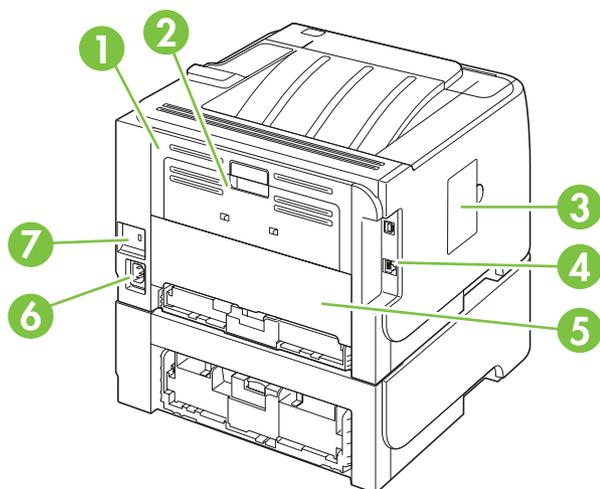
HP LaserJet P2050 Series Printers

Front view



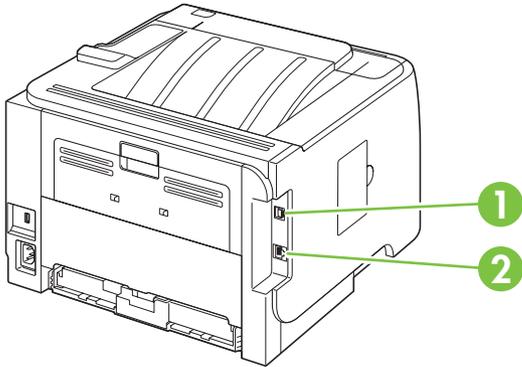
1	Tray 1 (pull to open)
2	Top output bin
3	Control panel
4	Print-cartridge-door release button
5	On/off switch
6	Optional Tray 3 (included with the HP LaserJet P2055x printer)
7	Tray 2
8	Print-cartridge door

Rear view



1	Jam-release door (pull the green handle to open)
2	Straight-through paper path (pull to open)
3	DIMM cover (provides access to the DIMM slot)
4	Interface ports
5	Rear duplex jam-release door
6	Power connection
7	Slot for a cable-type security lock

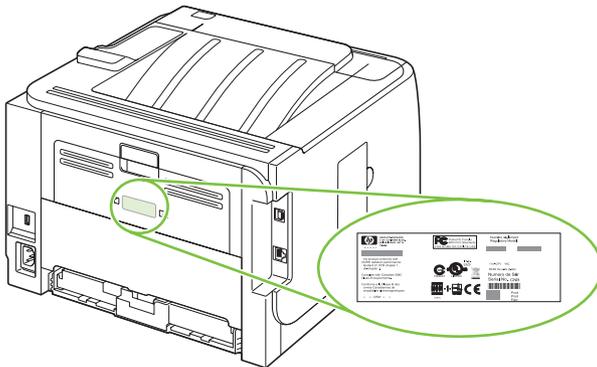
Interface ports



- | | |
|---|--|
| 1 | Hi-Speed USB 2.0 connection, for connecting directly to a computer |
| 2 | Gigabit networking connection (10/100/1000 networking port) |

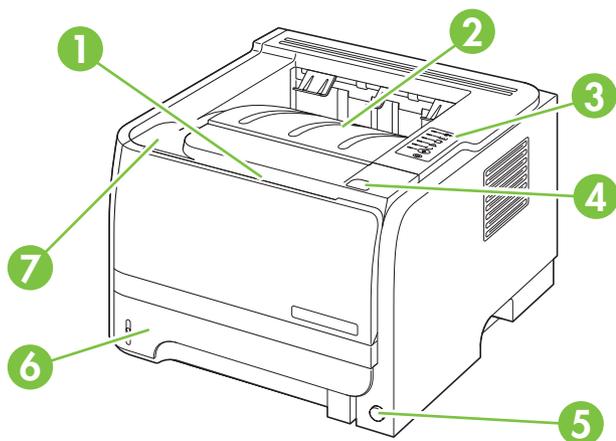
Model and serial number label

The label that contains the model and serial numbers is on the outside of the rear output door (straight-through paper path).



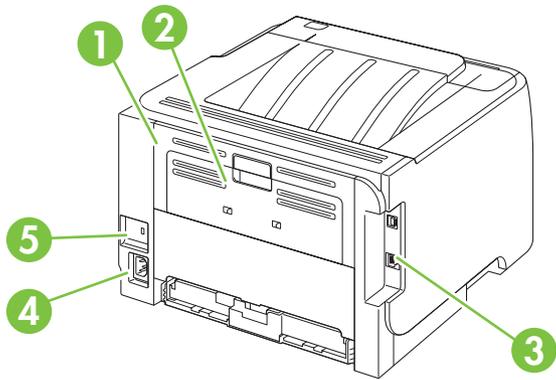
HP LaserJet P2030 Series Printers

Front view



1	Tray 1 (pull to open)
2	Top output bin
3	Control panel
4	Print-cartridge-door release button
5	On/off switch
6	Tray 2
7	Print-cartridge door

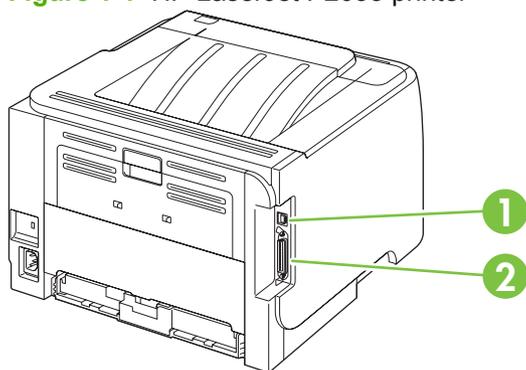
Rear view



1	Jam-release door (pull the green handle to open)
2	Straight-through paper path (pull to open)
3	Interface ports
4	Power connection
5	Slot for a cable-type security lock

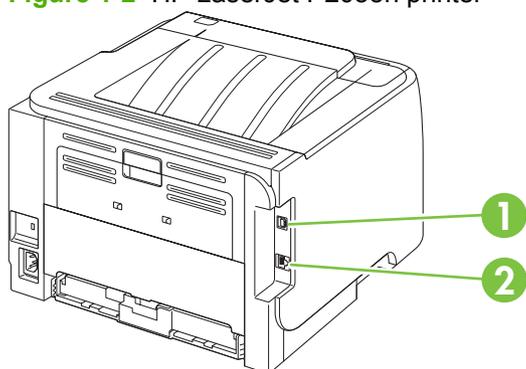
Interface ports

Figure 1-1 HP LaserJet P2035 printer



1	Hi-Speed USB 2.0 port
2	Parallel port

Figure 1-2 HP LaserJet P2035n printer



1	Hi-Speed USB 2.0 port
2	10/100 network port

Supported product software

Software included with the product

There are several options for completing a recommended install. Easy Install will complete the installation with default settings. Advanced Install allows you to select custom settings and choose the components that are installed.

Software installation types for Windows

You can choose from the following types of software installations:

- **Recommended Installation** . This method installs the full set of drivers and software, including status, alerting, and troubleshooting tools. This method is recommended for computers in a direct-connect or a home/small network environment.
- **Express Installation**. This method installs the minimum set of drivers and software. This method is recommended for servers or computers in a network environment.

Macintosh software

- HP Printer Utility

Supported printer drivers for Windows (HP LaserJet P2050 Series Printers)

- HP PCL 6 (on the product CD)
- HP PCL 5c Universal Print Driver (HP UPD PCL 5c) (available for download from the Web)
- HP postscript emulation Universal Print Driver (HP UPD PS) (available for download from the Web)
- XPS (XML Paper Specification) driver (available for download from the Web)

The printer drivers include online Help that has instructions for common printing tasks and also describes the buttons, checkboxes, and drop-down lists that are in the printer driver.

 **NOTE:** For more information about the UPD, see www.hp.com/go/upd.

Supported printer drivers for Windows (HP LaserJet P2030 Series Printers)

The product features a host-based printer driver.

The printer drivers include online Help that has instructions for common printing tasks and also describes the buttons, checkboxes, and drop-down lists that are in the printer driver.

Supported printer drivers for Macintosh (HP LaserJet P2050 Series Printers only)

The HP installer provides PostScript® Printer Description (PPD) files, Printer Dialog Extensions (PDEs), and the HP Printer Utility for use with Macintosh computers.

The PPDs, in combination with the Apple PostScript printer drivers, provide access to device features. Use the Apple PostScript printer driver that comes with the computer.

Supported printer drivers for Macintosh (HP LaserJet P2030 Series Printers only)

The HP installer provides a printer driver and the HP Printer Utility for use with Macintosh computers.

Other software provided

Software for Windows

HP ToolboxFX (HP LaserJet P2050 Series Printers only)

HP ToolboxFX is a software program that you can use for the following tasks:

- Checking the product status
- Checking the supplies status and ordering supplies online
- Setting up alerts
- Setting up e-mail notification for certain product and supplies events
- Viewing and changing product settings
- Viewing product documentation
- Gaining access to troubleshooting and maintenance tools

You can view HP ToolboxFX when the product is directly connected to your computer or is connected to a network. HP ToolboxFX is installed as part of the basic installation (recommended).

Status Alerts software (HP LaserJet P2030 Series Printers only)

The Status Alerts software provides information about the current status of the product.

The software also provides pop-up alerts when certain events occur, such as an empty tray or a problem with the product. The alert includes information about solving the problem.

Software for networks

HP Web Jetadmin

HP Web Jetadmin is a browser-based management tool for HP Jetdirect-connected printers within your intranet, and it should be installed only on the system administrator's computer.

To download a current version of HP Web Jetadmin and for the latest list of supported host systems, go to www.hp.com/go/webjetadmin.

When installed on a host server, any client can gain access to HP Web Jetadmin by using a supported Web browser (such as Microsoft® Internet Explorer 4.x or Netscape Navigator 4.x or later) by navigating to the HP Web Jetadmin host.

Embedded Web server (HP LaserJet P2055dn, HP LaserJet P2055x, and HP LaserJet P2035n printers only).

The device is equipped with an embedded Web server, which provides access to information about device and network activities. This information appears in a Web browser, such as Microsoft Internet Explorer, Netscape Navigator, Apple Safari, or Firefox.

The embedded Web server resides on the device. It is not loaded on a network server.

The embedded Web server provides an interface to the device that anyone who has a network-connected computer and a standard Web browser can use. No special software is installed or configured, but you must have a supported Web browser on your computer. To gain access to the embedded Web server, type the IP address for the device in the address line of the browser. (To find the IP address, print a configuration page. For more information about printing a configuration page, see [Print the information pages on page 48.](#))

For a complete explanation of the features and functionality of the embedded Web server, see [Embedded Web server \(HP LaserJet P2055dn, HP LaserJet P2055x, and HP LaserJet P2035n only\) on page 57.](#)

Software for other operating systems

OS	Software
UNIX	To download the HP UNIX modelscripts, follow these steps. <ol style="list-style-type: none">1. Go to www.hp.com, and click Software & Driver Download.2. Type the name of the product in the product name box.3. In the list of operating systems, click UNIX.4. Download the appropriate file or files.
Linux	For information, go to www.hp.com/go/linuxprinting .
Citrix	Use the printer driver provided with the product.

System minimum requirements

Windows requirements

- 512 MB of RAM
- 350 MB of disk space

Macintosh requirements

- 256 MB of RAM
- 150 MB of disk space

Connectivity

Supported networks (HP LaserJet P2050 Series Printers)

The product supports the TCP/IP network protocol. It is the most widely used and accepted networking protocol. Many networking services use this protocol. This product also supports IPv4 and IPv6. The following tables list the networking services/protocols that are supported on the product.

Table 1-1 Printing

Service name	Description
port9100 (Direct Mode)	The default TCP/IP printing port on the HP Jetdirect print server, accessed by software such as HP Standard Port
Line printer daemon (LPD)	LPD provides line printer spooling services for TCP/IP systems. Use LPD services on the HP Jetdirect print server.
WS Print	Use the Microsoft Web Services for Devices (WSD) Print services supported on the HP Jetdirect print server.

Table 1-2 Network product discovery

Service name	Description
SLP (Service Location Protocol)	Device Discovery Protocol, used to help find and configure network devices. Used primarily by Microsoft-based software programs.
multicast Domain Name Service (mDNS—also known as “Rendezvous” or “Bonjour”)	Device Discovery Protocol, used to help find and configure network devices. Used primarily by Apple Macintosh-based software programs.
WS Discovery	Allows Microsoft WS discovery protocols on the print server.
LLMNR (TCP/IP v6)	Indicates whether link local multicast name resolution (LLMNR) requests are responded to over IPv6.
NetBIOS over TCP/IP	Provides communication among applications on separate computers within a local area network. Because the programming interface runs through TCP/IP (NBT), each computer in the network has both a NetBIOS name and an IP address relevant to a host name (even though the two names might not be the same).
DNS Client	DNS domain name that the HP Jetdirect print server resides in (for example, support.hp.com).

Table 1-3 Messaging and management

Service name	Description
HTTP (hypertext transfer protocol)	Allows Web browsers to communicate with embedded Web server.
EWS (embedded Web server)	Allows a user to manage the product through a Web browser.
SNMP (simple network management protocol)	Used by network programs for product management. SNMP V3 and standard MIB-II (Management Information Base) objects are supported.

Service name	Description
Web Jetadmin (WJA)	Management program that provides controlled access to HP Jetdirect and product features.
EPC	HP Easy Printer Care Software 2.0 (EPC 2.0) provides HP Web Jetadmin-type functions for small and micro businesses with up to 15 HP LaserJet products. EPC 2.0 delivers effortless laser product upkeep and protection for your printing investment, in addition to simple, consolidated supplies replenishment.

Table 1-4 IP addressing

Service name	Description
DHCP (dynamic host configuration protocol)	For Automatic IP address assignment. DHCP server provides the product with an IP address. Generally requires no user intervention for product to obtain IP address from a DHCP server.
BOOTP (bootstrap protocol)	For Automatic IP address assignment. BOOTP server provides the product with an IP address. Requires the administrator to type the product MAC hardware address on the BOOTP server in order for the product to obtain an IP address from that server.
Auto IP	For Automatic IP address assignment. If neither a DHCP server nor a BOOTP server is present, this service allows the product to generate a unique IP address.
Manual IP	Manually configure the IP address on the print server by using the product control panel or the embedded Web server.
Telnet	Set configuration parameters by using the default IP address to create a Telnet connection from your system to the HP Jetdirect print server. When configured, the print server saves the configuration when turned off and then turned on.
RARP	You can configure the print server to use RARP on UNIX and Linux systems. Use RARP to answer the print server's RARP request and supply the print server with the IP address. The RARP method allows you to only configure the IP address.
ARP/PING	You can configure an HP Jetdirect print server with an IP address using the <code>arp</code> command from a supported system. The workstation from which the configuration is made must be located on the same network segment as the HP Jetdirect print server.

Supported network (HP LaserJet P2030 Series Printers)

The product supports the TCP/IP network protocol. It is the most widely used and accepted networking protocol. Many networking services use this protocol. This product also supports IPv4 and IPv6. The following tables list the networking services/protocols that are supported on the product.