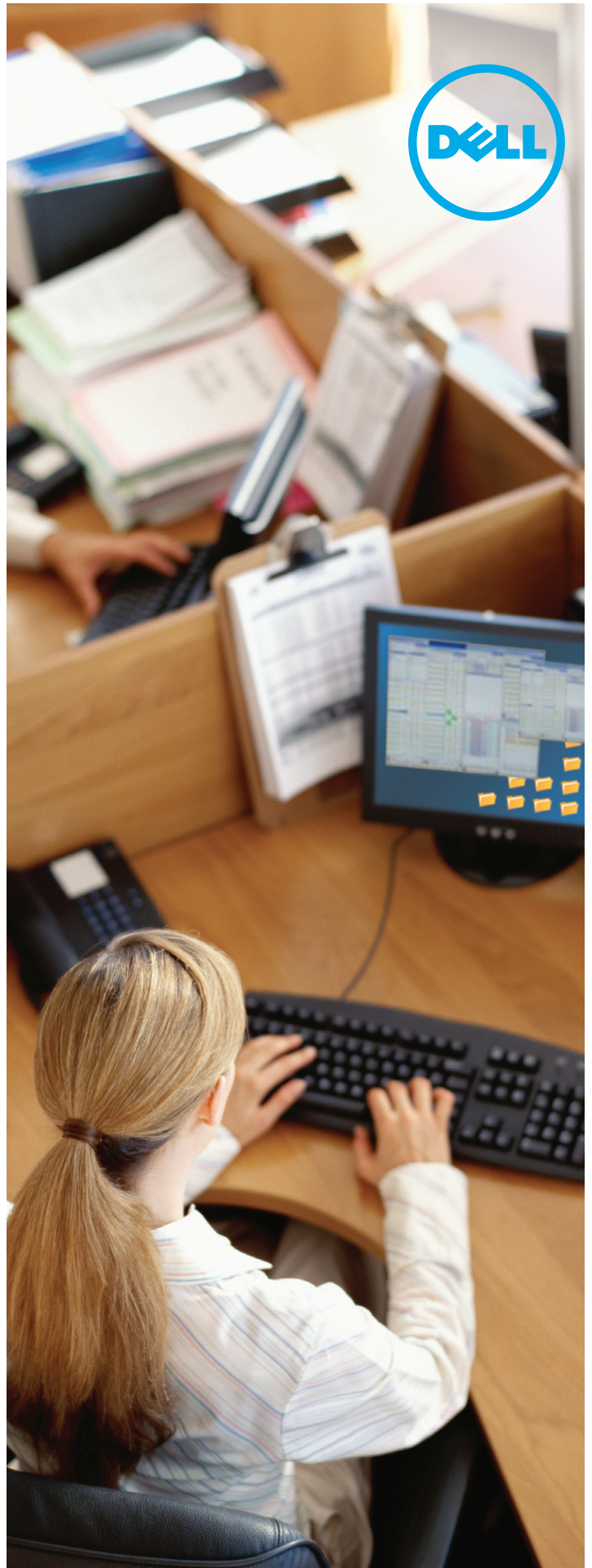# Dell Scanning Solutions:

Affordable, powerful scanning for enterprise productivity

Abstract

Organizations of all sizes are looking for ways to increase efficiency, reduce costs, and enable people to work more productively. Dell® multifunction printers (MFPs) help deliver those benefits by giving organizations the ability to scan documents or images and then transmit the scanned data over a USB cable or network connection. Users can employ features built into an MFP to e-mail scanned items, transmit them to a document management system, upload them to a server, or send them directly to a designated PC. Dell MFP models also offer a variety of advanced document management capabilities for creating, storing, and editing scanned material.

Dell Scanning Solutions

Affordable, Powerful Scanning for Enterprise Productivity

The Value of Scanning Solutions

Today, most multifunction printers (MFPs) can be used to scan a document and convert it into digital form. However, this capability is of limited value in the enterprise unless users can quickly and easily get scanned documents to wherever they are needed. Dell® Push Scan and Automatic Document Feeder (ADF) features in Dell MFPs allow a user to scan multipage documents to a preconfigured network PC without walking to the desktop, thereby improving productivity and saving time.

In a larger sense, the scanner in a Dell MFP is a ramp to the digital world. Once a document is digitized through the scanning process, it becomes much more of a "living" document. The user has more flexibility to transform the document using word processing, spreadsheet, or graphics software and distribute it efficiently in any form. Users can leverage the multiple capabilities of document management applications to perform tasks such as filling out forms electronically, capturing Web pages, and sharing files in multiple formats.

Scanning can also give users and organizations global reach. With Internet connectivity, anyone can distribute documents to virtually anywhere in the world at the touch of a button. Relatively small businesses can project a much larger presence.

Record keeping is transformed. Organizations with digitized record-keeping folders for products, suppliers, customers, or patients can scan materials from an MFP directly to the appropriate folder anywhere on the network. Healthcare facilities, for example, can help improve the quality of care, reduce costs, and enhance staff productivity by scanning critical documents directly into their existing electronic health records systems. Using electronic storage can reduce costs, and files are easily retrieved and sent to the MFP for printing at any time.

Dell multifunction print devices come with a variety of transmission capabilities designed to deliver these benefits (see Figure 1). Wired or wireless networks are increasingly common for businesses of all sizes, and networked organizations can take advantage of multiple scanning and transmission capabilities in Dell MFPs—from e-mail to bulk transfer technology. For situations where a printer is not connected to a network, some Dell MFPs have a conveniently located USB port, so documents can be scanned to a USB storage device.

Overview of Scanning Methods

Common scanning methods for Dell MFPs include the following:

- Scan to E-mail—Sends the scanned image as an e-mail attachment
- Scan to Network/Computer—Transmits images to an organization's document management system, or to a user's networked or USB-connected PC with client software installed
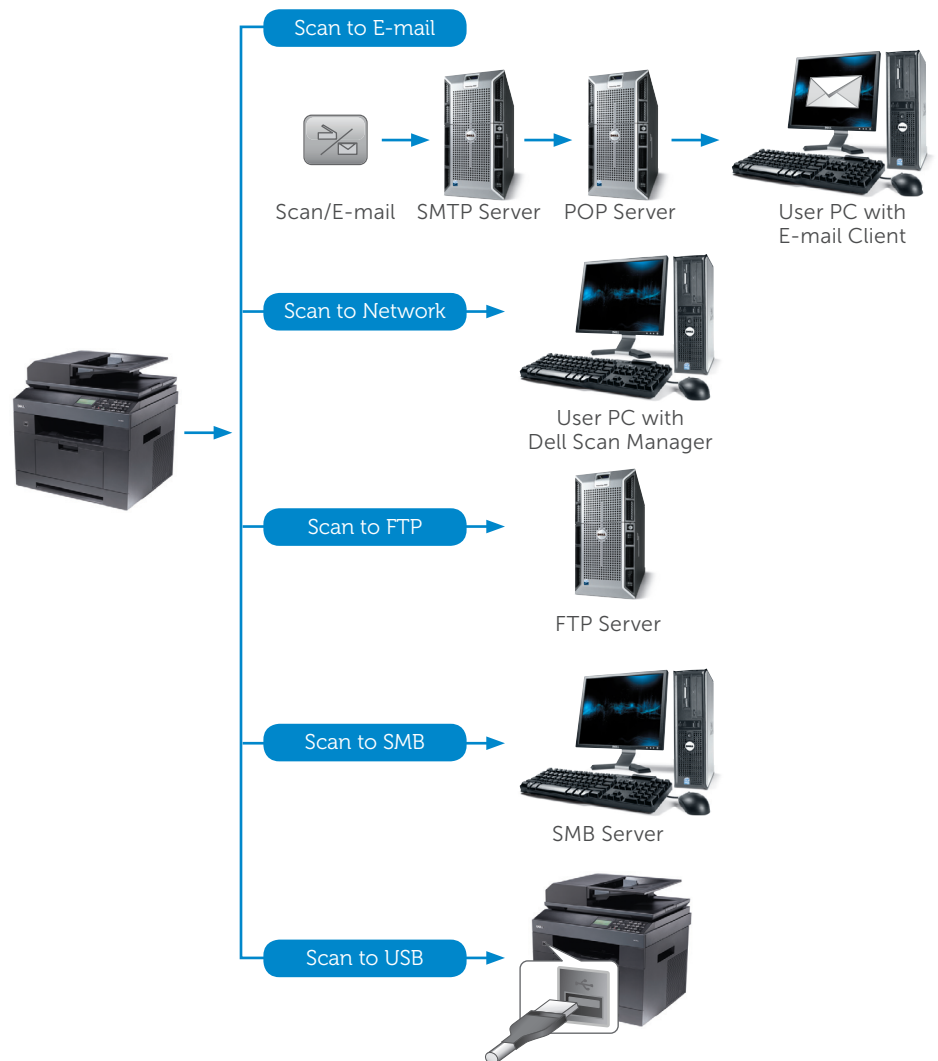- Scan to FTP—Scans an image and uploads it to an FTP server

Figure 1. Dell multifunction print devices come with a variety of transmission capabilities

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- Scan to SMB—Sends an image to a shared folder on an SMB server

- Scan to USB memory—Transfers documents to a USB storage device through a USB port on the printer

The following sections of this document provide additional details about the scanning capabilities widely supported by Dell MFPs. A complete table of scanning features supported by specific Dell MFP models is located on page 6.

Scan to E-mail

Dell's powerful scan to e-mail solution enables users to scan documents and then e-mail them to anyone from a network-connected Dell MFP. This feature can enhance productivity for small-to-medium enterprises or workgroups within a larger organization. Users scan once to distribute to multiple e-mail addresses. Unlike sending faxes, scanning to e-mail preserves confidentiality from the time a document is sent to the moment it is received. Scanned documents are sent as e-mail attachments over standard e-mail servers using Simple Mail Transfer Protocol (SMTP) and Post Office Protocol (POP).

Users can either key in e-mail addresses through the Dell MFP operator panel or choose an e-mail address from a preconfigured local address book. A local e-mail address book can be created using the Dell Web Tool, an Embedded Web Service in Dell MFPs. A user can easily access the Embedded Web Service by entering the printer's IP address as the URL in a Web browser. All Dell network-capable MFPs support local address books.

Some Dell MFPs are capable of looking up e-mail addresses from a centralized directory on a designated Lightweight Directory Access Protocol (LDAP) server. The user can type in a name, prompting the server to provide the complete address. LDAP setup can be configured using the Dell Web Tool. See the table on page 6 for the list of printers supporting LDAP.

Scan to Network/Computer

Scan to network is ideal for office departments needing to capture, store, share, and retrieve information from hard-copy documents—for example, a purchasing department can easily scan and share bids and proposals with key personnel throughout the company.

Documents can be scanned and sent from a network-connected MFP directly to a shared folder on network file servers for immediate, on-demand access.

Users can also scan documents directly to their networked computers with client software installed, or scan to a laptop computer using a USB cable connection. Scan to network/computer capabilities are provided by the Dell Scan Manager program and by advanced document management applications accompanying Dell MFPs.

Using Dell Scan Manager

The Dell Scan Manager program is included on the CD that comes with Dell MFPs. When the printer driver is installed, the Dell Scan Manager program installs as well. Using this program, users can change scan settings and add or delete the folders where scanned documents are to be stored in designated PCs.

Dell Scan Manager provides scanning from the MFP control panel to a PC through a USB connection or through the network. Dell MFPs support Microsoft® Windows® Images Acquisition (WIA), which enables scanning to a computer that is directly connected to the MFP with a USB cable. Dell MFPs also use the TWAIN imaging application, which provides both USB and network capabilities. Users select the desired method, and then the process of scanning an image launches the selected software, enabling control of the scanning process.

Unlike the TWAIN driver, the WIA driver enables users to scan an image and easily manipulate the image without using additional software. WIA is one of the standard components provided by Microsoft Windows XP, Windows Server® 2003, Windows Server 2008, and Windows Vista®.

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Document Management Software

Users can also scan to network or USB-connected computers using third-party document management applications that accompany Dell MFPs. These applications provide advanced management capabilities beyond those of Dell Scan Manager.

Dell MFPs come with either the Nuance® PaperPort® or SmarThru™ Office applications (see the chart on page 6 for specific software supported by Dell MFP models). SmarThru Office is a powerful document management, image editing, and distribution application that creates, stores, and edits scanned images, and delivers them to each application. With SmarThru Office client software installed on the desktop, users can scan documents directly to a network or USB-connected PC.

Nuance PaperPort has document management features that enable organizations to quickly and efficiently archive office documents. An enhanced search feature lets users find items by specific item properties. PaperPort functionality includes support for optical character recognition (OCR) software to convert scanned files into editable Microsoft Word, Excel®, or text files. The OCR process requires textual images scanned at 150 dpi to 600 dpi, with 300 dpi or 600 dpi recommended for graphics. See Table 1 for a comparison of SmarThru and PaperPort capabilities.

Scan to FTP

File Transfer Protocol (FTP) is a commonly used protocol for exchanging files over any network that supports the TCP/IP protocol, such as the Internet or an intranet. FTP offers an efficient way to digitize and transmit large numbers of documents, or large files that may not be practical to send by e-mail.

Dell MFPs enable users to scan hard-copy documents, convert them to digital format, and store them in a specified directory on an in-house or external FTP server. Scanned data stored on the FTP server can then be accessed from an FTP client program installed on a user's PC or a Web browser. Dell's scan to FTP solution supports up to 20 servers, easily shares large files on servers with multiple users, and can handle popular file formats including .pdf, .jpg, and .tiff files.

To enable scanning to FTP, you must first set up parameters for access to FTP servers using the Embedded Web Service in Dell MFPs, as well as register the account information of authorized users to protect the security of scanned data sent by network server. Dell MFPs allow users or administrators to select a preferred authentication type. Once the setup is completed, users enter an ID and password on the MFP operator keypad, select the FTP server and file type, and then press Start. The MFP begins scanning and then sends the file to the specified server.

Comparison of Document Management Software

Features	SmarThru™ Office 2.0	SmarThru™ version 4	PaperPort™ 12
Scan to Image (including PDF)	Yes	Yes	Yes
Scan to Application (including e-mail/FTP)	Yes	Yes	Yes
Text Recognition OCR	Yes	Yes	Yes
Network scanner support	Yes	Yes	Yes
Creation of PDF normal files from any application	No	No	Yes
Backup / Restore	Yes	No	No
Audit trail	Yes	No	No
Document lifecycle management	Yes	No	No
PC to Fax	Yes	Yes	Yes

Table 1. Critical features supported in the document management software supplied with the MFP

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Scan to SMB

Server Message Block (SMB) is a network protocol applied primarily to shared files, printers, serial ports, and miscellaneous communications between nodes on a network. It also provides an authenticated inter-process communication mechanism. The scan to SMB feature in Dell MFPs lets users store scanned documents directly to a shared folder in a user's PC. SMB transmits scanned documents directly to the PC even without a server, and no additional client program is needed.

This method is more secure than scanning to FTP because the password is encrypted. There is no limitation on document size—users can send larger documents than they could with e-mail. Like the scan to FTP feature, server access and user authentication are easy to set up for scan to SMB through the Dell Embedded Web Service. Up to 20 destinations can be designated as shared folders. Scan to SMB supports Microsoft Windows, TCP/IP, and other network protocols.

Scan to USB Memory

With scan to USB, users can perform monochrome or color scanning directly from a Dell MFP to any standard USB storage device. The USB device plugs into a port on the printer, and no added software is needed. The scan to USB function supports common file formats such as .pdf, .bmp, .jpg, and .tiff. This feature's capabilities include directly printing data stored on the USB drive, formatting the drive, and checking the available memory space.

Scanning Features	Mono					Color		
Dell MFP models	1135n	2335dn	2355dn	3333dn/ 3335dn	5535dn	1355cn/ 1355cnw	2155cn/ 2155cdn	3115cn
Scan to PC (USB connect)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Scan to USB memory device	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Scan to network/PC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes[1]
Scan to e-mail	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Scan to network folder (SMB)	No	No	Yes	No	No	Yes	Yes	No
Scan to network folder (FTP)	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Document Management Software	SmarThru™ v4	Nuance Paper-Port™ Version 12	Smart-Thru™ Office 2.0	NA	NA	Nuance Paper-Port™ Version 12	Nuance Paper-Port™ Version 12	Nuance Paper-Port™ Version 10.4
LDAP support	No	Yes[2]	Yes[2]	No	Yes	No	Yes[3]	No
TWAIN support USB	USB and Network	USB and Network	USB and Network	USB and Network	USB and Network	USB and Network	USB and Network	USB
File format	BMP, JPEG, TIFF, PDF	BMP, JPEG, TIFF, PDF	BMP, JPEG, TIFF, PDF	PDF, JPEG, BMP, XPS and TIFF	PDF, JPG, BMP, XPS, TIFF and encrypted PDF	JPEG, TIFF, PDF	JPEG, TIFF, PDF	BMP, JPEG, TIFF, PDF
Duplex scan (DADF)	No	Yes	Yes	Yes	Yes	No	No	No

Table 2. Current Dell product support for scan functionality

[1] Supports only push scan for a network-connected PC. Push scan is defined as scanning initiated from the MFP operator panel to a preconfigured network PC.
[2] LDAP support is based on Exchange Server or Win AD access and authentication — however it authenticates the user via user login information stored on the device
[3] Open LDAP Simple

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Scan to USB is best for smaller businesses or educational facilities where the MFP is not networked. For example, in a library, users can plug in a USB memory device, scan the pages they need, and then carry away the digital information. To retrieve the information, the user plugs the USB storage module into a laptop or PC. This process is much easier than carrying books or periodicals, and less expensive than making numerous photocopies. Table 2 shows the scanning features supported by specific Dell MFP models.

Automatic Duplex Scan

Selected models of Dell MFPs provide powerful automatic duplex scanning capability that lets users scan a double-sided original without manually reversing it. Duplex Automatic Document Feeder (DADF) allows multipage, double-sided document scanning without any user intervention by automatically reversing the document after scanning the first side.

For More Information

For more details on Dell printers and scan capabilities, visit **DELL.COM**/printers.

If you are interested in upgrading your Dell printer capabilities, or if you have questions about Dell printers, contact your Dell sales team and ask for a print management consultant; for complete information on using Dell printers and scanning features, see the operating manual for your Dell printer product.

To learn more visit dell.com/Printers