

Network Guide



HP all-in-one Network Guide

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- Paper currency, traveler's checks, or money orders
- Certificates of deposit
- Copyrighted works

safety information



Warning To prevent fire or shock hazard, do not expose this product to rain or any type of moisture.

Always follow basic safety precautions when using this product to reduce risk of injury from fire or electric shock.



Warning Potential shock hazard

- 1 Read and understand all instructions in the setup poster.
- 2 Use only a grounded electrical outlet when connecting the device to a power source. If you do not know whether the outlet is grounded, check with a qualified electrician.
- 3 Observe all warnings and instructions marked on the product.
- 4 Unplug this product from wall outlets before cleaning.

- 5 Do not install or use this product near water or when you are wet.
- 6 Install the product securely on a stable surface.
- 7 Install the product in a protected location where no one can step on or trip over the line cord, and where the line cord will not be damaged.
- 8 If the product does not operate normally, see the onscreen Troubleshooting Help.
- 9 No operator-serviceable parts inside. Refer servicing to qualified service personnel.
- 10 Use in a well-ventilated area.

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1 Get started

This guide complements the information in the printed Setup Guide and the User Guide that came with your HP all-in-one. It describes how to set up your HP all-in-one in a network, which includes configuring and connecting the device, and installing the software. This guide also provides examples of recommended networks, network management information, and troubleshooting tips.

Connecting your HP all-in-one to a network enables you to share your HP all-in-one and all of its capabilities with every computer on the network. However, if you do not intend to connect to a network and want a direct USB connection instead, please see the Setup Guide for information.

Use this chapter to help you find information on the following topics:

- Choose a network type
- Use the network management tools
- Switch from a USB connection to a network connection
- Connect additional computers
- Get HP support

Note For definitions of terms used in this guide, see the [Glossary](#).

Choose a network type

There are a number of different ways to set up an Ethernet network environment for your HP all-in-one. For ideas, please see [Choose a recommended Ethernet network](#).

Use the network management tools

For information on using the HP all-in-one management tools, see [Manage your network](#).

Switch from a USB connection to a network connection

If you first install your HP all-in-one with a USB connection, you can later switch to a network connection.

To switch a USB connection to a network connection

- 1 Unplug the USB connection from the back of your HP all-in-one.
- 2 Connect your HP all-in-one, as described in [Connect with an Ethernet cable](#).
- 3 Install the software, as described in [Install the software](#).
- 4 When the installation is complete, access the printer icons on your computer as follows:
 - For **Windows XP**: Open the **Printers and Faxes** folder.
 - For **Windows 9.x or Windows 2000**: Open the **Printers** folder.
 - For **Macintosh OS X**: Open the **Printer Setup Utility** in the **Utilities** list.
- 5 Check to see if the USB printer icon for your HP all-in-one is there. If it is, delete it.

Connect additional computers

If your HP all-in-one is connected to one of the recommended networks you can share your HP All-in-One with additional computers on the network. For each additional computer, you must install the HP all-in-one software, as described in [Install the software](#). During installation, the software will discover the SSID (network name) of the existing network. Once you have set up your HP all-in-one on the network you will not need to configure it again when you add additional computers.

Get HP support

For information on how to get HP customer support, please see the printed User Guide that came with your HP all-in-one.

Choose a recommended Ethernet network

Use this chapter to help you identify what kind of Ethernet network you already have in place or want to set up. Each network shown here uses a device, such as an Ethernet router, to connect the network elements. A network connected in this manner is called an **infrastructure** network. An Ethernet network provides superior performance, reliability, and network security.

Ethernet networks might or might not be connected to the Internet. If you place your HP all-in-one on an Ethernet network connected to the Internet, it is recommended that you use a gateway so that the HP all-in-one's IP address is assigned dynamically through Dynamic Host Configuration Protocol (DHCP). A gateway can either be a router or a Windows computer running Internet Connection Sharing (ICS).

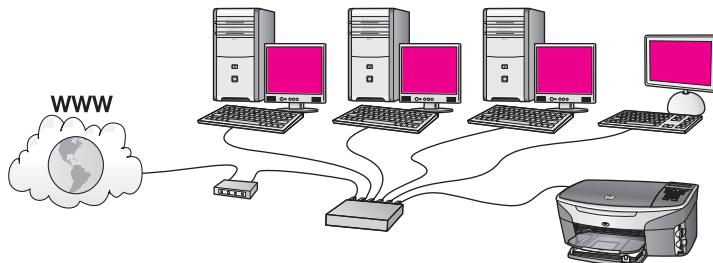
Note For definitions of terms not defined here, see the [Glossary](#).

We recommend the wired LAN (local area network) configurations below to support your HP all-in-one.

Ethernet connection to a wired network with DSL or cable Internet access

If your network has DSL or cable Internet access, you can use either a router or a computer as the Internet gateway. With either DSL or cable, you are able to access the full functionality of your HP all-in-one, including sharing pictures over the Internet with HP Instant Share.

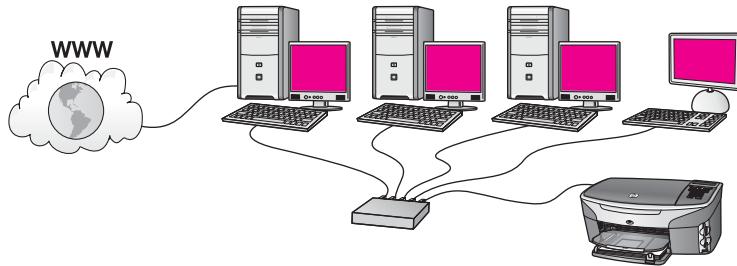
Router gateway



In this example, a router manages the network connections, and a DSL or cable modem provides Internet access. If you use this configuration, connect your HP all-in-one to the router with an Ethernet cable.

With this configuration, you are able to access the full functionality of the HP all-in-one, including sharing pictures over the Internet. For connection instructions, see [Connect with an Ethernet cable](#).

Computer gateway

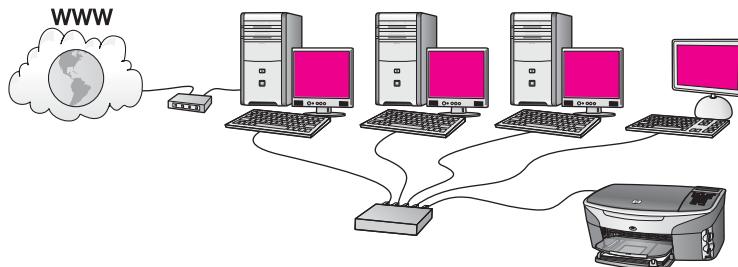


In this example, the network devices are connected to a switch or router. A computer on the network acts as the gateway between the network and the Internet. The gateway computer uses Windows Internet Connection Sharing (ICS) or similar software to manage the network connections and provide Internet access to the other devices.

Note If the computer acting as a gateway is turned off, the other computers on the network will lose their Internet connection. The HP all-in-one will not support Internet-related functions.

If you use this configuration, connect your HP all-in-one to the switch or router with an Ethernet cable. For connection instructions, see [Connect with an Ethernet cable](#).

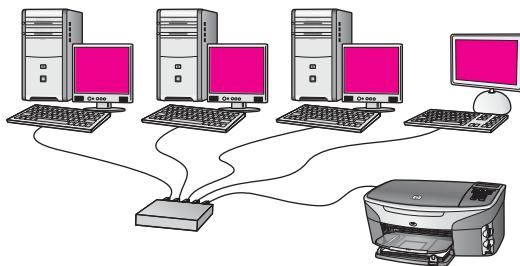
Ethernet connection to a wired network with modem Internet access



In this example, the network devices are connected to a switch or router, and a modem (shown here connected to the computer on the left) provides Internet access. The modem is connected to the computer using a phone cord and jack. Only one computer has Internet access. Neither the HP all-in-one nor any of the other computers on the network have access to the Internet. If you use this configuration, connect your HP all-in-one to the switch or router with an Ethernet cable. For connection instructions, see [Connect with an Ethernet cable](#).

Note In order to use the HP Instant Share features on your HP all-in-one, you will need broadband Internet access, such as cable or DSL. For more information about HP Instant Share, see the printed User Guide that came with your HP all-in-one.

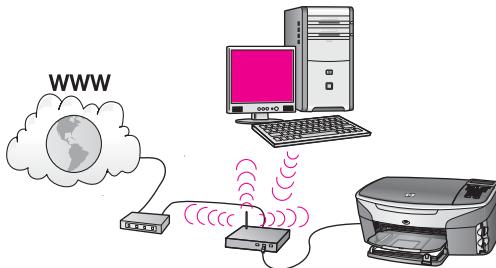
Ethernet connection to a wired network without Internet



In this example, the network devices are connected to a switch or router, and there is no Internet connection. Devices use AutoIP, which means IP addresses are configured automatically. If you have this configuration, connect your HP all-in-one to the switch or router with an Ethernet cable. For connection instructions, see [Connect with an Ethernet cable](#).

Note In order to use the HP Instant Share features on your HP all-in-one, you will need broadband Internet access, such as cable or DSL. For more information about HP Instant Share, see the printed User Guide that came with your HP all-in-one.

Ethernet connection to a wireless network

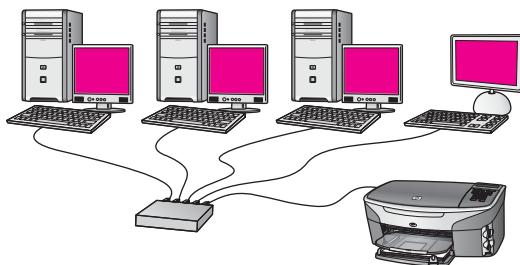


Your access point connects a wired device to a wireless network. In this model, your computer is configured for wireless networking using a wireless network adapter, and transfers and receives data through the access point. Your HP all-in-one is configured for wired networking and is connected with an Ethernet cable to the access point. A DSL or cable modem can provide Internet access. For connection instructions, see [Connect with an Ethernet cable](#).

Note In this configuration, we recommend that you route the Internet connection directly through the access point using an Ethernet cable.

3 Connect with an Ethernet cable

Use this chapter to connect your HP all-in-one to a router, switch, or access point using an Ethernet cable.



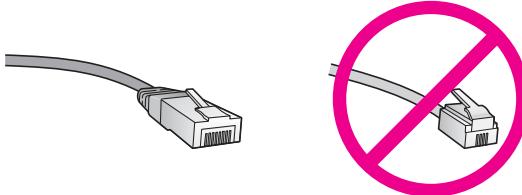
For ideas on how to set up a wired network, see [Choose a recommended Ethernet network](#).

Note For definitions of terms not defined here, see the [Glossary](#).

To connect your HP all-in-one to your computer, first see the next section for the things you will need. When you are finished connecting your HP all-in-one, you will need to install the software as described in [Install the software](#).

What you need

- A functional Ethernet network that includes an Ethernet router, switch, or a wireless access point with Ethernet ports.
- CAT-5 Ethernet cable. If the Ethernet cable provided is not long enough for your network configuration, you might need to purchase a longer cable.



Although standard Ethernet cables look similar to standard telephone cables, they are not interchangeable. There is a different number of wires in each one, and each has a different connector. An Ethernet cable connector (also called an RJ-45 connector) is wider and thicker and always has 8 contacts on the end. A phone connector has between 2 and 6 contacts.

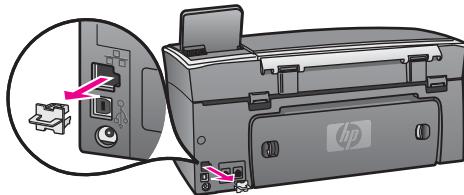
- A desktop computer or laptop with either a wired or wireless connection to the router or access point.

Note The HP all-in-one supports both 10 Mbps and 100 Mbps Ethernet networks. If you are purchasing, or have purchased, a network interface card (NIC), make sure it can operate at either speed.

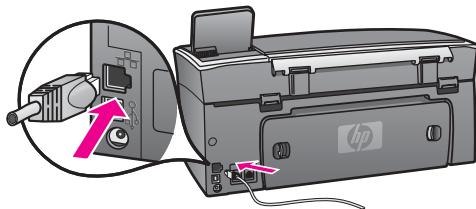
- Broadband Internet access such as cable or DSL (only if you want to access **HP Instant Share** directly from the device). For more information on HP Instant Share, see the printed User Guide that came with your HP all-in-one.

Connect your HP all-in-one

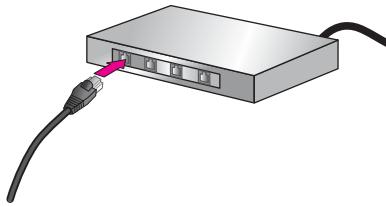
- 1 Remove the yellow plug from the back of the HP all-in-one.



- 2 Connect the Ethernet cable to the Ethernet port on the back of your HP all-in-one.



- 3 Connect the other end of the Ethernet cable to an available port on your Ethernet router, switch, or wireless access point.



- 4 Once you have connected the HP all-in-one to the network, go to your computer to install the software. See [Install the software](#).

4 Install the software

Use this chapter to install your HP all-in-one software on either a Windows or Macintosh computer. However, before you install the software, make sure you have connected your HP all-in-one as described in one of the previous chapters.

Note If your computer is configured to connect to a series of network drives, make sure that your computer is currently connected to these drives before installing the software. Otherwise, HP all-in-one installation software might take one of the reserved drive letters, and you will not be able to access that network drive on your computer.

See the instructions below for your Windows or Macintosh computer.

For Windows

The following instructions are for Windows computers only.

Note Installation time can range from 20 to 45 minutes depending on your operating system, the amount of available space, and the processor speed of your computer.

To install your HP all-in-one software

- 1 Quit all applications running on your computer, including the internal XP firewall and any other firewall or virus detection software.
- 2 Insert the Windows CD that came with your HP all-in-one into your computer's CD-ROM drive.

The **Welcome** screen appears.

Note Windows XP only: If the startup screen does not appear, double-click **My Computer**, double-click the CD-ROM icon, and then double-click **setup.exe**.

- 3 Click **Next** on the installation screens for checking and preparing the system, and for installing drivers, plug-ins, and software.

After several screens, the **Connection Type** screen appears.

- 4 On the **Connection Type** screen, select **Through the network**, and then click **Next**.

The **Searching** screen appears as the Setup program searches for your HP all-in-one on the network.

- 5 On the **Printer Found** screen, verify that the printer description is correct. If more than one printer is found on the network, the **Printers Found** screen appears. Select the device you wish to connect.

To see the device settings on your HP all-in-one:

- a Go to the control panel on your device.
- b Select **View Network Settings** on the **Network Menu**, and then select **Display Summary**.

- 6 If the device description is correct, select **Yes, install this printer**.

- 7 At the prompt, restart your computer to finish the installation process.

When you have finished installing the software, your HP all-in-one is ready for service.

- 8 To test your network connection, go to your computer and print a test page to your HP all-in-one. For more information, see the printed User Guide that came with your HP all-in-one.

For Macintosh

The following instructions are for Macintosh computers only.

Note Installation time can range from 20 to 45 minutes depending on your operating system, the amount of available space, and the processor speed.

To install your HP all-in-one software

- 1 Quit all applications running on your computer.
- 2 Insert the Macintosh CD that came with your HP all-in-one into your computer's CD-ROM drive.
- 3 Double-click the **HP all-in-one installer** icon.



Macintosh installer icon

- 4 On the **Authentication** screen, enter the Administrator pass phrase used to access your computer or network.
The installer software looks for HP all-in-one devices, and then lists them.
- 5 On the Select Device, select your HP all-in-one.
- 6 Follow the onscreen instructions to complete all the installation steps, including the **Setup Assistant**.
When you have finished installing the software, your HP all-in-one is ready for service.
- 7 To test your network connection, go to your computer and print a test page to your HP all-in-one. For more information, see the printed User Guide that came with your device.

5 Manage your network

This chapter describes how to use the network tools on the device control panel and the Embedded Web Server. These tools enable you to view and edit network settings, and add advanced security to your network.

Use the HP all-in-one control panel

The HP all-in-one control panel enables you to perform a variety of network management tasks, including viewing the network settings, restoring the network defaults, and changing the network settings.

View network settings

You can display a summary of the network settings on the device control panel. Or you can print a more detailed configuration page.

Display a network summary

Choose whether to display a network summary or print a detailed report.

To display a network summary

- 1 On the control panel of the HP all-in-one, press the **Setup** button.
- 2 Press **8**, and then press **1**.
This displays the **Network Menu** and then selects **View Network Settings**.
- 3 Press **2**.
This displays a summary of the network settings.

Print and view a network configuration page

The **Network Configuration Page** lists all of the important network settings such as the IP address, link speed, DNS, and DNS-SD.

To print a network configuration page

- 1 On the control panel of the HP all-in-one, press the **Setup** button.
- 2 Press **8**, and then press **1**.
This displays the **Network Menu** and then selects **View Network Settings**.
- 3 Press **1**.
This prints the network configuration page.

For definitions of the items on the configuration page, see [Configuration page definitions](#).

Restore network defaults

If necessary, you can reset the HP all-in-one network to factory defaults.

Note This will erase all wireless setup information that you have entered. In order to restore this information, you will need to use the Wireless Setup Wizard again.

To reset to factory defaults

- 1 On the control panel of the HP all-in-one, press the **Setup** button.
- 2 Press **8**, and then press **2**.
This displays the **Network menu** and then selects **Restore Network Defaults**.
- 3 Press **1** to confirm.

Advanced network settings

The **Advanced Setup** options enable you to change link speed, IP settings, and memory card security.

Note Unless you are an advanced user, you should not change any of these settings.

Set link speed

You can change the speed at which data is transmitted over the network. The default is **Automatic**.

To set the link speed

- 1 On the control panel of the HP all-in-one, press the **Setup** button.
- 2 Press **8**, and then press **3**.
This displays the **Network menu** and then selects **Advanced Setup**.
- 3 Press **1** to select **Change Link Speed**.
- 4 Press the number next to the link speed:
 - **1. Automatic**
 - **2. 10-Full**
 - **3. 10-Half**
 - **4. 100-Full**
 - **5. 100-Half**

Change IP settings

The default IP setting is **Automatic**. However, if necessary, you can manually change the IP address, subnet mask, or the default gateway. To see the IP address and subnet mask of your HP all-in-one, print a network configuration page from your HP all-in-one (see [Print and view a network configuration page](#)). For a description of the items on the configuration page, including the IP address and subnet mask, see [Configuration page definitions](#).

To change an IP setting

- 1 On the control panel of the HP all-in-one, press the **Setup** button.
- 2 Press **8**, and then press **3**.
This displays the **Network menu** and then selects **Advanced Setup**.
- 3 Press **2** to select **IP Settings**.
- 4 Press the number next to the IP setting:
 - **1. IP Address**
 - **2. Subnet Mask**
 - **3. Default Gateway**
- 5 Enter your changes, and then press **OK** when done.

Change memory card security

The **Memory Card Security** option on the **Advanced Setup** menu enables you to set the HP all-in-one so that it does not share memory card data with computers on a **wireless** network. However, we do not recommend this security method for your memory card because it prevents you from accessing your memory card from your computer. Also, this feature does not work on an Ethernet network. All computers on an Ethernet network can access the memory card on a HP all-in-one connected to the network.

Use the Embedded Web Server

The best way to manage the general network settings for the HP all-in-one is through the HP all-in-one control panel. However, for more advanced settings you can use the Embedded Web Server (EWS). When you open the your web browser, you can monitor status, configure HP all-in-one networking parameters, or access HP all-in-one features. For more information about these and other features available in the EWS, see the onscreen Help within the Embedded Web Server. To access Embedded Web Server help, open the Embedded Web Server as described below, then click the **Help** link under **Other Links** on the Embedded Web Server **Home** tab.

Access the Embedded Web Server

To access the Embedded Web Server

- 1 On the control panel of the HP all-in-one, press the **Setup** button.
- 2 Press **8**, press **1**, and then press **1**.
This prints configuration page for your HP all-in-one, including the IP address. You will use the IP address in the next step.
- 3 In the **Address** box in your web browser, enter the IP address of the HP all-in-one, as shown on the network configuration page. For example, <http://195.168.0.5>.
The Embedded Web Server **Home** page appears, showing the HP all-in-one device information.

Note If you are using a proxy server in your browser, you might need to disable it to access the Embedded Web Server.

- 4 If you need to change the language displayed in the Embedded Web Server, do the following:
 - a Click the **Settings** tab.
 - b Click **Select Language** in the **Settings** navigation menu.
 - c In the **Select Language** list, click the appropriate language.
 - d Click **Apply**.
- 5 Click the **Home** tab to access device and network information, or click the **Networking** tab to access more network information or to modify network information.



Caution Be very careful when changing the wireless network settings for the print server; you could lose your network connection. If you lose your network connection, you might need to use the new settings to reconnect. If the print

server loses its network connection, you might need to reset it to factory-default and reinstall the software.

Note Do not disable TCP/IP (Transmission Control Protocol/Internet Protocol) on your computer. It is required for communication with the Embedded Web Server.

6 Network troubleshooting

This section contains network troubleshooting information for the HP all-in-one. Specific information is provided for installation and configuration issues.

Wired network setup troubleshooting

Use this section to solve wired network setup problems.

The Computer is unable to discover the HP all-in-one

Cause

Cables are not connected properly.

Solution

Check the following cables to ensure they are connected properly:

- Power cords to the HP all-in-one and the router
- Cables between the router and your computer
- Cables to and from your modem or HP all-in-one Internet connection (if applicable)

Cause

Your Local Area Network (LAN) card (NIC) is not set up properly.

Solution

Make sure that your LAN card is set up properly.

To check your LAN card in Windows XP

- 1 Right-click **My Computer**.
- 2 In the **System Properties** dialog box, click the **Hardware** tab.
- 3 Click **Device Manager**.
- 4 Make sure your card shows up under **Network Adapters**.
- 5 Refer to the documentation that came with your card.

Cause

You do not have an active network connection.

Solution

Check to see if you have an active network connection.

To make sure your network connection is active

- 1 Check to see if the wired network icon (below on the left) is present on the color graphics display. If the icon is present, the HP all-in-one is connected to the network.

The icon on the left shows an active wired network. The icon on the right shows an inactive network.



Wired network icon

- 2 If the wired network icon is not present, check the cable connections from the HP all-in-one to your gateway or router to ensure connections are secure.
- 3 Make sure the HP all-in-one is connected to the network with a CAT-5 Ethernet cable.
- 4 Check the two Ethernet indicator lights on the top and bottom of the RJ-45 Ethernet jack on the back of the HP all-in-one. The lights indicate the following:
 - a Top light: If this light is a solid green, the device is properly connected to the network, and communications have been established. If the top light is off, there is no network connection.
 - b Bottom light: This yellow light flashes when data is being sent or received by the device over the network.
- 5 If the connections are secure, turn off the power on your HP all-in-one, and then turn it on again. On the control panel of the HP all-in-one, press the **On** button to turn off the HP all-in-one, and then press it again to turn it on. Also, turn off the power on your router and then turn it on again.

To establish an active network connection

- 1 If the wired network icon is not active, check the cable connections from the HP all-in-one to your gateway or router to ensure connections are secure.
- 2 If the connections are secure, press the **On** button to turn off the HP all-in-one, and then press it again to turn it on. Also, turn off the power on your router and then turn it on again.

I received a System Requirements Error: No TCP/IP

Cause

Your Local Area Network (LAN) card (NIC) is not installed properly.

Solution

Make sure your LAN card is installed properly and set up for TCP/IP. See the instructions that came with your LAN card.

The Printer Not Found screen appears during installation

Cause

The HP all-in-one is not turned on.

Solution

Look at the color graphics display on HP all-in-one. If the color graphics display is blank and the light next to the **On** button is not lit, the HP all-in-one is turned off. Make sure the power cord is firmly connected to the HP all-in-one and plugged into a power outlet. Press the **On** button to turn on the HP all-in-one.

Cause

You do not have an active network connection.

Solution

Make sure you have an active network connection. For more information, see [You do not have an active network connection](#).

Cause

Cables are not connected properly.

Solution

Check the following cables to ensure they are connected properly:

- Power cords to the HP all-in-one and the router
- Cables between the router and your computer
- Cables to and from your modem or HP all-in-one Internet connection (if applicable)

I am using a cable modem without a router and I do not have IP addresses

Cause

If you have a PC with a cable modem, a separate Local Area Network (LAN) for your other computers, and no DHCP or router, you must use AutoIP to assign IP addresses to the other computers and to the HP all-in-one.

Solution

To obtain an IP address for the PC with the cable modem

→ Your Internet Service Provider (ISP) assigns either a static or dynamic IP address to the PC with the cable modem.

To assign IP addresses to the remaining computers and the HP all-in-one

→ Use AutoIP to assign IP addresses to the remaining computers and the HP all-in-one. Do not assign a static IP address.

a Configuration page definitions

This appendix explains the items that appear on the network configuration page.

General network settings

The following table describes the general network settings shown on the network configuration page.

Parameter	Description
Network Status	<p>Status of the HP all-in-one:</p> <ul style="list-style-type: none">• Ready: the HP all-in-one is ready to receive or transmit data.• Offline: the HP all-in-one is offline.
Active Connection Type	<p>Network mode of the HP all-in-one:</p> <ul style="list-style-type: none">• Wired: the HP all-in-one is connected by Ethernet cable to an IEEE 802.3 network.• Wireless: the HP all-in-one is connected wirelessly to an IEEE 802.11b or g network.• None: Both network connection types are disabled. <p>Note Only one connection type can be active at a time.</p>
URL	<p>The web or IP address of the Embedded Web Server.</p> <p>Note You will need to know this URL when you try to access the Embedded Web Server.</p>
Hardware Address (MAC)	<p>The Media Access Control (MAC) address that uniquely identifies the HP all-in-one. This is a unique 12-digit identification number assigned to networking hardware for identification. No two pieces of hardware have the same MAC address.</p> <p>Note Some Internet service providers (ISPs) require that you register the MAC address of the Network Card or LAN Adapter that was connected to your cable or DSL modem during installation.</p>
Firmware Revision	<p>The internal networking component and device firmware revision code separated by a hyphen.</p> <p>Note If you call in for support, depending on the problem, you might be asked to provide the firmware revision code.</p>
Hostname	<p>The TCP/IP name assigned by the install software to the device. By default, this is the letters HP followed by the last 6 digits of the MAC address.</p>
IP Address	<p>This address uniquely identifies the device on the network. IP addresses are assigned dynamically through DHCP or AutoIP. You can also set up a static IP address, though this is not recommended.</p> <p>Note Manually assigning an invalid IP address during install will prevent your network components from seeing the HP all-in-one.</p>

Subnet Mask	<p>A subnet is an IP address assigned by the install software to make an additional network available as part of a larger network. Subnets are specified by a subnet mask. This mask determines which of the HP all-in-one IP address bits identify the network and subnet, and which bits identify the device itself.</p> <p>Note It is recommended that the HP all-in-one and the computers that use it all reside on the same subnet.</p>
Default Gateway	<p>A node on a network that serves as an entrance to another network. A node in this instance can be a computer or some other device.</p> <p>Note The address of the default gateway is assigned by the install software.</p>
Configuration Source	<p>The protocol used to assign the IP address to the HP all-in-one:</p> <ul style="list-style-type: none"> • AutoIP: the installation software automatically determines the configuration parameters. • DHCP: the configuration parameters are supplied by a dynamic host configuration protocol (DHCP) server on the network. On small networks, this could be a router. • Manual: the configuration parameters are set manually, such as a static IP address. • Not Specified: the mode used when the HP all-in-one is initializing.
DNS Server	<p>The IP address of the domain name service (DNS) for the network. When you use the web or send an e-mail message, you use a domain name to do it. For example, the URL http://www.hp.com contains the domain name hp.com. The DNS on the Internet translates the domain name into an IP address. Devices use the IP addresses to refer to one another.</p> <ul style="list-style-type: none"> • IP Address: the domain name server's IP address. • Not Specified: the IP address is not specified, or the device is initializing. <p>Note Check to see if a DNS IP address appears on the network configuration page. If no address is shown, obtain the DNS IP address from your Internet service provider (ISP). The DNS IP address is required to use HP Instant Share from the device, and can be entered through the Embedded Web Server.</p>
mDNS	<p>Rendezvous is used with local and ad hoc networks that don't use central DNS servers. To perform name services, Rendezvous uses a DNS alternative called mDNS.</p> <p>With mDNS, your computer can find and use any HP all-in-one connected to your local area network. It can also work with any other Ethernet-enabled device that appears on the network.</p>
Admin Password	<p>Status of the administrator's password for the Embedded Web Server:</p> <ul style="list-style-type: none"> • Set: password is specified. You must enter the password to make changes to the Embedded Web Server parameters. • Not Set: no password is set. A password is not required for making changes to the Embedded Web Server parameters.

(continued)

Link Configuration	<p>The speed at which data is transmitted over a network:</p> <ul style="list-style-type: none">• 802.11b: for wireless network.• 10TX-Full: for wired network.• 10TX-Half: for wired network.• 100TX-Full: for wired network.• 100TX-Half: for wired network.• None: networking is disabled.
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Wireless network settings

The following table describes the wireless network settings shown on the network configuration page.

Parameter	Description
Wireless Status	<p>Status of the wireless network:</p> <ul style="list-style-type: none">• Connected: the HP all-in-one is connected to a wireless LAN and everything is working.• Disconnected: the HP all-in-one is not connected to the wireless LAN due to incorrect settings (such as the wrong WEP key), or the HP all-in-one is out of range.• Disabled: either the radio is turned off, or the Ethernet cable is plugged in.• Not applicable: this parameter does not apply to this network type.
Communication Mode	<p>An IEEE 802.11 networking framework in which devices or stations communicate with each other:</p> <ul style="list-style-type: none">• Infrastructure: the HP all-in-one communicates with other network devices through a wireless access point, such as a wireless router or base station.• ad hoc: the HP all-in-one communicates directly with each device on the network. No wireless access point is used. This is also called a peer-to-peer network. On Macintosh networks, ad hoc mode is called computer-to-computer mode.• Not applicable: this parameter does not apply to this network type.
Network Name (SSID)	<p>Service Set Identifier. A unique identifier (up to 32 characters) that differentiates one wireless local area network (WLAN) from another. The SSID is also referred to as the network name. This is the name of the network to which the HP all-in-one is connected.</p>
Signal Strength (1-5)	<p>The transmitting or return signal graded on a scale of 1 to 5:</p> <ul style="list-style-type: none">• 5: Excellent• 4: Good• 3: Fair• 2: Poor• 1: Marginal• No signal: no signal detected on the network.• Not applicable: this parameter does not apply to this network type.
Channel	<p>The channel number currently being used for wireless communication. This depends on the network in use, and might differ from the requested channel</p>

	<p>number. Value is from 1 to 14; countries/regions might limit the range of approved channels.</p> <ul style="list-style-type: none"> • <number>: value ranging from 1 to 14, depending on country/region. • None: no channel is in use. • Not Applicable: the WLAN is disabled or this parameter does not apply to this network type. <p>Note In ad hoc mode, if you are not able to receive or transmit data between your computer and the HP all-in-one, make sure that you are using the same communication channel on your computer and the HP all-in-one. In infrastructure mode, the channel is dictated by the access point.</p>
Authentication type	<p>Type of authentication in use:</p> <ul style="list-style-type: none"> • None: no authentication in use. • Open System (ad hoc and infrastructure): no authentication. • Shared Key (infrastructure only): WEP key is required. • WPA-PSK (infrastructure only): WPA with Pre-Shared Key. • Not applicable: this parameter does not apply to this network type. <p>Authentication verifies the identity of a user or device before granting access to the network, making it more difficult for unauthorized users to get at network resources. This security method is common on wireless networks.</p> <p>A network using Open System authentication does not screen network users based on their identities. Any wireless user can have access from the network. However, such a network might use WEP (Wired Equivalent Privacy) encryption to provide a first level of security against casual eavesdroppers.</p> <p>A network using Shared Key authentication provides increased security by requiring users or devices to identify themselves with a static key (a hexadecimal or alphanumeric string). Every user or device on the network shares the same key. WEP encryption is used along with shared key authentication, using the same key for both authentication and encryption.</p> <p>A network using server-based (WPA-PSK) authentication provides significantly stronger security, and is supported in most wireless access points and wireless routers. The access point or router verifies the identity of a user or device requesting access to the network before granting that access. Several different authentication protocols might be used on an authentication server.</p> <p>Note Shared key and WPA-PSK authentication can only be entered through the Embedded Web Server.</p>
Encryption	<p>The type of encryption in use on the network:</p> <ul style="list-style-type: none"> • None: no encryption is in use. • 64-bit WEP: a 5-character or 10-hex-digit WEP key is in use. • 128-bit WEP: a 13-character or 26-hex-digit WEP key is in use. • WPA-AES: Advanced Encryption Standard encryption is in use. This is an encryption algorithm for securing sensitive but unclassified material by US Government agencies. • WPA-TKIP: Temporal Key Integrity Protocol, an advanced encryption protocol, is in use.

(continued)

	<ul style="list-style-type: none">• Automatic: AES or TKIP is in use.• Not applicable: this parameter does not apply to this network type. <p>WEP aims to provide security by encrypting data over radio waves so that it is protected as it is transmitted from one end point to another. This security method is common on wireless networks.</p>
Access Point HW Address	<p>The hardware address of the access point on the network to which the HP all-in-one is connected:</p> <ul style="list-style-type: none">• <MAC address>: the unique MAC (media access control) hardware address of the access point.• Not applicable: this parameter does not apply to this network type.

Miscellaneous

The following table describes the data transmission and receipt information shown on the network configuration page.

Parameter	Description
Total Packets transmitted	The number of packets transmitted by the HP all-in-one without error since it has been turned on. The counter clears after the HP all-in-one is turned off. When a message is transmitted over a packet-switching network, it is broken up into packets. Each packet contains the destination address as well as the data.
Total Packets received	The number of packets received by the HP all-in-one without error since it has been turned on. The counter clears after the HP all-in-one is turned off.

Appendix a

b Glossary

ASCII	American Standard Code for Information Interchange. The standard for numbers used by computers to represent all the uppercase and lowercase Latin letters, numbers, punctuation, etc.
autoIP	A feature of the installation software, which determines the configuration parameters of devices on the network.
DHCP	Dynamic Host Configuration Protocol. A server on the network that supplies configuration parameters to devices on the network. On small networks, this could be a router.
DNS	Domain Name Service. When you use the web or send an e-mail message, you use a domain name to do it. For example, the URL http://www.hp.com contains the domain name <code>hp.com</code> . The DNS on the Internet translates the domain name into an IP address. Devices use the IP addresses to refer to one another.
DNS-SD	See DNS. The SD portion stands for Service Discovery. This is part of a protocol developed by Apple that enables automatic discovery of computers, devices, and services on IP networks.
DSL	Digital Subscriber Line. A high-speed connection to the Internet.
Ethernet	The most common local network technology that connects computers using copper cabling.
Ethernet cable	The cable used to connect network elements in a wired network. The CAT-5 Ethernet cable is also known as a straight-through cable. When using an Ethernet cable, the network elements must be attached to a router. The Ethernet cable uses an RJ-45 connector.
EWS	Embedded Web Server. A browser-based utility that provides a simple way to manage your HP all-in-one. You can monitor status, configure HP all-in-one networking parameters, or access HP all-in-one features. For more information, see Use the Embedded Web Server .
HEX	Hexadecimal. The base 16 numbering system, which uses the digits 0-9 plus the letters A-F.
hub	No longer used much in modern home networks, a hub takes its signal from each computer and sends it to all of the other computers connected to the hub. Hubs, are passive; other devices on the network plug into the hub in order to communicate with one another. A hub does not manage the network.
IP address	A number that uniquely identifies the device on the network. IP addresses are assigned dynamically through DHCP or AutoIP. You can also set up a static IP address, though this is not recommended.
infrastructure	An infrastructure network uses a router, switch, or access point to connect network elements.

Appendix b

(continued)

MAC address	Media Access Control (MAC) address that uniquely identifies the HP all-in-one. This is a unique 12-digit identification number assigned to networking hardware for identification. No two pieces of hardware have the same MAC address.
NIC	Network Interface Card. A card on your computer that provides an Ethernet connection so that you can connect your computer to a network.
RJ-45 connector	The connector on the ends of an Ethernet cable. Although standard Ethernet cable connectors (RJ-45 connectors) look similar to standard telephone cable connectors, they are not interchangeable. An RJ-45 connector is wider and thicker and always has 8 contacts on the end. A phone connector has between 2 and 6 contacts.
SSID	Service Set Identifier. A unique identifier (up to 32 characters) that differentiates one wireless local area network (WLAN) from another. The SSID is also referred to as the network name. This is the name of the network to which the HP all-in-one is connected.
router	A router provides a bridge between two or more networks. A router can link a network to the Internet, link two networks and connect both to the Internet, and help secure networks through the use of firewalls and assigning dynamic addresses. A router can also act as a gateway, while a switch cannot.
switch	A switch makes it possible for several users to send information over a network at the same time without slowing each other down. Switches allow different nodes (a network connection point, typically a computer) of a network to communicate directly with one another.

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