HP CM8060/CM8050 Color MFPs
with Edgeline Technology
Reviewer/Evaluator's Guide

Contents

Getting to know the MFP

A department-class powerhouse featuring high speeds, high quality, and low cost per page.

Welcome to the Reviewer/Evaluator's Guide for the new HP CM8060/CM8050 Color MFP with Edgeline Technology. This guide will introduce you to the product and help you to conduct a successful evaluation.

The HP CM8060/CM8050 Color MFP with Edgeline Technology is a multifunction product for demanding businesses looking to improve productivity and control operating costs. Versatile, powerful, and designed to serve the needs of enterprise departments, it delivers high-speed performance,[1] best-in-class operating costs,[2] best-in-class reliability,[3] excellent output quality, and intuitive usability. Enjoy unprecedented performance and print quality with HP's new Edgeline Technology and Vivera office inks. Take advantage of a full spectrum of multi-function capabilities, from printing, copying, and faxing,[4] to embedded send to e-mail and send to network folder functionality.

Top features

The HP CM8060/CM8050 Color MFP with Edgeline Technology is built to perform, with a combination of features and affordability unmatched by any machine in its class. Improve productivity and reduce print and copy costs with a fast, versatile, multi-purpose print device you can rely on.
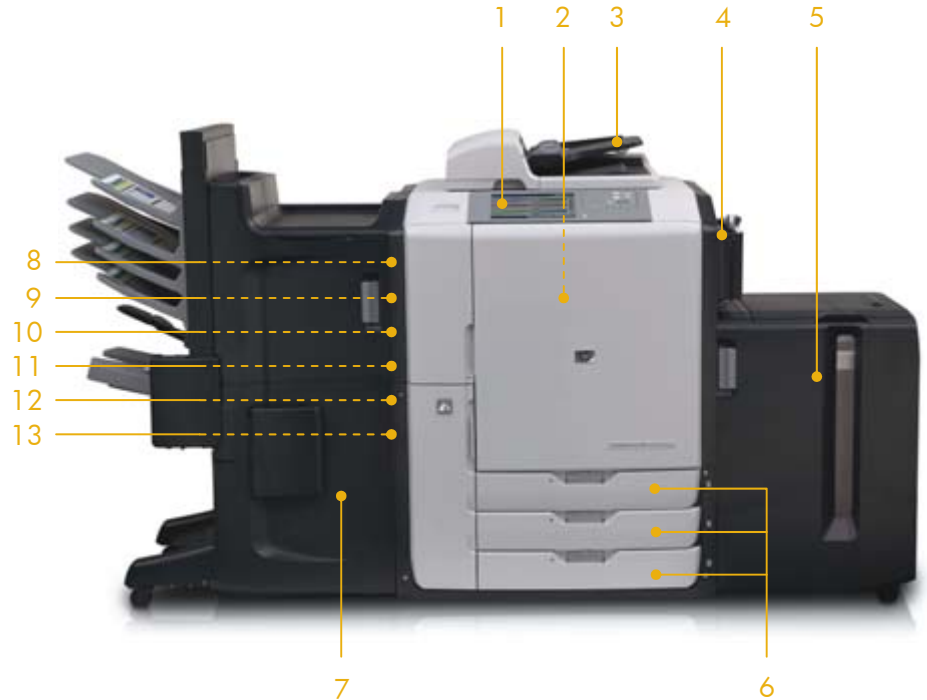
- **Keep operating costs under control.** With the HP CM8060/CM8050 Color MFP, you pay one price for each page of Professional color, another lower price for General Office color, and a third price for black-and-white. This two-tier color pricing structure makes the product significantly less expensive to operate than similar competitor offerings. Plus, HP's Color Access Control provides the tools to manage who uses color and when they use it.

- **Add a dash of color at no extra cost.** HP's Color Accent feature keeps your overall printing costs down by charging Pay per use users the black-and-white price for pages that use a very small amount of color.[6]

- **Save time with blazing fast speeds.** HP's new Edgeline Technology means you can print a wide range of common business documents on plain papers at an average of 50 pages per minute (ppm) color and 60 ppm black-and-white with the HP CM8060 Color MFP (an average of 40 ppm color and 50 ppm black-and-white with the HP CM8050 Color MFP). Experience maximum speeds of 71 ppm black-and-white or color on less complex documents with the CM8060 (57 ppm with the CM8050).

- **Expect an unsurpassed user experience.** Easily access the device's features via HP's award-winning[7] Easy Select Control Panel. The 10-inch color touch-screen clearly displays all available applications and settings, and troubleshooting is a snap.

- **Scan directly to e-mail, network folders, and more.** The color flatbed scanner and 100-sheet ADF allow you to scan to PC, a network folder, LAN fax, Internet fax, or e-mail. Get enhanced security with network authentication and easy integration with LDAP support.

- **Produce brilliant, resilient documents.** New HP Vivera office inks not only produce vibrant color images and crisp text quality at any speed, but also deliver water resistant prints that resist smearing on plain papers. Four individual extra-high-capacity ink cartridges and a bonding agent cartridge eliminate waste and minimize costs.

- **Count on legendary quality and reliability from HP.** The reliability of HP equipment, support, and service is the biggest contributor to user productivity and low total cost of ownership.

Product walk-around

1. Easy Select Control Panel: 10-inch touch-screen with 12-key number pad provides effortless interaction
2. Automatic two-sided printing offers fast, efficient duplexing
3. 100-sheet automatic document feeder (ADF) automatically scans two-sided documents
4. 80-sheet multipurpose tray handles heavy custom media up to 58 lb (220 g/m^2)
5. Optional 4,000-sheet high-capacity input tray 5 (sold separately)
6. Adjustable 500-sheet input trays 2, 3, and 4
7. Choose the right output solution:[5] a single output bin, a 4-bin job separator, or a multifunction finisher (shown here; each sold separately)
8. Flexible connectivity with a device USB port and a host USB port for third-party solutions
9. HP Jetdirect embedded print server enables high-performance networking
10. 1 GB total memory and a powerful 1.6 GHz Intel Pentium M-730 processor perform complex tasks quickly
11. 80 GB embedded hard disk for effective digital sending, private printing, and job storage
12. EIO expansion slot
13. Analog fax connection for optional analog fax

HP CM8060 Color MFP shown with the optional multifunction finisher and the optional 4,000-sheet input tray 5

The HP CM8050 Color MFP offers all the features of the CM8060 model, but with slightly lower print speeds, at a reduced cost.

Choose the paper handling solution that fits your business

4,000-sheet input tray

Add the optional large-capacity input tray to support high-volume printing while reducing user intervention. Print up to 5,580 letter or A4 sheets through up to 5 input options without reloading.

Single output bin[5]

Get standard output capacity—about 250 sheets—with this single output bin. The tray supports plain paper in a wide variety of sizes and weights.

4-bin job separator[5]

Get a maximum output capacity of 1,200 sheets while separating copy, print, and fax[4] jobs to different output bins. Two bins hold up to 400 sheets each and two more hold up to 200 sheets each.

Multifunction finisher[5]

Get extra output capacity—up to 3,700 sheets in five bins—and separate jobs by function. Staple up to 50 sheets per document and stack up to 1,000 stapled sheets.

Evaluating color multifunction products

Based on extensive market research and customer feedback, HP has identified user needs in seven key categories. These categories should be closely examined as businesses consider purchasing a color multifunction product. In this section, we will examine each of these and how the HP CM8060/CM8050 Color MFP with Edgeline Technology meets the criteria in each category.

1—Ease of use

2—Versatility

3—Performance

4—Reliability

5—Output quality

6—Total cost of ownership

7—Network management solutions

The HP CM8060/CM8050 Color MFP is ideal for departments in enterprise, large, and medium companies that need a fast, versatile, multi-purpose print device they can rely on. Together with the new Edgeline Technology, the product delivers high-speed performance,[1] best-in-class operating costs,[2] best-in-class reliability,[3] high-quality, resilient output, and intuitive usability, plus printing, copying, faxing,[4] and embedded send to e-mail and network folder functionality. HP features set this product apart from the competition:

- A two-tiered color pricing model with Pay per use services keeps color costs under control. Plus, HP's Color Access Control provides you with the tools to decide who uses color and when they use it.

- For Pay per use users, HP's Color Accent feature keeps your overall printing costs down by charging the black-and-white price for pages that use a very small amount of color.[6]

- The product delivers black-and-white prints for about the same price you'd pay for black-and-white prints from an equivalent-class monochrome MFP.

- The award-winning[7] HP Easy Select Control Panel user interface makes it easy to perform a number of tasks.

During your evaluation, we invite you to compare the HP CM8060/CM8050 Color MFP with Edgeline Technology to other competing products to see why it is the best choice for your workplace!

Evaluation guidelines

As you design tests and conduct your evaluation, remember the following guidelines:

- Consider the typical end-user's hardcopy needs.

- Simulate the end-user's environment.

- When testing more than one product, try to make a fair comparison between products by setting up in the same environment and testing similar device settings and configurations.

- Analyze each element of the document creation process, but remember that the elements work together as part of the whole solution. (For instance, performance claims mean very little if documents print incorrectly or with poor print quality.)

Intuitive usability for both IT and end users

The HP CM8060/CM8050 Color MFP with Edgeline Technology is easy to use and easy to manage. It integrates effortlessly into your business environment, reducing your day-to-day business concerns and allowing you to invest your time in other issues.

Simple connectivity

- Workgroups can easily and conveniently share the MFP with the HP Jetdirect Fast Ethernet embedded print server. With embedded networking, you experience increased reliability, less cable clutter, and EIO slot availability for even more connectivity options.
- Manageable, upgradeable, and robust, HP Jetdirect full-featured print servers offer enterprise environments outstanding performance, advanced security features, and support for a broad range of network operating systems and protocols.
- HP Web Jetadmin software enables efficient installation, configuration, and management.
- The network configuration wizard reduces the time and complexity of networked printer installation and configuration by providing easy, straightforward steps and a user-friendly interface.

Effortless interaction

- HP printer software, with its standardized drivers and interfaces, provides a familiar look and feel for HP users.
- HP partnerships allow you to access third-party solutions in the areas of document capture, job accounting, and security quickly and easily through your MFP's host USB port.
- The 100-sheet reversing automatic document feeder supports unattended two-sided copying and scanning of double-sided originals.
- The automatic two-sided printing unit delivers professional two-sided documents with no user intervention.

Intelligent supplies

Interactive technology in the device and Original HP printing supplies is designed to maintain device reliability while optimizing the quality of every page printed. To minimize interruptions, the system monitors supplies levels and provides alerts when supplies should be reordered or need to be replaced.[8] The HP ink cartridges, MFP, and software are designed to work together, allowing you to monitor your current supplies and print successfully every time. A simple design enables any user to manage HP ink cartridges, and when a cartridge runs out, helpful instructions ensure effortless replacement.

Easy and intuitive operational control

HP completely redefines the term usability with its new, radically simple user interface. Easily take advantage of your MFP's complete feature set with an intuitive interface that clearly displays all available applications.

Powerful tools and services allow you to manage the MFP simply and provide convenient access to device information, settings, and support. For more information, see "Productivity tools" on page 25.

Automatic Printer Wakeup

Just like your coffee maker, the Automatic Printer Wakeup feature allows you to set your MFP to be warmed up and ready first thing in the morning.

Intuitive, helpful control panel

The award-winning[7] HP Easy Select Control Panel features a ten-inch full VGA color touch-screen. It's easy to perform a number of tasks, with a wide variety of settings available around each application, and familiar Windows® emulation icons that make navigation a snap. All options required to perform a function are contained within each submenu, so there's no need to access several different menus for any one job. Troubleshooting is simple with video demonstrations and indicator lights to guide you through certain tasks. An automatic navigation tool walks you through paper jam removal.
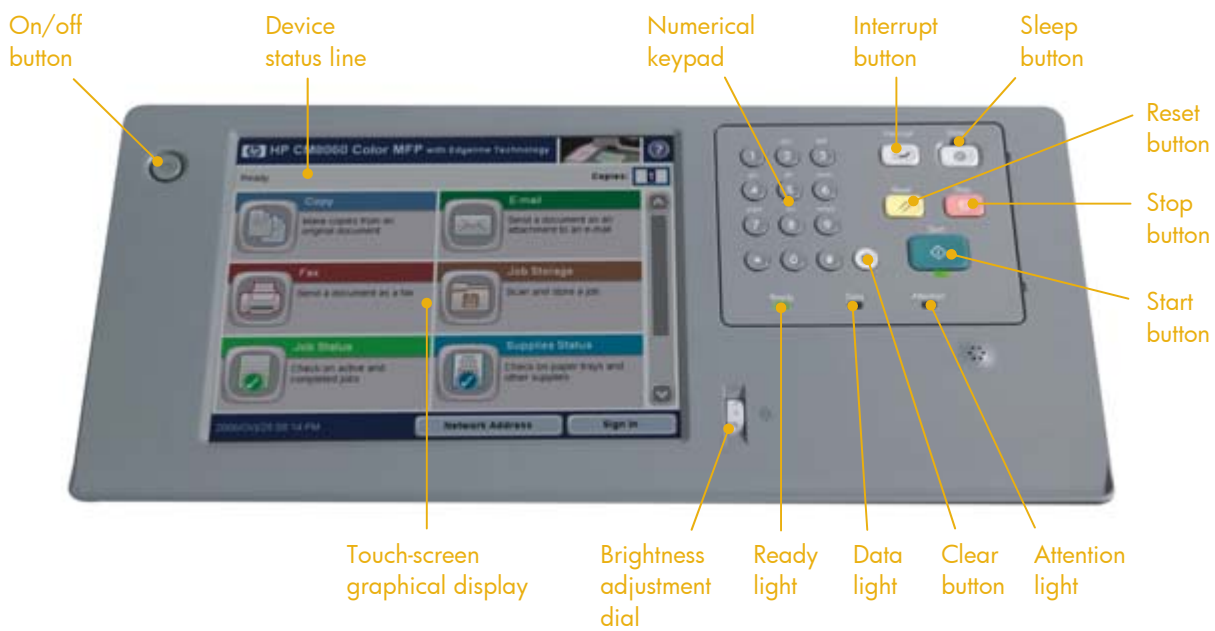
Use the control panel's menus to set system defaults, customize settings for a particular job, and store and retrieve printed and scanned jobs.

The control panel offers:

- Clear feedback during interaction with the touch-screen graphical display
- Support for learning how to use product features
- Clear instructions and illustrations
- Easy-to-read status messages in one location

The control panel includes a color touch-screen graphical display with a contrast adjustment dial for optimal viewing, five job-control buttons, a 12-key numeric keypad, three LED status indicator lights, and a Sleep mode button.

View and adjust job status

The control panel's new **Job Status** function allows administrators and authorized users to view the job queue, adjust any job's placement in the queue, or easily cancel a job.

Extensive user help

The device has a built-in Help system that explains how to use each screen. To open the Help system, touch the Help button in the upper-right corner of the screen. For some screens, the Help button opens to a global menu where you can search for specific topics. For screens that contain settings for individual jobs, the Help button opens to a topic that explains the options for that screen.

Universal Print Driver

The HP Universal Print Driver for Windows is the single driver that gives users instant access to virtually any HP LaserJet printer or MFP, at home, in the office, or on the road—without downloading separate drivers. More than a one-size-fits-all print solution, this sophisticated yet simple print driver communicates directly with each HP device, gathers configuration information, then customizes the user interface to show the device's unique, available features. While some multi-device print drivers only enable the most basic functions, the HP Universal Print Driver enables all available features—no matter how advanced—from two-sided printing and stapling to watermark printing on all of the devices it supports.

Because it's just as important for print drivers to communicate with people as with printers, the HP Universal Print Driver is available in twenty-six different languages. This multilingual driver also supports multiple printer languages, including PCL 5, PCL 6, and HP postscript emulation and is compatible with a range of Windows environments, including Windows Vista™.

Get even more functionality from the HP Universal Print Driver. Use Managed Printing Administration software or Active Directory templates to set policies that control color access and manage print status notifications or to create user groups, printer lists, and more. Define user groups by department, printing needs (high-quality color or advanced finishing), or printer location.

To download the free HP Universal Print Driver, go to: www.hp.com/go/upd.

Setting up the MFP

1. Identify an appropriate physical location and power source for the MFP. Have HP or a partner reseller install the device and print an internal test page.

2. Determine how the device will be connected to the network and use the configuration menus under the administration functions to set the network connection protocol. Run the network connection software. Refer to the System Administrator Guide for further information.

3. Install the drivers and other device software and then print some test pages. Document any driver or software changes performed during testing. Note which platforms and printer languages the drivers support.

4. If you are evaluating digital sending, run the setup e-mail wizard, or configure the device via the Embedded Web Server or Web Jetadmin. If you are evaluating the optional fax functions, run the fax setup wizard in the Administration functions.

5. Configure the device's security settings (device access, color access controls, etc.) using the Embedded Web Server or Web Jetadmin.

Consider the following:

- Was the installation completed in a timely manner?
- Did you receive a product walk-around to familiarize you with the features of the device?
- Is the device working as expected after installation?
- Are the user documentation and installation and setup software helpful?
- How does the overall product design contribute to ease of setup?
- How well are you able to install and interact with supplies and accessories?

Testing product software

Evaluate the product software:

- How long does it take to install the software?
- Are the drivers easy to use?
- What special software or tools are available?
- What special features or utilities does each driver or tool include?
- Is it easy to create color access settings and assign user types?

Interacting with the control panel

Try the various control panel functions. When comparing products, consider the following:

- In general, is the control panel easy to use?
- How easy is it to determine device, job, and ink cartridge status?
- Is it easy to scan, make copies, and send faxes from the control panel?
- Can you electronically send documents and images from the control panel?
- Can you access help options from the control panel?

Multifunction productivity with the flexibility to meet your needs

When you purchase an HP CM8060/CM8050 Color MFP with Edgeline Technology and HP Vivera office inks, you get a full-featured black-and-white and color printer/copier, a color scanner, a fax,[4] and a digital sender— all in one amazing device. Plus, choose from four different paper handling solutions to best meet your specific needs. For ordering and additional information on all accessories, see "Appendix B—Ordering information" on page 29.

The best of monochrome and color in one device

The HP CM8060/CM8050 Color MFP capably serves a wide variety of users with very diverse needs. The device is a high speed color MFP that features Professional mode for professional quality color printing and copying with competitive per-page costs for demanding color users that need premium quality prints. At the same time, this versatile MFP also offers General Office mode to serve the needs for everyday low-cost color printing in a general office environment. In addition, the Color Accent feature allows users to print a dash of color on a page for the price of a black-and-white page.[6] The product also offers high-speed black-and-white printing and copying, delivering black-and-white prints for about the same price you'd pay for black-and-white prints from an equivalent-class monochrome MFP.

Build to suit your environment

For the utmost in flexibility, choose between the HP CM8060 Color MFP (C5957A) and the HP CM8050 Color MFP (C5958A). The products share all features in common, except that the HP CM8060 Color MFP prints at an accelerated rate—an average of 60 pages per minute (ppm) black-and-white, 50 ppm color, with maximum speeds of 71 ppm black-and-white or color on less complex documents—while the HP CM8050 Color MFP prints at an average of 50 ppm black-and-white, 40 ppm color, with maximum speeds of 57 ppm, at a reduced cost. Add the optional Analog Fax Accessory to meet the needs of your business and maximize the return on your hardware investment.

Get investment protection with next-generation TCP/IP protocol support with IPv6,[9] standard Gigabit Ethernet network compatibility, and standard IPsec security. An open EIO slot and host USB port allow you to expand the MFP's capabilities with easy access to additional solutions in the areas of document capture, job accounting, and security. HP partnerships allow you to quickly and easily enable one-of-a-kind third-party solutions such as additional forms, fonts, and barcode printing capabilities. The 1284 parallel IO card gives you the ability to add a parallel interface.

In addition, HP Imaging and Printing Services provides a full range of services to help you gain control of all aspects of your printing environment—with a clear focus on maximizing the value of your investment, increasing printer uptime, planning for future technology needs, and reducing printer management costs. For more information, please see page 16.

Flexible paper handling

Versatile input trays

The MFP supports up to five input trays for an impressive total input capacity of up to 5,580 sheets. Multiple input trays allow immediate access to several different paper sizes and types, reducing the time spent

replenishing supplies. Both models in the series include an 80-sheet multipurpose tray and three 500-sheet input trays. Add the optional 4,000-sheet high-capacity input tray 5 to support high-volume printing while reducing user intervention.

Adjustable input trays store a variety of standard and custom paper sizes. The multipurpose tray supports paper from 4 by 6 inches to 12 by 18 inches (102 by 148 mm to 305 by 457 mm), while input trays 2, 3, and 4 support paper from 5.5 by 8.27 inches to 11.69 by 17 inches (140 by 210 mm to 297 by 432 mm), and the optional input tray 5 supports letter and A4 paper. The product supports paper (plain, preprinted, letterhead, prepunched, bond, color, recycled, matte, HP Glossy for Edgeline), labels, and cardstock. For the product's complete media specifications, see "Appendix A" on page 27.

Choose the paper finishing solution that fits your needs

The HP CM8060/CM8050 Color MFP with Edgeline Technology comes with three output accessory options:[5]

- Get standard output capacity—about 250 sheets—with the single output bin. The bin supports paper in a wide variety of sizes and weights.

- The 4-bin job separator allows a maximum output capacity of 1,200 sheets while separating copy, print, and fax[4] jobs to different output bins. Two bins hold up to 400 sheets each and two more hold up to 200 sheets each.

- Get extra output capacity—up to 3,700 sheets in five bins—with the multifunction finisher. Separate jobs by function with the 4-bin job separator and use the stacker/stapler to staple up to 50 sheets per document and stack up to 1,000 stapled sheets.

Automatic two-sided printing, copying, and scanning

The product includes a 100-sheet automatic document feeder that supports two-sided copying and scanning of double-sided originals. This allows for unattended copying and scanning and improved productivity because the originals don't have to be manually fed into the device. In addition, the standard automatic two-sided printing unit reduces your printing costs, virtually doubles the device's input capacity, and makes paperwork more manageable, freeing up space in your files and on your desk.

Automatically print the right paper type

When you assign a paper type to each input tray, you can select a paper type in the print driver and the MFP automatically finds and uses the requested paper. This feature also prevents accidentally printing on special, more expensive media, such as glossy paper.

Effortless copying

The MFP may be used as a standalone, walk-up copier—you do not need to be connected to a computer to make copies. You can adjust all copy settings at the control panel, including lightness/darkness of reproduction, reduce or enlarge from 25 to 400 percent, watermarks/overlays/stamps, or even produce 2-up and 4-up copies to conserve resources. The device also offers many advanced features you expect in a department-class device, such as Job Build, Color Settings, Automatic Exposure Selection, Automatic Magnification Selection, Automatic Paper Selection, and Automatic Tray Switching.

Reliable scanning

Scan your color documents and send them via e-mail to ensure they maintain their readability. Utilize the automatic document feeder for easy two-sided scanning for documents up to legal size, or use the flatbed scanner for books, magazines, or single sheets of various sizes up to 11 by 17 inches (297 by 432 mm) or A3. The scanner supports the following file types: JPEG, TIFF (compressed and uncompressed), PDF, and MTIFF. Process documents with included Optical Character Recognition (OCR) software and convert them from image files to searchable text files in popular formats, including PDF.

Digital sending

The MFP comes standard with these digital sending features to streamline workflows in your office: send to e-mail, send to network folder, send to LAN fax, and send to Internet fax; LDAP, Kerberos, and SMTP authentication; and LDAP addressing. Plus, you can configure and manage these features using the world's most popular printer management tool—Web Jetadmin.

Affordable and reliable analog faxing

Quickly and easily send and receive documents by adding analog fax functionality to your MFP. (Fax functionality is optional for the HP CM8060/CM8050 Color MFP; not included, sold separately.) Designed with flexibility in mind, this HP analog fax accessory increases the value of your MFP, supports efficient information sharing, and improves office productivity. Enjoy such features as standard JBIG compression, secure faxing with manual and scheduled memory lock, fax forwarding, speed dial, and auto redialing. Save time, paper, and printing supplies by sending and receiving faxes directly from your computer—even from applications like Microsoft® Word or Excel—with the PC Send Fax driver, available for free at www.hp.com/support.

Printing flexibility

To deliver effortless printing in multiple environments, the MFP supports HP PCL5c for backward compatibility and legacy print jobs, HP PCL6 for performance, and HP postscript level 3 emulation for PostScript® print jobs. Automatic language switching ensures that the appropriate printer language is used for each print job.

HP's Direct PDF printing

With the MFP's direct PDF printing solution, you can send PDF files from any device, without using PDF reader/converter software. The product directly renders PDFs to printed output, bypassing conversion processes used by other product-based solutions, which increases printing performance and avoids possible conversion errors. Direct PDF printing enables driverless printing of PDF files, allowing you to print from devices of all types, such as mobile phones, handheld computers, PDAs, and notebook computers.

Department multitasking

Experience effortless multitasking with enhanced memory and HP technology. Scan a new job while the MFP is processing another scan or print job. After the current job is completed, the device will process the one in memory. You also have the ability to "interrupt" the current job to make a quick copy when you need to.

Embedded hard drive with convenient job retention features

The MFP includes an 80 GB embedded hard drive with four job retention features that allow printing to be initiated from the device control panel after the print job is sent from the computer. Take advantage of a virtual mailbox to keep sensitive documents confidential, proof a document before releasing the remaining copies, and store frequently printed jobs for easy retrieval, such as expense reports or invoices.

Quick Copy	Prints the requested number of copies of a job and stores a copy of the job on the MFP's hard drive. Additional copies of the job can be printed later, directly from the MFP's control panel.
Proof and Hold	Provides a quick and easy way to print and review the first copy of a job with multiple copies. After reviewing the first copy, you can either print the remaining copies, which have been saved at the MFP, or cancel the job from the control panel. After all copies are printed, the Proof and Hold job is deleted from the MFP. This reduces network traffic, paper waste, and supplies costs.
Private Printing (virtual mailbox)	Lets you protect confidential documents by allowing you to hold a job for printing until you release it using a 4-digit Personal Identification Number (PIN) through the MFP's control panel. When you enter the PIN in the driver, it is sent to the MFP as part of the print job.
Stored Job	Allows you to download a print job to the MFP without printing it. You can then print the job at any time from the MFP's control panel. For example, you may want to download a personnel form, calendar, time sheet, or accounting form that other users can access and print.

Evaluating paper handling

Produce the type of material typical for your day-to-day business, such as a report, spreadsheet, high-quality brochure, or other professional document. While you perform your evaluation, consider the following:

- Is the product customizable to meet your needs? Does it fit into your existing office environment?
- Is the paper-handling system adjustable and expandable?
- Does the range of paper sizes and types supported meet your needs?
- What are the product's input and output capacities? How easy is it to change paper sizes and types?
- Do the paper finishing options fit your needs?
- Are automatic two-sided printing, copying, and scanning available?

Evaluating copying

Copy the type of material you typically copy. While you perform your evaluation, consider the following:

- Can you make a quick copy by simply pressing a single button on the control panel?
- How easy is it to adjust image quality and select output options from the control panel?
- How quickly does the page copy?

Evaluating faxing

If faxing is available, fax some test documents. If the product has fax speed-dial capabilities, program some fax numbers. While you perform your evaluation, consider the following:

- Is the fax function easy to use? Does it provide advanced faxing capabilities like fax forwarding and fax receive and send from your computer?
- Is secure faxing available?
- Is JBIG compression available?
- Do you encounter any problems sending or receiving faxes?

Evaluating scanning

Scan several documents and photos. While you perform your evaluation, consider the following:

- How easy is it to configure scanning options?
- Can you easily scan to destinations of your choice? Can you scan directly to e-mail or network folders?
- Is OCR software included?

Evaluating extended functionality

Determine what kinds of extended features could be valuable for your business. While you perform your evaluation, consider the following:

- Is it possible to add additional functions to the product? Does the product have an open EIO slot or host USB port?
- Does the product support direct PDF printing?
- What, if any, are the digital sending capabilities? Is it possible to integrate the device with enterprise document management solutions?
- Does the device include a hard drive? Are there job retention features available?

Evaluating compatibility

- Does the product support automatic print language switching?
- Does the product support legacy print jobs?

Performance

HP

New technology delivers best-in-class performance,[1] stunning print speeds, and top quality

Performance is more than maximum engine speed, measured in pages per minute (ppm). Rather, performance should be gauged by the speed at which the device can turn electronic files into printed pages or convert printed material into electronic information. In addition to engine speed, several factors affect the time it takes to print a job, including the use of specialty paper, computer download time, and device processing time. The time it takes for your computer to download a job to the device, and for the device to process the job, may depend on the following variables:

- The complexity and size of graphics
- The product's I/O configuration (network or USB)
- The speed of your computer
- The amount of device memory installed
- The network operating system and configuration
- The throughput speed of the network print server
- Printer personality or language (such as PCL or PostScript)
- Device warmup time, if it has been idle
- Whether the job is single-sided or duplexed
- Which paper source is used
- Output device and functions used (such as stapling or offsetting)

A better performing product leads to higher productivity in your workplace. You spend less time waiting, output appears more quickly, and network traffic is minimized. The HP CM8060/CM8050 Color MFP with Edgeline Technology is optimized for performance, print quality, and affordability; it completes complex jobs quickly and without device failures.

Printing redefined

Available exclusively from HP, Edgeline Technology is sophisticated technology built on a simple concept: move the paper—not the printhead. Instead of using a single small printhead that moves back and forth across the page to distribute ink (as traditional inkjet devices do), Edgeline Technology uses an array of larger printheads that stretch across the entire page. When the printheads span the page, they don't need to move. They can stay in one place while the paper moves below them, and that opens the door to a whole host of exciting performance capabilities.

Edgeline Technology leverages HP's exclusive Scalable Printing Technology, which works in tandem with other system improvements—such as HP Vivera office inks—to give you the benefits of lasers and the benefits of ink in a single print engine. Edgeline Technology results in an entirely new class of color print devices, featuring best-in-class reliability[3] and operating costs[2] and outstanding performance.[1] They deliver exceptional print quality (those large printheads each have an amazing 10,560 nozzles for incredibly precise ink delivery).

The Scalable Printing Technology printhead components are fabricated as one unit via a photolithographic process. This results in the precise alignment of the chamber, nozzles and heating element, which then improves the accuracy of ink-drop placement. The multi-die printhead construction enhances the uniformity with which fluid drops are deposited on paper. The product also features a printhead monitoring system that automatically adjusts and compensates for nozzle misfires, ensuring you get the best possible prints.

Fast, professional printing and copying

The product quickly and easily delivers high-quality, 600 dpi documents on plain paper (1200 by 600 optimized dpi documents on glossy paper).[10] The HP CM8060 Color MFP delivers average print speeds of 50 pages per minute (ppm) color and 60 ppm black-and-white on a wide range of common business documents. The HP CM8050 Color MFP is capable of printing an average of 40 ppm color and 50 ppm black-and-white. The device's speed will vary with document content. Simple text pages will print at up to 71 ppm black-and-white or color with the HP CM8060 Color MFP (57 ppm with the CM8050), while high coverage pages could print at 25 ppm.

With a powerful 1.6 GHz Intel Pentium M-730 processor, 1 GB RAM memory, and a robust HP Jetdirect Fast Ethernet embedded print server that supports up to 1 GB transfer rates, the MFP is designed to process jobs quickly and provide a fast return to the print job's application.

Productive faxing and scanning

The 100-sheet ADF processes input at up to 50 ppm and supports two-sided copying and scanning, so you don't have to manually feed originals into the device. Experience fast processing speeds of up to 33.6 kbps and standard JBIG compression with the optional Analog Fax Accessory.[4]

Evaluation

Creating samples

First, develop a group of sample documents that represent what the end-user typically prints or copies. This is the best method for determining if a product is suited to your environment.

Note   It is important to test files like those that a typical user will print. Most print samples included with a product have been optimized for that product and may not reflect the type of output you will receive.

When evaluating performance, your print and copy samples should include multiple documents and file types, each created in the applications that will be used by the end-user. The samples should have different elements (text, graphics, and photographic images) and should vary in complexity and page length. Some suggested content includes simple text documents, mixed text and graphics, and complex graphics containing photographic images.

CAUTION!   Using only one application or file can skew test results. Use several types of files and applications to present a broad and realistic performance picture.

Simple — text, line art, and basic clip art

Mixed — from complex text to a mixture of text and medium-complexity graphics

Complex — photographic images and advanced graphics (using overlays or fill patterns)

Different manufacturers provide different print modes. Try to compare similar modes to achieve a fair comparison.

To evaluate the print quality and speed of text documents, such as those created in Microsoft Word and Excel, you should print them in both quality print modes (Professional and General Office modes). Compare the output produced on other devices using default modes as well as alternative quality modes.

When evaluating more than one product, it is crucial that you make a fair comparison between products.

- Print from identical computer systems to ensure speed variations are not due to differences in processing power.
- Print the same files on all products, using the same paper type and the same or equivalent settings. Print modes need to be tested separately for each device and compared respectively.
- Use the same operating system and software application and test comparable print drivers. (Each of these components interacts with the printing process and can affect performance.)

Evaluating printing and copying performance

Using the samples that you created, perform the following tests to gauge device performance.

First-copy-out	The time from when the copy button is pressed on a product that is in READY (or standby) mode until the completion of the first page. Separate tests should be performed using the flatbed scanner and the ADF.
Click-to-drop	The time from when the print command is issued until the completion of the print job.
Pick-to-drop	The time from when the first piece of paper is picked up by the product until the completion of the print job.
Return-to-application	The time from when the print command is issued until the time when the computer is available for other tasks.

Running the tests

Follow the guidelines below when measuring printing performance:

- Be sure to measure the amount of time it takes to print a *complete* document. (For example, you might print an eight-page, two-sided, stapled color document with company letterhead on the first page.)

Note   A professional printing product is designed to print multiple-page documents. We suggest that you print either multiple-page documents or multiple copies of a single page.

- Record any error messages.
- Perform each test three times to obtain an average. If the variances in the three tests are too much, discard the result, check the system, and redo the test.
- Print from the source application rather than from a PDF. Using a PDF may result in vastly different processing times, especially if postscript emulation drivers are used.
- Print using both PCL and postscript emulation (or other device specific) drivers, if available. Compare speed and print quality from each.
- Look at each page to make sure all text and graphics printed correctly. Files that print significantly faster on one device might not be printing correctly. Some devices drop complex graphics and images when they are unable to process the whole job. Examine output to ensure that the entire document printed and that it printed correctly.
- When comparing device performance, look beyond the speed trial data and consider the acceptability of the output. There are definitely tradeoffs in print quality, but as you review your results, look at the samples and consider whether the quality meets your standards.

Reliability

Minimize maintenance efforts and maximize uptime with best-in-class reliability[3]

The HP CM8060/CM8050 Color MFP with Edgeline Technology sets the standard for industry reliability and provides a worry-free hardcopy solution. The product combines a robust print engine with advanced printhead design to create a low-maintenance printing powerhouse—with reliability that averages 50 percent better than competitors' color MFPs.[3]

Reliability matters

- The innovative, long-life printheads for the HP CM8060/CM8050 Color MFP are designed to be so reliable they may never need replacing for the life of the system. The printheads work with HP Vivera office inks and bonding agent to deliver the reliability and print quality required for the office environment.

- Interactive technology in the product and Original HP printing supplies is specifically designed to maintain device reliability while optimizing the quality of every page printed.[8]

- With recommended monthly volume ranges as high as 50,000 pages per month and estimated Mean Copies Between Jams comparable to a department class black-and-white MFP, this device is built to stand up to the demands of today's fast-paced business environment, keeping intervention rates low.

- The award-winning[7] HP Easy Select Control Panel user interface empowers end users with a friendly and intuitive way to resolve problems without having to call for service. It provides features such as guide lights, door sensors, and easy to follow control panel instructions such as paper jam video demonstrations, for an ultimately faster resolution. The removal of paper jams is simple with HP AutoNav functionality.

- HP conducts extensive testing, printing millions of test pages with a variety of applications and file types, in multiple environments, with different media types.

Legendary HP service and support

HP's award-winning customer service and support backs every product with a 90-day parts only warranty; fast, knowledgeable online support available 24/7 at www.hp.com/support, and easy-to-access phone support provided by HP trained agents. Plus, HP Imaging and Printing Services offers a range of flexible imaging and printing options—including support services, Pay per use services, and managed printing services. HP's Pay per use services offer all the advantages of quality HP hardware and services, without a large investment upfront. HP's portfolio of managed printing services includes Assessment Services, Deployment and Implementation Services, Education and Management of Change, Supplies Management, Onsite Administrative Services, HP Remote Monitoring and Reporting Services, and Infrastructure Services such as Job Accounting. Specific service and support options may vary by region. Choose the service and support offering that best fits your business needs.

Evaluation

At HP, we typically test multiple products in various environmental conditions to evaluate engine reliability. We run the products to engine life and test and improve the supplies' life, jam rate, and misfeed rate.

This kind of extensive, long-term testing is beyond the limits of most companies' resources; however, it is possible to estimate their device engine reliability. One option is to compare other products' duty-cycle ratings and recommended monthly page volume. When comparing the HP CM8060/CM8050 Color MFP with Edgeline Technology with products from other manufacturers, consider the following:

- What is the product's recommended monthly page volume?

- Does the product perform consistently under various environmental conditions?

- How easy is it to maintain the product?

- When connected to a network, does the product print correctly every time?

- What does it cost, in downtime, to replace empty cartridges?

- Are there any paper jams or other failures during your evaluation? How easy is it to clear jams or fix failures?

Meet a wide variety of user needs with top output quality

There are many different factors to consider when evaluating the overall quality of a product's output. Output quality is more than the number of dots per inch (dpi) that the device places on a page; a higher dpi does not necessarily mean better output quality. The HP CM8060/CM8050 Color MFP with Edgeline Technology features a number of new HP technologies to consistently deliver impressive results at an outstanding price.

High-quality printing with HP Vivera office inks

Designed specifically for HP's Edgeline Technology, new HP Vivera office inks enable an unprecedented combination of performance and print quality on plain papers. They not only produce vibrant color images and crisp text quality at any speed, but with HP's new ink and bonding agent system they also deliver water resistant prints that resist smearing even from normal highlighter use.[11] You can rely on Original HP printing supplies to produce page after page of prints that hold up to the demanding needs of the office.

When compared side by side against competitive samples, the HP CM8060/CM8050 Color MFP achieved color print quality among the leaders when printing in Professional mode, and delivered quality that meets the needs of most office users when printing in General Office mode. This is achieved by using HP Vivera office inks and employing a multi-layering process that applies multiple inkdrops onto each "dot" or pixel, for more precise color reproduction.

Durable, long-lasting documents

Documents printed with the HP CM8060/CM8050 Color MFP meet the durability needs of customers in a general office environment. Documents can be handled right out of the output tray without ink transfer and will not smear with normal highlighter use, will not run or bleed when getting wet and blotted dry without rubbing, and will not crack on the printed output when the page is folded.
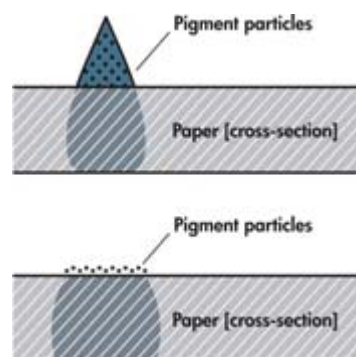
When printed with HP Vivera Inks, documents can be archived for decades. The new pigment-based color inks are non-acidic, dry quickly, and deliver excellent fade resistance, even when exposed to light and air.

New fast drying HP ink

Get fast throughput, enhanced dry time, and excellent print quality that rivals laser text printing—all from an easy-to-use, reliable department-class color MFP. The enhanced optical density[12] of the pigmented ink allows the MFP to produce dark, crisp, laser-quality text in a single print pass. One-pass printing uses less ink, and contributes to an overall lower cost per page.

The new pigmented ink is one element that enables the device to deliver breakthrough speeds with fast dry times. The ink is designed to quickly penetrate the paper, while the ink's pigment locks onto the surface of the paper without wicking into paper fibers. This allows the device to produce exceptionally dark text with enhanced edges and bleed control.

The new pigmented black and color inks are designed to be in close proximity to each other—just three millimeters apart on the printhead—without mixing or interacting, which is a major innovation in ink design.

Impressive copying, scanning, and faxing

The color scanner converts printed material to digital information at high fidelity, with up to 600 by 600 dpi optical resolution. You can make impressive copies at up to 600 by 600 dpi, and send and receive faxes at up to 300 by 300 dpi.

Ensured output quality with HP testing

Prior to its introduction, a new HP product undergoes rigorous HP testing to ensure that it provides consistent high-quality output. Tests are performed with a large sample of products through each step of the design process, to be certain that the multifunction product measures up to HP standards. Throughout this testing, HP discovers and resolves any issues that would compromise output quality. The result is a solid, reliable product that produces consistent, excellent output throughout its life and the life of its supplies.

Evaluation

Printing samples

It is important to test files like those generated at your workplace. Most print quality files or print samples included with a product have been optimized for that product and may not reflect the type of output you will receive. You might want to use the print samples that you created for evaluating performance (see "Creating samples" on page 14). Follow these guidelines for creating sample documents:

- When evaluating more than one product's output quality, it is crucial that you make a fair comparison between products. Print the same files on all products, using the same or equivalent settings. Use the same operating system and software application, and be sure to test comparable print drivers. (Each of these components interacts with the printing process and can affect output quality.)

- Use more than one software application to make sure software/driver conflicts are not affecting output quality.

- Plain papers vary among brands and the regions in which they are manufactured. Some plain papers have a preferred print side. You should also take into account storage conditions as well as how the papers handle ink.

- Temperature and humidity should be kept constant for each product tested. These factors can have an impact on final output quality.

Viewing samples

Ideally, output quality should be evaluated under a mix of fluorescent and incandescent lighting. Print quality should not be evaluated too close to windows, since natural light changes dramatically with variations in weather and time of day.

In addition, the color of the surrounding area can significantly affect quality perception. White surroundings may call undue attention to the color of the media. Medium or light gray is usually the best choice for the area surrounding where the sample documents will be evaluated.

Individuals may perceive print quality differently. HP suggests that you have several people evaluate your sample documents, in the same environment, with a consistent light source. Have them vote on the samples that they like by listing them in order from the best to the worst. Allow each person to rate the samples independently and then record the results. Also, have each person establish a *cut line* for acceptable print quality for the end-user environment.

Note   This process is referred to as psychometric testing and should be performed on all of the sample documents that you are using to evaluate text, graphics, and image quality.

Evaluating output quality

When you evaluate output quality, avoid magnification, which can draw attention to insignificant differences. However, careful inspection is still necessary, and when doing this, look for the following characteristics:

Text quality

- Text should be dark, not faded, and solid black, without hollow spots.
- Edges should be crisp and smooth, not jagged.
- Reverse text should be fully visible, with no filling lines.
- Portrait and landscape text should have the same print quality.
- Ink should not blur or bleed.

Graphics quality

- Edges of colored shapes and graphics should be well-formed and smooth.
- Solid color fills should be uniform and should not bleed into each other.
- There should be no bands across graphics.
- Areas of solid ink should not wick into the paper fibers.

Missing lines, bad detail

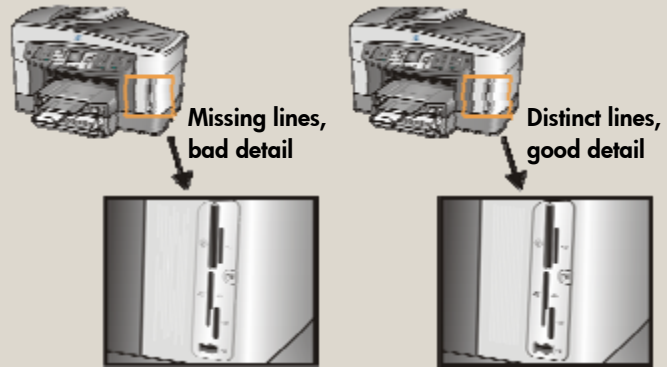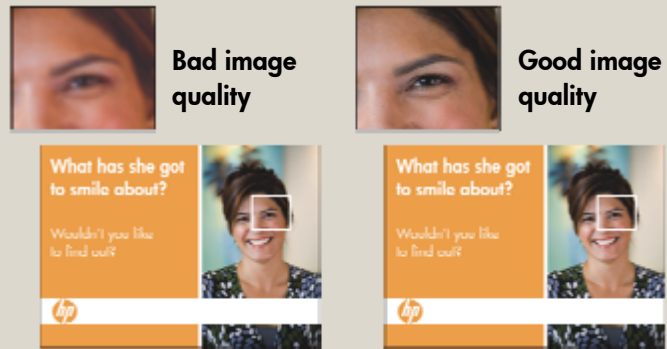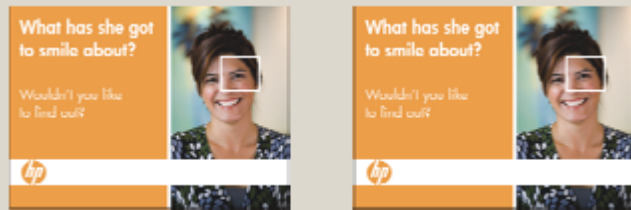**Distinct lines, good detail**

Image quality

- Images should be clear and sharp.
- There should be no bands across images.
- Skin tones should look natural.
- Images should look natural and realistic.

Bad image quality

Good image quality

What has she got to smile about?

Wouldn't you like to find out?

Evaluating copy quality

Copy the type of material typical for your office.

- Does the copy quality meet your expectations?
- How easy is it to adjust image quality and select output options from the control panel?
- Does it take multiple adjustments and multiple copies to get good copy quality?
- How accurate is an enlarged or reduced image?

Evaluating scan quality

Scan the type of material typical for your office.

- Does the quality of the scanned image meet your expectations?
- Are there options for scanning specific document and image types?
- How easy is it to adjust image quality and select output options from the control panel?
- Does it take multiple adjustments and multiple scans to get good quality?

Evaluating document durability and usability

After you have finished evaluating the output quality of your samples, evaluate the documents' durability and usability. Test the following:

- Does the printed output curl or lie flat?
- Can documents be handled right out of the output tray without ink transfer?
- Can the document withstand normal highlighter use without smearing (following a typical waiting period after printing)?
- Can the printed output be easily degraded? Is it durable? Can documents be folded without the printed output cracking?

Total cost of ownership

Reduce your overall printing and copying expenses with best-in-class operating costs[2]

A successful department-class multifunction product has to offer more than just superior performance and outstanding output quality. For many businesses, the total cost of ownership (TCO) is a critical part of the purchasing decision. TCO takes into account everything from the initial investment, to support and maintenance costs, to the hard costs of supplies.

The HP CM8060/CM8050 Color MFP with Edgeline Technology includes a number of features that add up to significant cost savings over time. With outstanding print speeds and a flexible pricing structure, it delivers both best-in-class performance[1] and best-in-class operating costs.[2] The product provides a robust business solution at a great price.

Keep color costs under control

Two-tier color pricing model

HP useage-based service options include a two-tiered color pricing model to control color costs. Unlike most digital color printer/copiers, which base operating costs on one price for color "clicks" and one for black-and-white, the HP CM8060/CM8050 Color MFP with Edgeline Technology charges one price for each page of Professional color, another lower price for General Office color, and a third price for black-and-white. This two-tier color pricing model makes the product significantly less expensive to operate than similar competitor offerings.

Add a dash of color at no extra cost

HP's Color Accent feature keeps your overall printing costs down by charging Pay per use service users the black-and-white price for pages that use a very small amount of color. Print memos with color logos, highlight the due date of an invoice, and include color URLs where you need to. One example of Color Accent is for approximately 100 characters at 10-point Arial font, underlined. If the font changes to Times Roman 10-point, underlined the limit would increase to approximately 125 characters (serif fonts are thinner and use less ink). This example is based on an HP Service Contract.

Control when color can be used

HP's Color Access Control makes color printing and copying affordable by providing you with the tools to control who uses color and when they use it. Assign color access by user, by application, by color mode (Professional or General Office mode), or shut color down completely until it's needed for special projects. Color Access Control ensures that the people in your company who truly need to leverage color—such as your sales team and marketing department—can, while those who don't need it automatically default to monochrome printing.

Simplify, save time, and reduce costs

- **Consolidate equipment and supplies.** By supporting one device rather than multiple devices, you can reduce costs by managing fewer supplies and minimizing storage requirements and service interruptions.

- **Reduce intervention with flexible paper handling.** The HP CM8060/CM8050 Color MFP with Edgeline Technology offers an input capacity of up to 5,580 sheets. Automatic two-sided printing, copying,

scanning, and faxing save time and paper.[4] Choose from three output handling solutions to best meet your business needs. For more information, see "Flexible paper handling" on page 9.

- **Enjoy stunningly fast print speeds.** The HP CM8060 Color MFP delivers average print speeds of 50 pages per minute (ppm) color and 60 ppm black-and-white, with maximum speeds up to 71 ppm black-and-white or color for less complex documents. The HP CM8050 Color MFP is capable of printing an average of 40 ppm color and 50 ppm black-and-white, with a maximum of up to 57 ppm black-and-white or color.

- **Save time and human resources** with powerful, flexible, and radically simple user interface and management tools. For more information, see page 5.

- **Create a secure, interactive, highly manageable client server network.** Manageable, upgradeable, and robust, the embedded HP Jetdirect full-featured print server offers outstanding performance, advanced security features, and support for a broad range of network operating systems and protocols.

- **Manage networked devices effortlessly.** With HP Web Jetadmin 10.0 device management software, you can install, configure, monitor, and troubleshoot your MFP from the comfort of your desk—using only a standard Web browser. For more information, see "HP Web Jetadmin" on page 26.

- **Depend on effortless legacy printing.** Printing compatibility is an essential part of reducing costs and maintaining productivity. HP's printing software ensures that legacy jobs still print accurately.

- **Save power.** The product conserves energy during periods of device inactivity.

- **Maintain a low cost of ownership and minimize user interaction** with Original HP printing supplies. Individual ink cartridges for each color means that you replace only the empty ink cartridge, eliminating waste and minimizing costs.

- **Re-engineer your workflow.** The MFP comes standard with embedded send to e-mail, send to network folder, send to LAN fax, and send to Internet fax functionality, including LDAP, Kerberos, and SMTP authentication and address book support.

Advanced security features

Because security doesn't end with your PCs and servers, HP wants to make sure your imaging and printing environment is protected, too. We help safeguard your business with capabilities that better secure this MFP, protect critical information on the network, and simplify the way you manage and maintain your environment with tools and checklists. Whether your main concern is data security, privacy, auditing issues, or any combination of these, HP helps you proactively secure your business:

- Private Printing lets you protect confidential documents by allowing you to hold a job for printing until you release it using a 4-digit Personal Identification Number (PIN) at the MFP's control panel.

- Embedded HP Jetdirect connectivity supports a wide range of industry-standard and trusted security protocols, including 802.1x for Wired Networks, SNMPv3 and HTTPS, and Secure IPP (IPP-S) and IPsec.[9]

- Track usage for all printer and MFP models by job, user, device, or application with the HP Web Jetadmin Report Generation Plug-in. For more information, go to www.hp.com/go/webjetadmin.

- Built-in local and network authentication (LDAP, Kerberos, and SMTP) adds another layer of security by allowing administrators to control device access. By requiring users to log in, administrators can limit usage of all the device features, or of just the copying or sending functions.

For more information on HP's secure imaging and printing solutions, go to www.hp.com/go/secureprinting.

HP dependability

By far the biggest contributor to user productivity is the reliability of HP equipment, support, and service. Instead of experiencing frustration and downtime while waiting for device repair, users are getting their work done.

Evaluation

Total cost of ownership is more than just purchase price or cost per page. To calculate the *true* TCO, consider the following factors:

- The monochrome cost per page on a color device.
- The color cost per page, including the cost of printing a small amount of color in e-mails, memos, and letterhead.
- What cost savings features or options such as Color Accent or Color Access Control are available.
- Energy consumption costs. (Some manufacturers require you to choose between fast warm-up times and energy efficiency, while HP offers both.)
- User productivity costs. (How easy is it to learn to use the product? How easy is it to print and process your documents correctly?)
- Cost of supplies and ongoing preventative maintenance.
- Cost of security risks.

Network management solutions

Easy networking allows for simple, reliable sharing

The HP CM8060/CM8050 Color MFP with Edgeline Technology is designed to integrate seamlessly into all major networking environments. Support for industry-leading network management tools such as HP Web Jetadmin provides convenient and efficient device administration. The product incorporates sophisticated hardware and software features to make device management scalable to meet your business needs. In addition, the network configuration wizard reduces the time and complexity of networked device installation and configuration by providing straightforward steps and a user-friendly interface.

Robust networking

HP Jetdirect print servers provide the simplest, most reliable way to share printing devices. The product's embedded HP Jetdirect IPv6/IPsec print server is compatible with most major network operating systems and protocols and offers Gigabit speeds with the robust security for next-generation networks.

With an open EIO slot and device USB 2.0 port, the MFP is ready for expanded connectivity when you are. The 1284 parallel IO card gives you the ability to add a parallel interface. For a complete list of compatible print servers, see "Appendix B—Ordering information" on page 29.
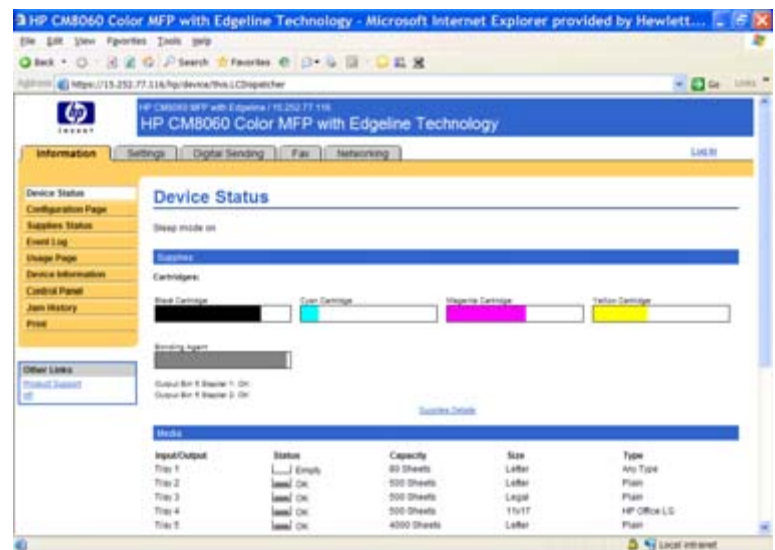
Productivity tools

Powerful tools and services allow you to manage the MFP simply and provide convenient access to device information, settings, and support. The following tools are included with the product or available for free download.

HP Embedded Web Server

The HP Embedded Web Server provides a method for managing most device functions from a computer that is on the same network as the device. It requires no special software to install or configure. The HP Embedded Web Server allows you to:

- Display device and supplies status
- Set up or change settings
- Restrict color printing and copying
- Configure automatic alerts
- Manage the MFP from your computer

The HP Embedded Web Server requires a connection to the network via an HP Jetdirect print server, which comes standard with the MFP.

For more information, see the HP Embedded Web Server User Guide located on the software CD included with the product.

HP Web Jetadmin 10.0

HP Web Jetadmin is the printing and imaging fleet management utility that administrators around the world rely upon to remotely manage a wide variety of HP and non-HP devices. Install, configure, monitor, and troubleshoot printing and imaging devices from anywhere on the network with a single tool. The HP Web Jetadmin interface is easily accessible via a web browser through Smart Client technology. With WJA 10.0, administrators can:

- Create settings and configure multiple devices simultaneously, eliminating the need to manually program one device at a time.
- Conduct remote diagnostics and solve potential problems before they impact user productivity.
- Set up automatic e-mail device alerts and real-time status reports.
- Proactively manage supplies and assess future needs with ad hoc reports and customizable templates. For accurate reordering on a just-in-time basis, WJA 10.0 provides one-click access to HP SureSupply.[13]
- Download the latest device plug-ins, language packs, or application plug-ins without reinstalling.
- Protect data and create a more secure print environment with IPsec and consolidated security settings.

Version 10.0 features right-click capability, drag-and-drop functionality, single sign-on, a new, task-based user interface, and device discovery based upon Active Directory services. Watch productivity soar as this solution helps you optimize device usage, control costs, streamline supplies management, and maximize IT efficiency.

Evaluation

When evaluating network capability, it is important to consider the needs of both the network administrator and the end-user.

For the network administrator

- Determine if your network operating systems are supported.
- Install and configure the device and administrative software and simulate connecting end-users. (Keep track of the resources and time required and the ease of setup.)
- Examine the following tools:
    - Ease of network installation.
    - Network security.
    - Device diagnostics and troubleshooting.
    - Device alerts and status.
    - Device grouping, filtering, or mapping.

Note   Try to assess the time efficiency and convenience of the network management utilities.

For the end-user

Make sure that the user can easily determine:

- What devices are available?
- Where are they relative to my desk?
- What are their features?
- What is the device's status?
- Is my job done yet?
- Is the device out of paper? Is there a paper jam? Is there enough ink to finish my job?

The user does NOT want to know:

- Status of all the devices on the network.
- Diagnostic information for all devices on the network.

A—Technical specifications

Print and copy speed[14]	HP CM8060 Color MFP: an average of 60 ppm black-and-white (maximum speeds up to 71 ppm), an average of 50 ppm color (maximum speeds up to 71 ppm)
	HP CM8050 Color MFP: an average of 50 ppm black-and-white (maximum speeds up to 57 ppm), an average of 40 ppm color (maximum speeds up to 57 ppm)
First page out	12 seconds from Ready (less than 35 seconds from Sleep)
	Warm-up time: 210 seconds (from power up to Ready)
Print resolution	600 by 600 dpi black-and-white and color; up to 600 by 1200 optimized dpi[10]
Printing features	Duplex and booklet printing, N-up printing, Collation, Watermarks, Edge-to-Edge printing (2 mm margins), Private printing, Proof and Hold, Personal job, Quick Copy, Job Storage
Copying features	1 to 9,999 copies, reduce/enlarge from 25 to 400%, N-up, Automatic Exposure Selection, Automatic Magnification Selection, Automatic Paper Selection, Automatic Tray Switching, Job Build, Image Erase, Watermarks/Overlays/Stamps, Color Temperature/Saturation
Scanning features	Flatbed scanner up to 11.7 by 17 in (297 by 432 mm); scan speed (color and black-and-white): up to 50 ipm letter/A4; supported file types: JPEG, TIFF, PDF (OCR supports searchable PDF, XML, HTML and CSV file types); input modes: copy, send to e-mail, send to folder, send to LAN fax, send to Analog fax[4]
Optional faxing features	Optional analog fax accessory; fax speed: up to 33.6 kbps; resolution best mode: 300 by 300 dpi; JBIG compression, fax forwarding, and auto redialing supported; up to 100 speed dial lists of 100 numbers each
Digital sending features	Send to e-mail, send to network folder, send to LAN fax, send to Internet fax; embedded local user database with PIN, LDAP, Kerberos, and SMTP authentication; local user database, LDAP and Microsoft Exchange Personal contacts addressing; IPsec encryption
Control panel features	10-inch touch-screen color display, 12-key numeric keypad, LED status indicator lights, menu and navigation buttons, job start, stop, clear, interrupt, reset, and sleep buttons
Processor	Intel Pentium M-730 processor, 1.6 GHz
Memory	1 GB DDR2 RAM (not expandable)
Storage	80 GB hard drive; secure disk erase, private print job, stored job, and stored fax
Durability ratings	Recommended monthly page volume:[15] HP CM8060 MFP: 10,000 to 50,000 pages; HP CM8050 MFP: 5,000 to 35,000 pages
	Duty cycle:[16] HP CM8060 MFP: up to 250,000 pages per month; HP CM8050 MFP: up to 220,000 pages per month
Connectivity	One device USB 2.0 port, one host USB 2.0 port, one available EIO slot, HP Jetdirect Fast Ethernet embedded print server (1000/100/10T with IPv6 and IPsec)
Printer language	HP PCL 6, HP PCL 5c, HP postscript level 3 emulation, direct PDF printing (v 1.4)
Font capabilities	93 Scalable TrueType fonts
Paper input	80-sheet multipurpose tray 1, three 500-sheet input trays (2, 3, and 4), 100-sheet automatic document feeder (ADF) Optional 4,000-sheet high-capacity input tray 5
Paper output and finishing	One finishing option must be ordered: single output bin (250 sheets), 4-bin job separator (1,200 sheets); or multifunction finisher (2,500-sheet stacker/stapler and 1,200-sheet 4-bin job separator)
Paper sizes	Multipurpose tray: 4 by 6 in to 12 by 18 in (102 by 148 mm to 305 by 457 mm); letter, legal, executive, statement, tabloid; A3 (ISO), A4 (ISO), A5 (ISO), RA3, B4 (JIS), B5 (JIS), B6 (JIS), 8K, 16K
	Input trays 2, 3, and 4: 5.5 by 8.27 in to 11.69 by 17 in (140 by 210 mm to 297 by 432 mm): letter, legal, executive, statement, tabloid; A3 (ISO), A4 (ISO), A5 (ISO), B4 (JIS)
	Optional high-capacity input tray 5: letter, A4 (ISO)
	ADF: letter, legal, executive, statement, tabloid; A3 (ISO), A4 (ISO), A5 (ISO); mixed sizes of same width
	Optional stapler/stacker (with multifunction finisher): letter, legal, executive, tabloid; A3 (ISO), A4 (ISO), A5 (ISO), B4 (JIS), B5 (JIS)
Paper weights	Multipurpose tray: 16 to 58 lb (60 to 220 g/m^2) Input trays 2, 3, and 4: 16 to 48 lb (60 to 180 g/m^2) Optional high-capacity input tray 5: 20 to 48 lb (75 to 180 g/m^2) ADF: 16 to 36 lb bond (60 to 135 g/m^2)

Media types	Paper (plain, preprinted, letterhead, prepunched, bond, color, recycled, HP Glossy for Edgeline), labels, cardstock
Operating systems	Microsoft Windows 2000, Me, XP, Windows Vista; IBM OS/2 version 3.0 or greater (available from the Web), Mac OS X v10.x or later, Linux® (available from the Web), HP-UX, Solaris
Network operating systems	Via HP Jetdirect Fast Ethernet embedded print server: Microsoft Windows 2000, Server 2003, XP, 2003 64-bit, XP 64-bit (IPv6 only supported on Windows 2003 and Windows XP; IPsec on IPv4 only on Windows 2003 and Windows XP), Windows Vista; Novell 5.1 and later; Mac OS X v10.2 or later; Red Hat Linux 7.x and later; SuSE Linux 8.x and later; HP-UX 10.20, 11.x, 11.i; Solaris 2.5 and later (SPARC systems only); IBM AIX 3.2.5 and later;[17] MPE-iX; Citrix MetaFrame Server; Windows Terminal Services
Network protocols	Via HP Jetdirect print servers: IPv6: IPsec, DHCPv6, HTTP, HTTPS, Port 9100, LPD, IPP, Secure-IPP,[18] MLDv6, ICMPv6, Apple Bonjour Compatible, FTP, WS-Discovery IPv4: IPsec, FTP, IPP,[18] Secure-IPP,[18] Auto-IP, Apple Bonjour Compatible, Telnet, SLP, IGMPv2, BOOTP/DHCP, WINS, SNMPv1/v2c/v3, TFTP, HTTP, HTTPS, Port 9100, LPD, IP Direct Mode Other: IPX/SPX, AppleTalk, NetWare NDS, Bindery, NDPS, iPrint
Minimum system requirements	PC: 133 Mhz processor or more, 64 MB of RAM, at least 40 MB available hard disk space, USB or Network port connection Macintosh: Mac OS X v10.2 or later, network or USB port, 128 MB RAM, 25 MB available hard disk space
Security	Management security: SNMP v3, SSL/TLS (HTTPS), 802.1x authentication (EAP- PEAP, EAP-TLS), IPP over TLS, IPsec, Web Jetadmin, local and network authentication (LDAP, Kerberos, and SMTP) Features: Secure Disk Wipe, Secure Print Job, Private Printing
Environmental ranges	Recommended temperature: 59 to 77 degrees F (15 to 25 degrees C) Maximum temperature: 50 to 86 degrees F (10 to 30 degrees C) Storage temperature: -40 to 140 degrees F (-40 to 60 degrees C) Recommended humidity: 40 to 55 percent, non-condensing Maximum humidity: 20 to 80 percent, non-condensing Storage humidity: 8 to 90 percent, non-condensing
Acoustics[19]	Sound power: Active (copying): 7.4 B(A); Ready/Idle: 5.2 B(A) Bystander sound pressure: Active (copying): 57 dB(A); Ready/Idle: 33 dB(A)
Power requirements	110 to 127 VAC nominal (+6%/-10%); 20 amp; 50-60 Hz; dedicated line 200 to 240 VAC nominal (+6%/-10%); 12 amp; 50-60 Hz; dedicated line
Power consumption[20]	Active: 1200 watts average, 1920 watts peak Ready (non-printing): 200 watts Sleep: 50 watts Off: 0 watts Typical Electricity Consumption (TEC): CM8060: 21 kWh/Week; CM8050: 20 kWh/week (ENERGY STAR® qualified models; see www.hp.com/go/energystar)
Dimensions (W by D by H)	With the single output bin: 50 by 33 by 48 in (1270 by 840 by 1220 mm) With multifunction finisher and high-capacity input tray: 78 by 33 by 48 in (1990 by 840 by 1220 mm)
Weight (base unit)	725 lb (330 kg)
What's in the box	CM8060: HP CM8060 Color MFP, power cord, printheads, printer documentation, printer software CD, control panel overlay, three 500-sheet input trays, 80-sheet multi-purpose tray, automatic document feeder CM8050: HP CM8050 Color MFP, power cord, printheads, printer documentation, printer software CD, control panel overlay, three 500-sheet input trays, 80-sheet multi-purpose tray, automatic document feeder
EMC certifications	CISPR 22: 1997+A1+A2, EN 55022: 1998 +A1+A2 - Class A, EN 61000-3-2: 2000, EN 61000-3-3: 1995+A1, CISPR 24: 1997+A1+A2, EN 55024: 1998+A1+A2, FCC Title 47 CFR, Part 15 - Class A
Safety certifications	IEC 60950-1: 2001, EN 60950-1: 2001, IEC 60825-1: 1993 + A1:1997 + A2: 2001, EN 60825-1: 1994 + A1: 2002 + A2: 2001 (Class 1 Laser/LED Product)
Warranty	90-day, parts only warranty

B—Ordering information

Use accessories and supplies specifically designed for the product to ensure optimal performance. To order the accessories and supplies listed here, go to the HP Web site at www.hp.com/ghp/buyonline.html. If you don't have access to the Internet, contact your qualified HP dealer, or call HP at (800) 282-6672 (U.S.).

Product	HP CM8060 Color MFP with Edgeline Technology	C5957A
	HP CM8050 Color MFP with Edgeline Technology	C5958A
Accessories	Analog Fax Accessory	C5954A
	4,000-sheet high-capacity input tray	C5961A
Output accessories (must choose one with order)	Single output bin	C5963A
	4-bin job separator	C5964A
	Multifunction finisher	C5959A
Supplies	HP Black Ink Cartridge with Vivera Inks	C8750A
	HP Cyan Ink Cartridge with Vivera Inks	C8751A
	HP Magenta Ink Cartridge with Vivera Inks	C8752A
	HP Yellow Ink Cartridge with Vivera Inks	C8753A
	HP Bonding Agent Ink Cartridge	C8754A
	3-Pack Staple Cartridge	C5967A
Connectivity	HP Jetdirect 625n Gigabit ethernet print server	J7960G
	HP Jetdirect 635n IPv6/IPsec print server	J7961G
	HP Jetdirect ew2400 802.11 b/g wireless print server (print only)	J7951G
	HP 1284B Parallel Card	J7972G
HP papers	North America: www.hp.com/go/paper	
	Europe: www.hp.com/go/supplies	
	Asia Pacific: www.hp.com/apac/printingsupplies	
	Latin America: contact HP via phone:	
	USA: 1-800-477-5010	
	Europe: +800 7644 7644	
	Asia: 65-6253-8500	
	Australia and New Zealand: 61-2997-2299LAR	
	Brasil: sac 0800 70 300 70	
Service and support	www.hp.com/go/printservices	
	www.hp.com/go/smartprinting	
Solutions	www.hp.com/go/gsc	

Endnotes

[1] Compared to department class color laser MFPs below $22,000. Speeds as published by manufacturers as of August 2006. Test methods vary.

[2] Compared to department class color laser MFPs. Operating costs are the combined price per page of service, repair parts, and consumables (exclusive of paper) over a monthly timeframe, based on manufacturers list pricing as of August 2006. HP office printing costs based on estimated ink prices and preliminary yield. For more information on office printing cartridge yield go to www.hp.com/go/pageyield.

[3] Compared to department class color laser multifunction products. Based on independent third party data, HP testing, and internal review of competitive products. As of March 2007.

[4] Fax capability is optional. Not included, please purchase separately.

[5] The single output bin, 4-bin job separator, and multifunction finisher are optional accessories (available for separate purchase). Purchasers must choose from one of these three output accessories.

[6] One example of Color Accent is for approximately 100 characters at 10-point Arial font, underlined. If the font changes to Times Roman 10-point, underlined the limit would increase to approximately 125 characters (serif fonts are thinner and use less ink). This example is based on an HP Service Contract.

[7] Buyer's Lab gave HP a "Pick of the Year" award in December 2006 for "Outstanding Achievement for the User Interface Design of its Multifunction Printers."

[8] Using Original HP supplies ensures availability of all HP printing features.

[9] IPv6 only supported Windows 2003 and Windows XP (print only).

[10] Black-and-white and color printing on glossy brochure paper, with 600 by 600 dpi input data when printing from a computer.

[11] Meets requirements of ISO 11798, "Information and documentation—Permanence and durability of writing, printing, and copying on paper—Requirements and test methods," including Section 4.4, "Water Resistance."

[12] Optical density is a measure of light absorption, or the ratio between incident light and reflection. The more light that is absorbed, the darker the text.

[13] Program features and availability may vary by country. For more information, visit www.hp.com/learn/suresupply.

[14] Average speed using document suite. Exact speed varies depending on the system configuration, software program, and document complexity. Maximum copy speed: single-sheet copy placed on glass. Print multiple copies of single-sheet original at engine speed.

[15] HP recommends that the number of pages per month of imaged output be within the stated range for optimum device performance, based on factors including supplies replacement intervals and device life over an extended warranty period.

[16] Duty cycle is defined as the maximum number of pages per month of imaged output. This value provides a comparison of product robustness in relation to other HP LaserJet or HP Color LaserJet devices, and enables appropriate deployment of printers and MFPs to satisfy the demands of connected individuals or groups.

[17] Requires software from the NOS vendor.

[18] May require software from the NOS vendor or 3rd party vendor.

[19] Values are based on preliminary data. See www.hp.com/support for current information. Configuration tested: print simplex using A4 paper at 60 ppm.

[20] Values subject to change. See www.hp.com/support for current information. Power numbers are the highest values measured using all standard voltages.