

# BERTL

## EXCEPTIONAL



### Xerox ColorQube 9203



50-ppm Monochrome; 50-ppm Color

Print • Copy • Scan • Fax

#### Key Buyer Benefits

- Energy Star compliant
- Utilizes cartridge-free solid ink sticks which reduce typical packaging consumable waste by up to 90%
- Solid ink-based imaging platform that consists of a staggered full width array of four printheads to create an A3-page-wide array
- Great image quality creates professional presentations, graphics and office documents
- Control Panel displays videos with step-by-step procedures for device maintenance
- Great design and ease-of-use with the PCL5c, PCL6, and Adobe PS drivers
- Flexible desktop and network utilities via Xerox's Centware Internet Service delivers exceptionally easy to use device monitoring
- Versatile document management capabilities from both a walk-up and desktop point of view
- Professional finishing options including booklet-making, stapling, hole-punching and c/z-fold
- Choice of four print speed options depending on the quality setting include: 38 ppm, 50 ppm (default), 70 ppm and 85 ppm
- Hybrid Color Plan offer customers a three tier billing arrangement and metering options based on color coverage
- Security features include: Secure Print, Audit log, Image Overwrite, IP filtering, Hide Print Jobs, Hard Drive Encryption and Secure Access option

## 100% INDEPENDENT ANALYSIS

## TABLE OF CONTENTS

---

<b>Introduction</b> .....	3
BERTL Galaxy® Star Rating .....	3
Pricing, Device Features Summary .....	4
<b>Print</b> .....	4
Network Print Features .....	4
Bandwidth .....	6
Print Productivity .....	7
What We Liked/Would Like To See .....	7
<b>Copy</b> .....	8
Copy Productivity .....	8
What We Liked/Would Like To See .....	9
<b>Scan</b> .....	10
What We Liked/Would Like To See .....	12
<b>Fax</b> .....	13
What We Liked/Would Like To See .....	14
<b>Image Quality</b> .....	15
Density .....	15
Resolution .....	15
Halftones .....	15
Negative/Positive Lines .....	16
Negative/Positive Dots .....	16
What We Liked/Would Like To See .....	17
<b>Ease of Use</b> .....	18
Programming the Control Panel .....	18
Print Drivers .....	19
Routine Maintenance .....	23
Client Utilities and Device Management .....	26
What We Liked/Would Like To See .....	29
<b>Media Handling</b> .....	30
Media Input .....	30
Loading Media .....	30
What We Liked/Would Like to See .....	31
<b>Ink Cracking</b> .....	32
Media Input .....	32
<b>Summing Up</b> .....	33
<b>About BERTL</b> .....	34

OFFICE

In May 2009, Xerox Corporation introduced the new solid ink multifunction ColorQube series. The ColorQube 9200 series is among Xerox's newest and fastest products that print, copy, scan and fax while incorporating the company's Extensible Interface Platform (EIP). EIP is based on Web development standards and allows software developers, as well as customers, to create applications tailored to address specific business applications, such as automating routine scan-and-distribute applications that users can access right from the touch screen.

This versatile color MFP has been designed to provide workgroups and businesses with an affordable document resource that speeds workflow and boosts productivity.

With Xerox's new Hybrid pricing plan, users can now print monochrome and color at nearly the same cost per page. The distinctive metered price plans are based on the actual color used on the page. Users will no longer pay expensive full-color page prices for small amounts of color. Pages with useful amounts of color are billed at the same rate as black-and-white pages. The Hybrid pricing are available in three levels of color:

- **Useful Color** is billed at the Black + Color Level 1 meter rate and includes up to 286,000 color pixels.
- **Everyday Color** is billed at the Color Level 2 meter rate and includes pages with 286,001 – 1,900,000 color pixels.
- **Expressive Color** is billed at the Color Level 3 meter and includes prints with over 1,900,000 color pixels.

One of the unique features offered with the Xerox ColorQube 9203 is the various print/image quality modes so that users can prioritize image quality versus speed and vice-versa.

- In **Photo Mode**, Xerox rates the unit at **38 ppm** in monochrome and color.
- In **Enhanced Mode** (default), Xerox rates the unit at **50 ppm** in monochrome and color.
- In **Standard Mode**, Xerox rates the unit at **70 ppm** in monochrome and color.
- In **Fast Color Mode**, Xerox rates the unit at **85 ppm** in monochrome and color.

The ColorQube 9203 controller is built on Xerox's Smart Controller Print System, which in turn is based on a 1 GHz CPU, and includes PCL 5, PCL 6 and PostScript 3 print drivers for Microsoft Windows, Apple Macintosh and Linux platforms.

For network and device management, Xerox Centware Web enables users to perform detailed status checks on the system and consumables, administer system settings, and manage access and accounting controls. Xerox provides device management support for some of the most wide-ranging network environments which include Tivoli

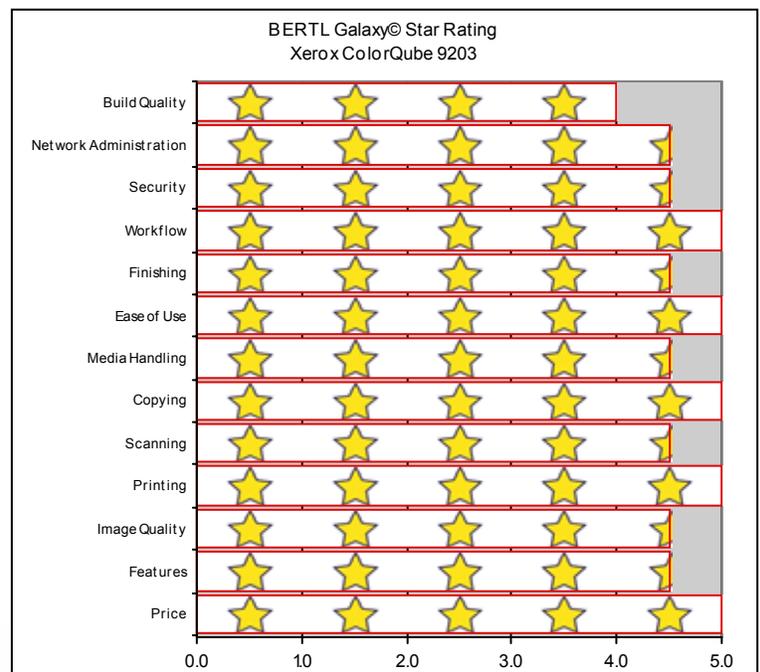
Netview, Microsoft Management Console, HP OpenView, and SAP R/3. Xerox's SMART Kit technology monitors CRU's (like ink stick levels, the Cleaning Unit, and Waste Ink Tray) in order to predict and prevent downtime.

Xerox's advanced MFP security features protect the document, device, and transmission path, and are available on all new ColorQube MFPs. Encrypted Disk and Image Overwrite features protect latent images recorded on the hard drive, and can be used automatically upon job completion or on demand. The Secure Print and Secure Fax safety measures ensure sensitive information stays private. With systems equipped with network scanning, users can create encrypted and searchable Adobe PDF and XPS files.

The ColorQube 9203 is Energy Star compliant and features cartridge-free solid ink sticks which avoid the typical extreme packaging of toner cartridges. That means fewer resources are used and less energy is invested in manufacturing and transportation. Xerox's innovative design results in 90 percent less waste for a typical office and a smaller carbon footprint across the product life cycle.

BERTL recently tested the Xerox ColorQube 9203, which has monthly duty cycles up to 300,000 impressions, high ink yields of 10,000 pages per stick with black and 9,250 pages per stick using CMY. The ColorQube 9203 has flexible media capabilities with a maximum paper capacity of 7,300 pages, the ability to print on stock as heavy as 80lb. cover (220 gsm) and paper sizes up to 12"x 18".

In the following test report, BERTL takes an in-depth look at the ColorQube 9203, testing and evaluating its productivity, image quality and ease-of-use.



Xerox ColorQube 9203 - Features Summary	
List Price	\$29,500
Imaging Technology	Solid Ink
Standard Functions	Network Printing, Copying, Scan, Fax
Optional Functions	SMARTsend , LAN Fax
Maximum Monthly Duty Cycle	300,000 pages
Recommended Monthly Print Volume	15,000 to 75,000 pages
Memory and Processor	2 GB RAM, 80GB Hard Drive, 1 GHz Processor
Mono Print Speed	50 ppm
Color Print Speed	50 ppm
Mono First Page Out Time	7.2 seconds
Color First Page Out Time	7.2 seconds
Automatic Duplex	Yes
Network Scanning	Yes
Color Scanning	Yes
NT Authentication	Yes
LDAP Compatibility	Yes
Hard Disk Overwrite	Yes



The Xerox ColorQube 9203 as tested by BERTL.

## NETWORK PRINTER FEATURES

### DEVICE MEMORY

+ The dedicated printer memory for the Xerox ColorQube 9203 is a respectable 512 MB memory (ESS) and offers an 80 GB system disk.

+ The Xerox multitasking network controller handles multiple tasks with speed and efficiency and this is due to its powerful network controller which has a processing speed of 1 GHz.

### PRINT DRIVERS (PDLs)

+ The ColorQube 9203 also delivers multiple Page Description Languages (PDLs) including the following:

- Postscript 3
- TIFF
- PCL 5c
- PDF
- PCL6
- XPS

+ The PostScript, PCL5c, and PCL6 drivers offer bidirectional communication with the device with its user-selectable interface for all of the Windows base operating systems

### NEW PRINT DRIVERS (X-MED / X-GPD)

The ColorQube 9203 device supports two innovative new print drivers that can greatly simplify installing, managing and supporting printers and multifunction devices on the network, and increase end-user productivity:

+ Xerox Mobile Express Driver (X-MED) makes it easy for mobile users to find, use and manage Xerox and non-Xerox devices in every new location. Plug into a new network, and X-MED automatically discovers available printers and provides status and capability information. Save a list of "favorite" printers for each location, store application print settings for use on any printer in any network, and greatly reduce mobile support calls to IT.

+ Xerox Global Print Driver (X-GPD) is a truly universal print driver that lets IT administrators install, upgrade and manage Xerox and non-Xerox devices from a single driver. It provides a consistent, easy-to-use interface for end-users, reducing the number of support calls, and simplifying print services management.

Both of these drivers provide users with the following enhanced options

- Printers are automatically discovered
- Printer list can be managed based on location
- Gives Bi-directional feedback, device status, supplies and queue management.

## OPERATING SYSTEMS SUPPORTED

+ The ColorQube 9203 offers support for a wide array of operating systems such as the following

- Windows Vista
- Windows XP/2000
- Windows Server 2003/2008/XP (32 and 64 bit)
- HP UX 11/11i
- AIX
- Macintosh OS 10.3 and 10.5
- Solaris 8, 9, 10
- Solaris 10 x86
- Linux x86/x86\_64

## PRINT RESOLUTION

+ In the Image Quality department, the ColorQube print drivers' offers users several print resolution options which range from 225 x 450, 300 x 500, 450 x 567, to 600 x 600 dpi resolution.

## CONNECTIVITY

+ Connectivity options for the 9203 include Ethernet 10/100/1000BaseT, 10 BaseT, 10Base2 (IEEE802.5) (Token ring) via adapter Wireless Ethernet (IEEE802.11a/b/g) - via third-party adapter 802.1x support.

## NETWORK PROTOCOLS

+ Supported Network Protocols include: TCP/IP, LPR/LPD, Raw IP (Port 9100), NetBIOS SMB, IPX/SPX, IPP, NDPS/NEPS AppleTalk and Bonjour. All protocols not in use can be disabled by the network administrator.

+ Administrative Protocols supported include DHCP, BOOTP, SNMP, WINS, DDNS, SLP v2, HTTP and RARP.

## PRINTING FEATURES

The following table provides a list printing features supported on the Xerox ColorQube 9203:

Network Printing – Printing Features	
• Special font	Job Type • Secure, Sample, Delay, Saved
• Banner Sheet	• Paper Selection by attribute (including transparency separators)
• Rotate Image	• Duplex (2-sided)
• Offset	• Multiple stapling positions
• Support PCL and PS switching	• Hole punch
• Page Segmentation	• Booklet creation
• Fit to new paper size	• Output tray selections
• Saddle stitch with High Volume Finisher with Booklet Maker	• Store and recall driver setting
• Custom Macintosh Driver (Watermark, Booklet Creation, JBA, Secure, Sample, Delay Print)	
• Job monitoring at the device and desktop	
• Bi-directional Print Drivers provide device and job status	
• Embedded web server for remote control/monitor/setup	

Job List	Media Size	Mode	Time to First Page (seconds)		Job Time (seconds)	
			PCL	Postscript	PCL	Postscript
1-page Digital photo print original	Letter	1:1	42.61	45.20	42.61	45.20
4-page Passport Form PDF	Letter	1:1	42.20	41.37	47.39	46.77
16-page Magazine PDF	Letter	1:1	45.33	45.37	64.80	64.84
22-page Excel Worksheet	Letter	1:1	49.20	60.77	75.80	86.98
32-page Text-Based PowerPoint	Letter	1:1	44.88	43.40	82.18	81.36
32-page Graphic Intensive PowerPoint	Letter	1:1	49.89	53.37	89.70	93.93
38-page Form Word Document	Letter	1:1	46.43	46.02	92.58	92.30
50-page Text-Based PDF	Letter	1:1	41.24	46.68	106.44	107.43
50-page Text-Based PDF (duplex)	Letter	1:2	47.05	49.09	122.55	124.37

Network-Bandwidth/Print File Sizes			
	Native File Size	PCL	PS
1-page digital photo PDF	4.48 MB	17.3 MB	5.65 MB
4 page Passport Form PDF	0.08 MB	704 KB	384 KB
16-page Magazine in PDF	1.78 MB	19.9 MB	3.32 MB
22-page Excel Worksheet	0.12 MB	4.76 MB	4.81 MB
32-page Text-Based PowerPoint	0.23 MB	15.9 MB	2.46 MB
32-page Graphic Intensive PowerPoint	4.20 MB	37.4 MB	22.9 MB
38-page Form Word Document	0.91 MB	14.1 MB	14.6 MB
50-page Text-Based PDF	0.17 MB	5.43 MB	1.52 MB

Postscript Driver				
Image Quality Settings	Simplex		Duplex	
	First Page Out	Last Page Out Time	First Page Out Time	Last Page Out Time
50-page text-based PDF				
Fast Color	40.30	83.33	45.52	110.08
Standard Color	40.83	83.95	46.21	114.24
High Resolution	55.21	187.77	66.65	198.93

Print Productivity (seconds)				
Mode	PCL Driver		Postscript Driver	
	Color	B&W	Color	B&W
Simplex	44.6	37.7	47.7	37.8
Duplex	-	46.0	-	45.1

\*Print productivity is evaluated based on a test of 1-50 letter sized pages.

## WHAT WE LIKED

- Tested simplex color network-print speed with the PCL driver was as fast as 44.6 ppm, closely matching Xerox's rated speed of 50 ppm.
- Tested simplex color network-print speed with the PostScript driver was as fast as 47.7 ppm.
- Tested duplex black-and-white network-printer productivity was extremely productive up to 46.0 ppm with the PCL driver and 45.1 with the PostScript driver.
- Tested simplex monochrome network productivity up to 37.8 ppm with the PostScript driver.
- In BERTL's job stream test the PostScript driver completed the stream job test in 7 minutes and 10:17 seconds, running at 34 ppm, which translates to an efficiency rate of 69%. Using the PCL6 driver the efficiency rate was up to 68%.
- 

## WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the Xerox ColorQube 9203 MFP's printing capabilities.

## COPY PRODUCTIVITY

Advertised speeds are always quoted using the simplest route—in-and-out of a device. Of course, users often apply finishing options, incorporate different media sizes and types into the document, print in duplex, and add other elements that can affect speed. In the chart below, BERTL tests how different modes—mixed-size original mode and duplex mode—affect document-feeder productivity.

In order to assess copier productivity, BERTL ran a series of copy jobs in order to determine document-feeder scanning speed, the affect of the first set out on overall engine speed, and whether specific job attributes affect engine throughput capability. Each job was set up by feeding media from the shortest media route to the shortest available output destination. A separate test examines how adding finishing/output destinations affects productivity.



**Above and below:** The Xerox ColorQube 9203 platen glass and duplex automatic document feeder (DADF).



Automatic Document Feeder First Copy Out Time	
Time in Seconds	
Number of Originals	Monochrome Mode
1 Simplex Original	13.50
1 Duplex Original	16.52
Color Mode	
1 Simplex Original	14.67
1 Duplex Original	18.92

Platen Glass First Copy Out Time	
Time in Seconds	
Number of Originals	Monochrome Mode
1 Simplex Original	10.49
Color Mode	
1 Simplex Original	11.52

Copy Job Time			
# of originals	Monochrome Mode	Time In Seconds	CPM
10	1 sided to 1 sided	27.02	22.2
10	1 sided to 2 sided	31.12	19.3
10	2 sided to 1 sided	48.30	12.4
10	2 sided to 2 sided	53.52	11.2
Color Mode			
10	1 sided to 1 sided	31.24	19.2
10	1 sided to 2 sided	32.74	18.3
Auto Color Mode			
10	1 sided to 1 sided	28.99	20.7

Copy Productivity (seconds)		
Mode	Color	Monochrome
Simplex	32.5	39.8
Duplex	34.6	32.8

\*Copy productivity is evaluated based on a test of 1-10 letter sized pages.

Document Feed Speed			
# of originals	Monochrome Mode	Time In Seconds	OPM*
10	Simplex Originals	22.68	22.68
5	Duplex Originals	22.68	22.68
10	Mixed-Size Originals	22.68	22.68
Color Mode			
10	Simplex Originals	55.36	10.8
5	Duplex Originals	34.69	17.3

\*Originals per minute.

Document-Finishing Penalty				
# of originals	Finishing Selection	Time In Secs	1 Set Time (Secs)	Penalty Per Set (Secs)
10/5	Corner Staple	78.24	26.45	-0.11
10/5	Side Staples	--	--	--
8/5	Saddle-Stitch Booklet	*	*	*
10/5	Covers and Inserts	--	--	--

\* Saddle-Stitch option was not available on the device tested.

## COPY FEATURES

+ The Xerox ColorQube 9203 comes standard with a Duplex Automatic Document Feeder (DADF) with capacity for up to 100-sheet.

+ Users can submit jobs that require single or duplex copying. The ColorQube supports copy jobs that require 1:1, 1:2, 2:2 and 2:1 side printing.

+ Users can make copies that range from 1 to 9,999 in quantity.

+ Xerox Rated Output Speed is up to 50 cpm color and 50 cpm black-and-white.

+ Xerox Rated First-Copy-Out Time (FCOT) is as fast as 8.1.

+ Copy Resolution is set at 600 x 600 dpi.

+ The ColorQube 9203 can simultaneously copy, fax and scan.

+ Users can use the variable zoom to scale from 25% to 400% in 1% increments.

## SPECIAL COPY FEATURES

The following is a list of supported copying features offered on the Xerox ColorQube 9203.

Highlighted Features	
• Collation	• Book Copying/Bound Copying
• Automatic 2-sided/Duplex	• Edge Erase
• Auto Reduction and Enlargement	• Single Color
• Hole Punching	• Repeat Image
• Booklet Creation	• Mixed Size Original
• Stapling	• Image Shift
• Large Job Interrupt	• Authentication for Services
• Auto Paper Select	• Auto Tray Switching

## WHAT WE LIKED

- Tested black-and-white FPOT as fast as 13.50 seconds in simplex copier mode, and as fast as 16.12 seconds in duplex copier mode.
- Tested color FPOT as fast as 14.67seconds in simplex copier mode, and as fast as 18.92 seconds in duplex copier mode.
- Tested black-and-white copier productivity was up to 39.8 ppm in simplex mode and up to 32.8 ppm in duplex mode, closely matching Xerox's rated copy speed of up to 50 ppm.
- Tested color productivity in simplex mode was as fast as 32.5 ppm, and as fast as 34.6 ppm in duplex color mode.
- Minimal document-finishing penalty when applying corner and side stapling.
- Fast document-feeder speeds of up to 22.68 opm in monochrome simplex mode and duplex mode.

## WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the ColorQube 9203's copying capabilities.

## SCANNING

Scanning features available on the ColorQube 9203 allows users to move, manage, manipulate, capture, repurpose and distribute their documents via email, Internet fax, embedded fax, network server fax or network scanning.

Device Contention	
Print slowdown when scanning copy job?	No
Print slowdown when scanning in scan job?	No
Print slowdown when scan-data transfer underway?	No

## Scanning Features

+ The ColorQube 9203 offers users the option to scan their jobs using the following color modes: Color Scanning, Grayscale, Black and White, and Auto Detect.

+ Users can scan while the system is copying, printing or while it is transferring scan data to a network or faxing jobs.

+The input scanning speed for the ColorQube 9203 is 75 ipm using monochrome and 51 ipm using color. 8.5 x 11 in. Long Edge First (LEF) (A4/210 x 297 mm).

## Resolution

+ This device offers several resolution options aimed at satisfying the most demanding customers. Options include the following:

- 600 x 600 dpi
- 400 x 400 dpi
- 300 x 300 dpi
- 200 x 200 dpi
- 200 x 100 dpi
- 150 x 150 dpi
- 100 x 100 dpi
- 72 x 72 dpi

## Scan Area

+ The maximum scan area for the ColorQube 9203 is 11.7" x 17" inches (A3/297 x 420 mm).

## File Formats

+ Xerox provides users with a multitude of file format options which include:

- PDF
- TIFF
- Multipage TIFF
- Searchable PDF
- PDF/A
- XPS
- Searchable XPS
- Linearized PDF
- Searchable PDF/A
- JPEG

These options are sure to meet the needs of the most demanding user.

## Secure Access and Authentication

+ The secure device login with network user name and password provides users with secure access to the ColorQube 9203.

+ User Authentication is supported with Kerberos in the following environments:

- (Windows 2000/UNIX/Windows Server 2003 and 2008)
- SMB (Windows NT 4.0/Windows 2000/Windows Server 2003 and 2008)
- Novell over IP/IPX (Novell NetWare 4.x/5.x/6.x)
- Common Access Card (CAC) / Personal Identity Verification (PIV)
- Xerox Secure Access Unified ID System
- LDAP and PIN-based guest login.

## LDAP

+ The Xerox ColorQube 9203 is compatible with LDAP (Lightweight Directory Access Protocol), which allows it to browse address lists stored on a corporate network. When a new name is added to the database, connected devices automatically have access to that name. This eliminates the need to maintain a separate address book for the ColorQube 9203.

This is much more convenient for IT managers, since it means they do not waste resources manually updating each device address book every time a phone number or email address is added, deleted, or updated.

## Network Protocol

+ This device supports the most commonly used network protocols supported today. This includes FTP, Novel (NCP via IPX/SPX), Microsoft SMB via TCP/IP and HTTP/HTTPS.

## Supported Scan Destinations

+ The ColorQube 9203 supports a multiple scan destinations making it easy for users to route their documents to most destinations. Scan destination options vary by scanning software options purchased.

Xerox offers some of the most comprehensive workflow options in the industry.

Scan destinations on the ColorQube 9203 include;

- Scan to Searchable PDF, PDF/A and XPS
- Scan to Home
- Scan to Mailbox
- Store and reprint jobs
- Scan to file
- Scan to network server/directory

- Scan to Windows XP client via Windows Image Acquisition (WIA) or TWAIN driver
- Scan to e-mail
- Scan to Microsoft Exchange public folders
- Scan to PC Desktop

### **Scan to PC Desktop Professional (Optional)**

+ Scan to PC Desktop SE is a desktop and server-based offering that provides document imaging, archiving, editing and organization tools.

+ Nuance PaperPort Pro is an excellent software solution which is used for image viewing and file management.

+ Nuance OmniPage Pro Office (for desktop/client installation) is another software solution which is used to perform OCR and file format conversions of scanned documents.

+ Image Retriever provides fully automated retrieval of scanned images direct from a scan enabled Xerox ColorQube to individual desktops.

### **Scan to PC Desktop Professional (Optional)**

+ Scan to PC Desktop Pro is a desktop and server-based offering that provides document imaging, archiving, editing and organization tools.

+ The PaperPort Personal Scanning Platform empowers office workers with the ability to customize, directly from the desktop, the scanning menus available to them on Xerox EIP enabled MFP devices.

+ ScanSoft PaperPort Pro – an excellent software solution which is used for image viewing and file management.

+ The Nuance PaperPort Pro version offers the following advance scanning features:

- Unlimited Scanner Profiles
- Capture Assistant with Scanning Preview
- DesktopDelivery from eMail
- DesktopDelivery from a Folder
- Scheduled Search Indexing
- SendTo OmniPage® Workflow
- SendTo Web Folders (WebDAV)
- SendTo ODMA
- SendTo SharePoint

+ Nuance OmniPage Pro Office (for desktop/client installation) is another software solution which is used to perform OCR and file format conversions of scanned documents. The OmniPage Pro version offers the following advance scanning features:

+ Advanced Productivity Features:

- Automatically Redact (Black-out), Highlight and Strikethrough text using keywords
- Form drawing & arrangement (e-form creation)
- Automatic data collection from forms
- Integration with SharePoint 2003
- Integration with SharePoint 2007
- ODMA (DMS) and FTP integration

+ Automation Capabilities:

- File-It Assistant with barcode driven workflows
- Workflow / Batch manager - jobs (scheduled workflows)
- Workflow / Batch manager - folder watching
- Workflow / Batch manager - mailbox watching

+ Image Retriever – provides fully automated retrieval of scanned images direct from a scan enabled Xerox or through email ColorQube to individual desktops. Also includes an Email inbox polling capability.

### **Additional Scanning Features**

The following is a list of additional supported scanning features offered on the Xerox ColorQube 9203:

- Scan Build Job
- Duplex Scanning
- Auto Detected Document Size
- Scan Mixed Size Originals
- Scan to Edge

### **Scan to Email**

+ The ColorQube 9203 supports Scan to Email (manual address entry) in color, auto detect, grayscale, and black and white modes. Users can direct their document destination directly from the device.

+ Users can easily look up and search for a destination or e-mail address by accessing Exchange/Notes/LDAP address directly from the control panel.

+ Images can be scanned, printed and faxed directly to the device hard drive and stored in a mailbox.

### **WHAT WE WOULD LIKE TO SEE**

- BERTL was very satisfied with the ColorQube 9203's network-scanning capabilities, features and functions.

## Fax Server Features

+ The ColorQube 9203 offers users network fax server integration which provides users with the ability to fax documents directly from the device control panel.

Other options include the following:

- One-sided and two-sided
- Phone number entry
- Add to Send List
- Delay Send
- Image quality settings (photo, text, photo and text, lighten/darken and five levels of sharpness)

## Fax Server Print Features

- One- or two-sided printing
- Quantity
- Staple on/off
- Collate on/off
- Finisher output tray selection (top tray or main tray)
- Secure print on/off

## One/Two Line Fax Options

### Transmission Resolution Options

+ The transmission speed available with these modem(s) is up to 33,600 bps, which equates to less than four seconds per page of transmission time.

+ The ColorQube 9203 has five transmission resolutions: Superfine (600x600 dpi), Superfine (400 x 400 dpi), Superfine (300 x 300 dpi), Fine (200 x 200 dpi), and Standard (200x100 dpi). Some devices only offer resolution up to 400 dpi quality.

### Compression Standards

+ The Xerox ColorQube 9203 uses MH, MR, MMR, JBIG, G3, and Super G3 compression coding schemes.

## Job Accounting

+ Job tracking can accurately monitor device usage remotely via the web. Xerox Standard Accounting monitors both the documents produced and can also track the people that produced them. The Xerox Standard Accounting function is also used to manage access and gather data for print, copy, scan and fax output for both black-and-white and color.

## Fax Send Features

- Original type: photo, photo/text, text only
- Fax – off platen, mixed sizes or bound/book
- Audio line monitor
- Transmission options (report/header)
- Reduce/Split large documents

- Cover letter
- Delayed send
- Build job (up to 1,000 images)
- Polling

## Fax Receive Features

Fax receive features include one- or two-sided printing, reduction at reception to fit available paper, junk fax prevention, secure receive, auto answer and stapled or unstapled, and hole punch.

## Fax Report

Administrators can generate up to 6 different fax reports which include:

- Activity
- Dial Directory
- Group Directory
- Options
- Pending Jobs
- Broadcast Report

## Fax Receive Mailboxed

The Xerox ColorQube 9203 offers up to 100 password-protected mailboxes with the one-line option or up to 200 password-protected mailboxes when the two-line option is purchased.

## Auto Dialing Features

### Speed Dials:

- 200 (one-line option)
- 1,000 (two-line option)

### Group Dials:

- Up to 100 groups with up to 200 recipients per group (one-line option)
- Up to 200 groups with up to 400 recipients per group (two-line option)

### Auto Redial:

- Up to 14 attempts
- 1 to 25 minute intervals
- Batch send (up to memory capacity)

## Fax Capability

+ Direct document transmission to remote Internet Fax machines or email clients (SMTP).

+ Reception and automatic printout of documents in black and white sent via email from remote Internet Fax machines or email clients.

## Maximum Scan Area

+ Maximum Scan Area: 11 x 17 in. (A3)

## Address Directory Access

---

+ Users can download the device's address list as a CSV (comma-separated value) file format.

+ The ColorQube 9203 can easily connect with corporate address lists via LDAPv3 and Internal LDAP or Public address books.

## Fax File Formats

---

+ Supported file formats include PDF and Multi TIFF.

## Resolutions

---

+ Fax resolution options include:

- 600 x 600 dpi
- 400 x 400 dpi
- 300 x 300 dpi
- 200 x 200 dpi
- 200 x 100 dpi
- 150 x 150 dpi
- 100 x 100 dpi
- 72 x 72 dpi

## Network Protocols

---

+ The ColorQube 9203 supports POP3 and SMTP network protocols.

## Compliance

---

+ Compliant with ITU-T, T.37 and 508.

## WHAT WE WOULD LIKE TO SEE

---

- BERTL was very satisfied with the ColorQube 9203's fax capabilities, features and functions.

## IMAGE QUALITY

BERTL evaluates the output of several “test targets” in order to determine image quality. Following are descriptions of key elements of image quality. Note the numbered examples on each of the test targets shown in the right column.

### Office Color Image Quality

1. **Density of Solid Areas** - Better contrast; more vivid overall images
2. **Line Work** - Better production of lines and text
3. **Halftones** - Better production of photographic and screened images
4. **Negative/Positive** - Better production of fine detail

### Photographic Color Image Quality

5. **Flesh tones** - Better production of portraits
6. **Banding** - Better solid and dithered fill
7. **Low Contrast** - Better production of dark images
8. **Saturation** - Better production of bright colors
9. **Caste** – Better color fidelity
10. **Fine Detail** – Better reproduction of fine details
- 11.

Density of Solid Areas*		
	Copy Density	Print Density
Black	1.76	1.70
Cyan	1.17	1.26
Magenta	0.94	0.91
Yellow	1.12	1.11

\*Density is on a scale of 0 to 2.5, with 2.5 being the best possible.

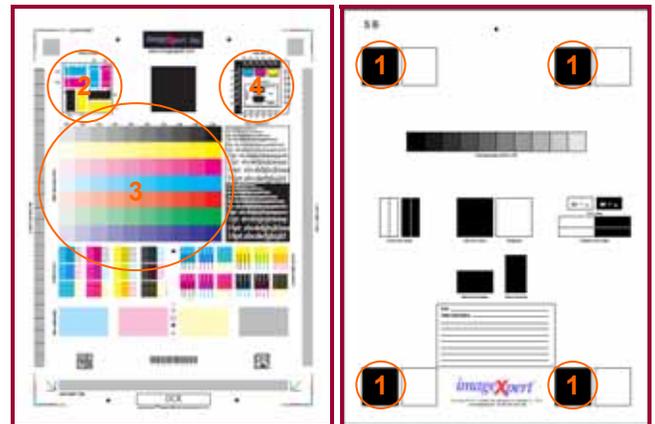
Copy & Print Resolution*				
	Copy Resolution		Print Resolution	
	Vertical	Horizontal	Vertical	Horizontal
Black	4.5	4.5	2	2
Cyan	--	--	2	2
Magenta	--	--	2	2
Yellow	--	--	3	3

\*Line Pairs per Millimeter. For copy resolution, higher is better (range, 2.0-8.0); for printer resolution, lower is better (range, 1.0-5.0).

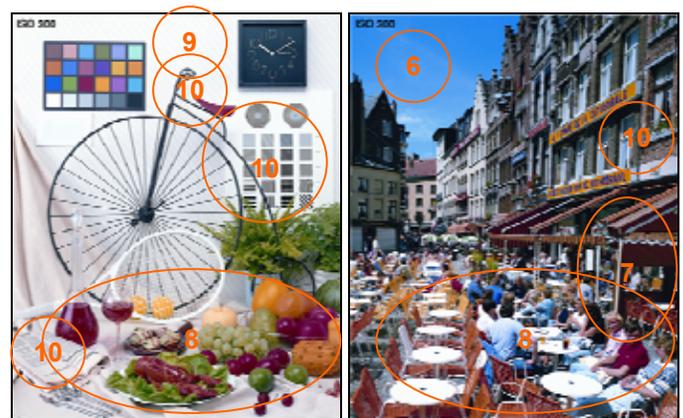
Print Halftones		
	Min. Gradation*	Max. Gradation**
Black	10	100
Cyan	10	100
Magenta	10	100
Yellow	10	100

\*Minimum gradation is on a scale of 10 – 100 percent in 10 percent increments. The best possible minimum gradation is 10 percent.

\*\*Maximum gradation is on a scale of 10 – 100 percent in 10 percent increments. The best possible maximum gradation is 100 percent.



BERTL uses ImageExpert printer test targets for the evaluation of printed image quality. BERTL technicians' measure image density and evaluate the device's ability to produce a full range of halftones and various sizes of negative/positive text, dots and lines in each primary printing color (CYMK).



BERTL uses synthetic (photographic) test images obtained from ISO International Standard 12640--Graphic Technology--Prepress digital data exchange--CYMK Standard Color Image Data (CYMK/SCID) in order to evaluate the ability to print photographic images.

## IMAGE QUALITY

Copy Halftones		
	Min. Gradation*	Max. Gradation**
Black	10	90
Cyan	10	90
Magenta	10	80
Yellow	10	90

\*Minimum gradation is on a scale of 10 – 100 percent in 10 percent increments. The best possible minimum gradation is 10 percent.

\*\*Maximum gradation is on a scale of 10 – 100 percent in 10 percent increments. The best possible maximum gradation is 100 percent.

Negative/Positive Lines*				
Line Width (points)	Negative		Positive	
	Vertical	Horizontal	Vertical	Horizontal
1	√	√	√	√
2	√	√	√	√
3	√	√	√	√
4	√	√	√	√
5	√	√	√	√
6	√	√	√	√

A "√" mark indicates the device was able to print the line width correctly.

\*Chart cells containing an "x" indicate that the printer was not able to print the line width correctly. Overall, the fewer "x's," the better the image quality. If no cells are marked with an "x," then the device was able to print all line widths correctly.

Negative/Positive Dots*	
Line Width (points)	% of Dots Printed
1 pixel Black	100
1 pixel Black Neg	100
1 pixel Cyan	100
1 pixel Magenta	100
1 pixel Yellow	100
2x2 pixel Black	100
2x2 pixel Black Neg	100
Checkerboard apparent?	No

\*On a scale of 0 – 100%. The higher the percentage, the better.

Photo Quality	
	Ranking (1-5)*
Fleshtones	4.5
Banding	4.0
Low Contrast	4.0
Saturation	4.0
Caste	4.0
Fine Detail	4.0

\*Based on a scale of 1 – 5, with 5 being the best.



**Above and below:** Xerox solid ink technology utilizes four A3-page-wide printheads to achieve fast print speeds and ensure that the entire page is imaged at a constant rate displaying vibrant color quality.



## ColorQube™ 9200 Series Cost Savings Calculator



The ColorQube 9200 series lowers the price of color prints, making it more affordable to print color everyday. Tell us what you pay today and compare your current per-page prices with one of the ColorQube flexible pricing plans. Find out how much you could save printing color everyday.

### Step 1 of 2: Tell us a bit about your current monthly usage:

Average monthly print volume:  
15,000 pages

Percentage of your print volume that is in color:  
50%

Price you currently pay for each color page:  
10¢

Price you currently pay for each black & white (B&W) page:  
0.5¢

Users can calculate their cost per page using Xerox's ColorQube Cost Savings Calculator to get price estimates depending on their typical print output.

### Step 2 of 2: Enter the % of each type of color document you print.

Useful Color 10 %

Everyday Color 65 %

Expressive Color 25 %

Users can enter a percentage estimate for each of the color documents that are mostly generated in their office.

Potential savings:  
**51 % or \$409 /month**  
compared to your current plan.

Want to learn more?  
Call a sales advisor  
1-800-275-9376 ext.587  
> print results  
> find a sales partner  
> get a quote  
> live chat

### Detailed Summary

#### Your current plan:

7500 pages/month B&W x .5¢ = \$37.50

7500 pages/month any color x 10¢ = \$750.00

Total Printing Cost: \$ 787.00 /month



#### ColorQube 9200 Series plan:

8250 pages B&W + Useful Color x 1¢ = \$82.50

4875 pages Everyday Color x .3¢ = \$146.25

1875 pages Expressive Color x .8¢ = \$150.00

Total Printing Cost: \$ 378.00 /month



Based on the information entered into the calculator, users are provided with a cost savings estimate.

## WHAT WE LIKED

- Very Good print and copy density in all four colors.
- Excellent resolution in both copy and printer modes.
- Great halftone reproduction in printer mode when printing all four colors (black, cyan, yellow and magenta), as the device was able to correctly produce virtually all halftone shades in BERTL's halftone-evaluation chart.
- Good halftone reproduction in copier mode when printing all four colors.
- The device displayed good line control and excellent dot control.
- Good saturation was attained using the enhance mode (default) and High Resolution/ Photo mode.
- Tints and registration was above-average.
- Excellent production of photographic images. Photographic color images were rated "Above Average"; BERTL analysts noted bright, rich colors and sharp details.
- Flestones were smooth and realistic.
- Four dpi resolution settings which include; High Resolution/ Photo at 600 x 600 dpi, Enhanced at 450 x 567 dpi, Standard at 300 x 500 dpi and Fast Color at 225 x 450 dpi.
- Xerox solid ink technology utilizes four printheads that cover the full width of a 12 x 18" page displaying vibrant color quality.

## WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the ColorQube 9203's image quality.

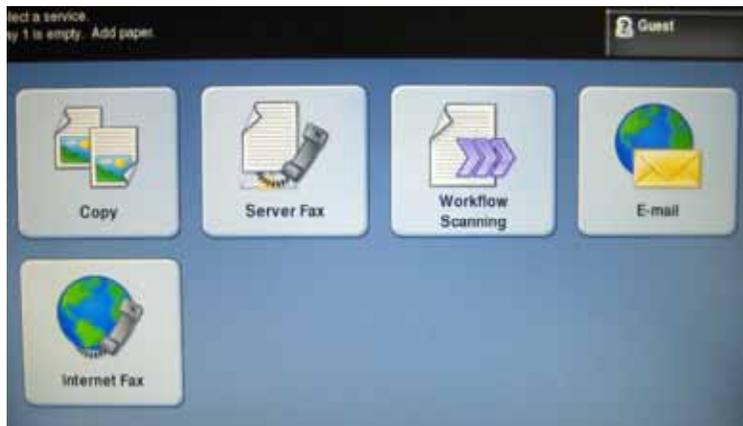
## PROGRAMMING THE CONTROL PANEL

A control panel's ease of use—or lack of—can often have a significant effect on user productivity. The harder it is to select frequently used options such as duplexing, document finishing, etc., the more time the user has to spend programming the device and the less productive they are. Xerox's ColorQube 9203's control panel has a large 8" color touch screen and hard keys. BERTL was extremely impressed with its on-screen help videos that displayed step-by-step instructions for device management and error recovery.

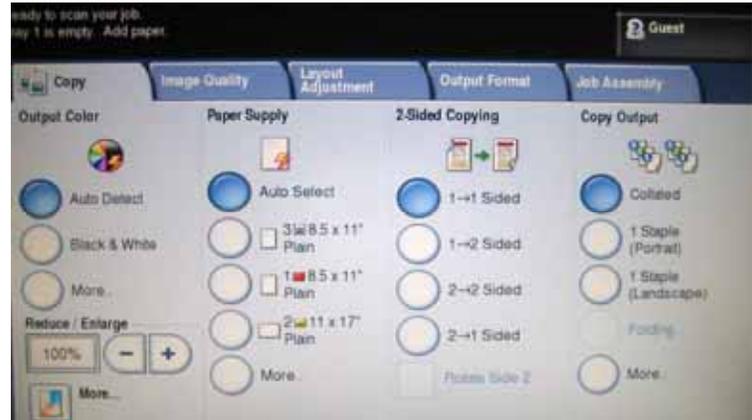


In the chart below, BERTL assesses how many steps are required to make these commonplace settings.

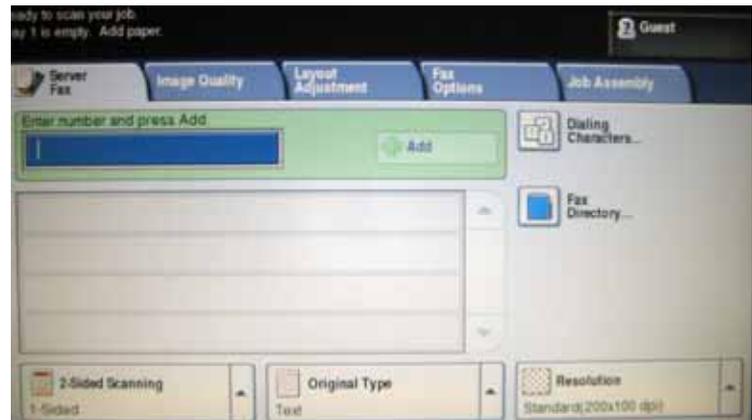
Selections Required for Frequently Used Copy Functions	
Photo Mode	4
Corner Staple	1
Reduce to 64%/78%	3
1:2	1
2:2	1
Copied Front and Rear Covers	6



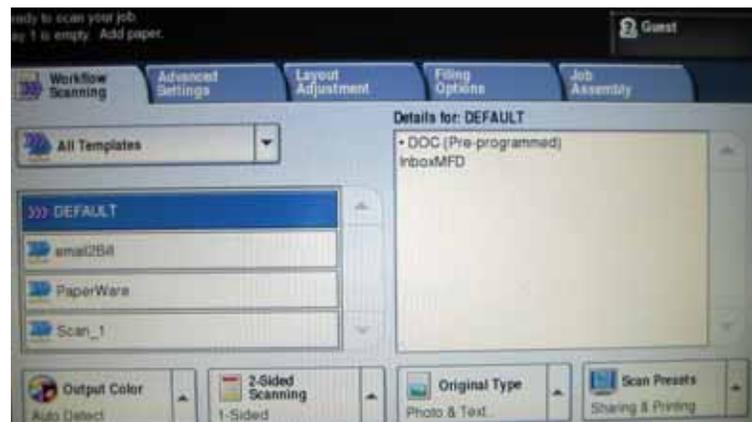
The touch screen's main menu provides users with functions that include; Copy, Server Fax, Workflow Scanning, E-mail and Internet Fax.



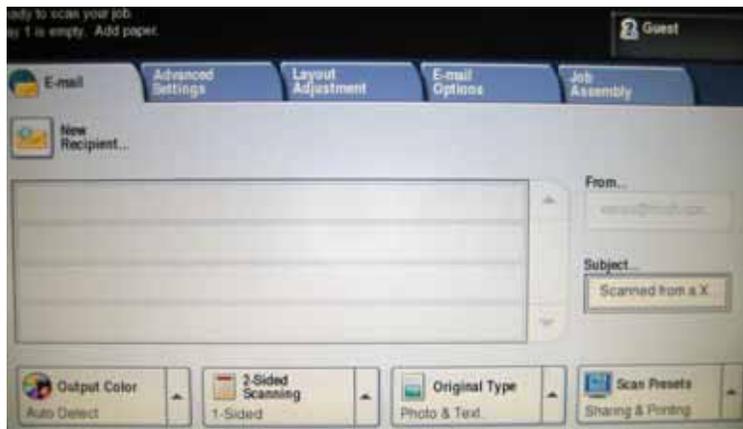
The copy touch screen's main menu displays the most common copying choices. The blue highlighted buttons on the touch screen display currently selected settings.



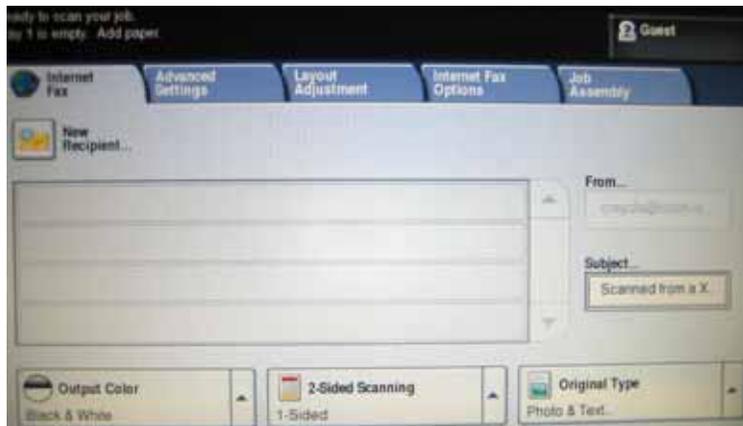
Users can send faxes from the desktop, over the Internet or via an existing fax server.



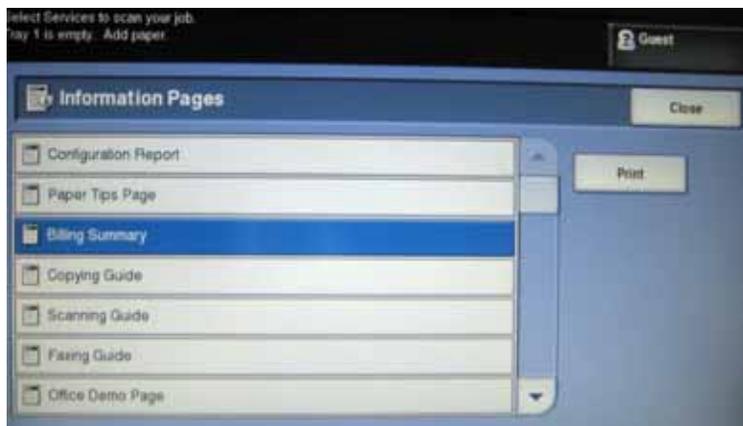
Users have many scanning options and features which include; scan to applications, web folders, URLs, PC and mailboxes.



Scan to Email allows users to route files to email recipients directly from the control panel.



Internet Fax allows users to send out faxes via a network connection rather than using a telephone line.



The Machine Status screen enables users to print configuration pages, guides and etc. Users can also print billing summary sheets as well as check consumable status.

## PCL AND POSTSCRIPT DRIVERS

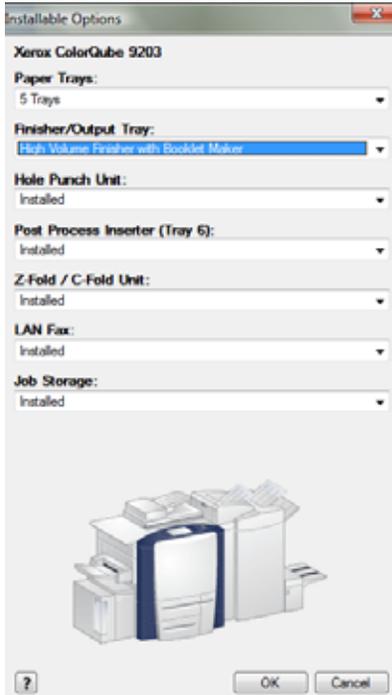
As with control panels and touch screens, print-driver design can vary enormously from manufacturer-to-manufacturer. Xerox has made it a simple process with their design of the Postscript and PCL drivers. The drivers are the same as other Xerox device drivers, which will make it especially easy for Xerox users to quickly acclimate to it. The ColorQube 9203 also supports the Xerox Global Print Driver and Xerox Mobile Express Driver which can simplify installing, managing and supporting printers and MFPs on the network, and increase end-user productivity.

Print-Driver Checklist	
Do print drivers have identical user interfaces?	Yes
Are print drivers interfaces identical to other vendor models?	Yes
Bidirectional communication within print drivers?	Yes
Auto device configuration from within print driver?	Yes
Does print-driver installation require rebooting of the workstation?	No
Are print-driver deployment processes included?	Yes
Are print-driver deployment guidelines and procedures included?	Yes

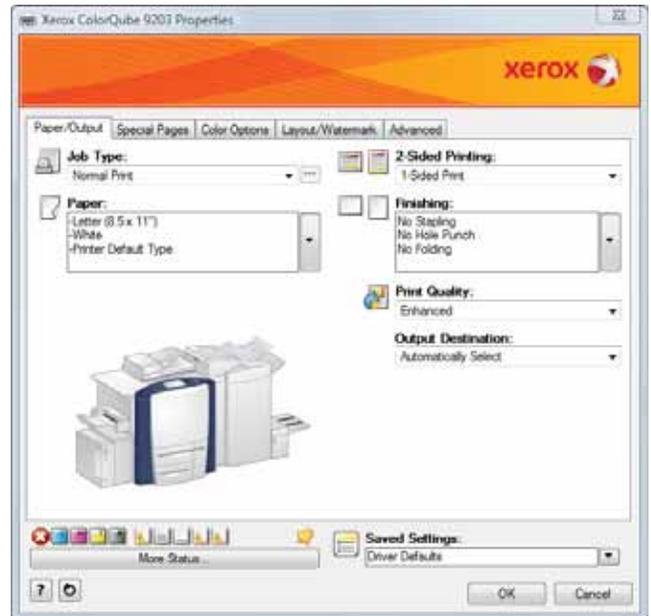
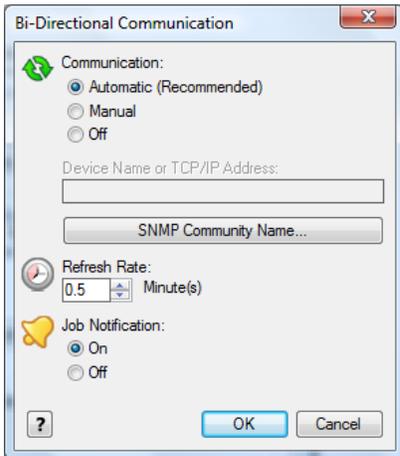
Xerox ColorQube 9203 print drivers offer different Print Quality settings which changes the print speeds and the image quality. Below is a chart displaying the different color mode settings found in each of the drivers tested.

Mode	Postscript Driver	PCL Driver
High Resolution/ Photo (38 PPM)	√	√
Enhanced (50 PPM)	√	√
Standard (70 PPM)	√	
Fast Color (85 PPM)	√	

## PRINT DRIVER DIALOGUE SCREENS



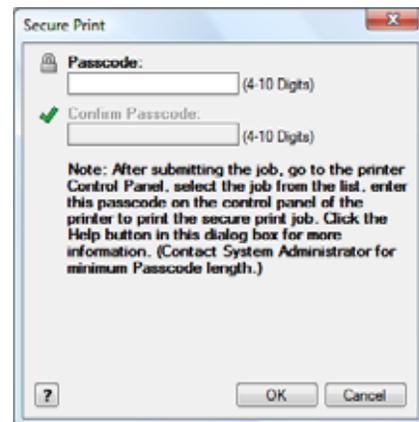
**Above and below:** In order to specify which options have been installed, as well as to specify system defaults, administrators first access the "Printers and Faxes" folder via the Microsoft Windows' Start menu, and then select either the ColorQube 9203's PCL or PostScript drivers. Administrators can "manually" specify which options are installed, or they may simply enable "Bi-Directional Communication" between the device, and the driver automatically indicates that the options shown above are available for use.



The print driver dialogue screen for both the PCL and PostScript drivers are virtually the same with some minor differences. The first tab on both the PCL and PostScript drivers is the Page/Output. This tab provides basic options such as job type, paper options, 2-sided printing, finishing, print quality, and output destination. Users can always view the device consumable levels and check the status of the device by selecting the "More Status" button located on the lower left side.

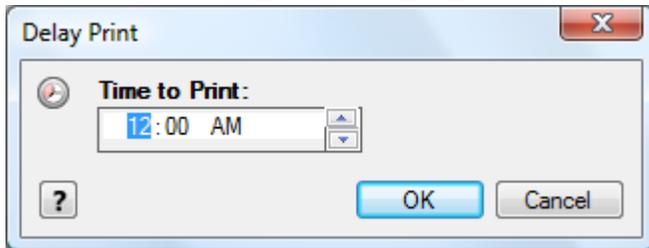
In the "Job Type" drop-down menu on the top left are options for Normal Print, Secure Print, Sample Set, Delay Print, Store File in Folder and Fax.

**Normal Print:** Prints the job immediately without requiring a pass code.

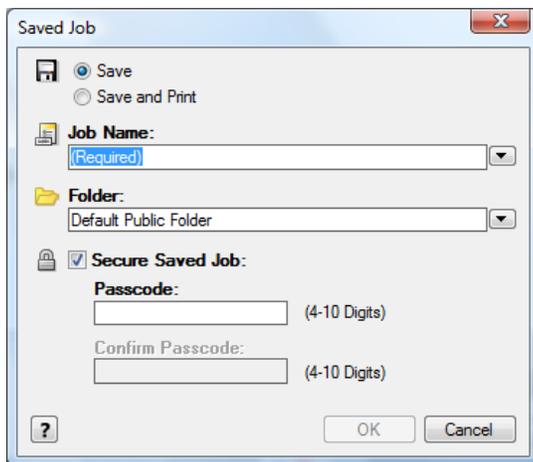


**Secure Print:** Prints the job only after the user enters their pass code at the printer's control panel.

**Sample Set:** Prints one copy of the job as a sample and holds the remaining copies of the job at the printer until you release them from the printer's control panel.



**Delay Print:** Prints the job at the time specified by the user. When this job type is selected, the Delay Print dialog box appears so users can specify a time to print.

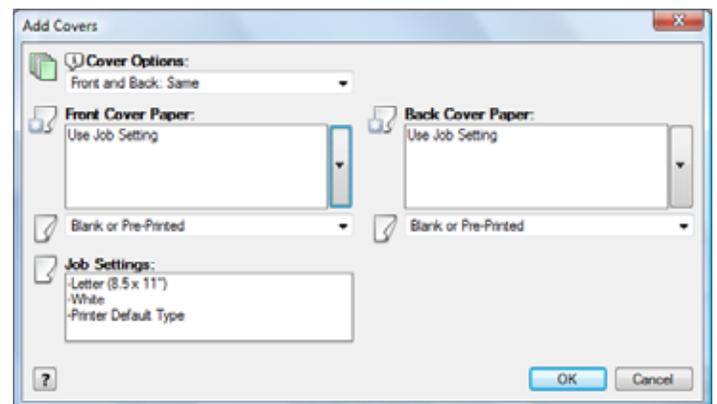


**Saved Job:** This feature Stores the job on the printer's hard drive. Users can then print the job on demand from the printer's control panel or from CentreWare Internet Services. When this job type is selected, the Store File in Folder dialog box appears so users can assign a job name, folder name and, if desired, enable secure saved job by providing a passcode with up to 20 digits.



The Special Pages tab enables users to add, modify, or delete cover pages, inserts, or add exception pages.

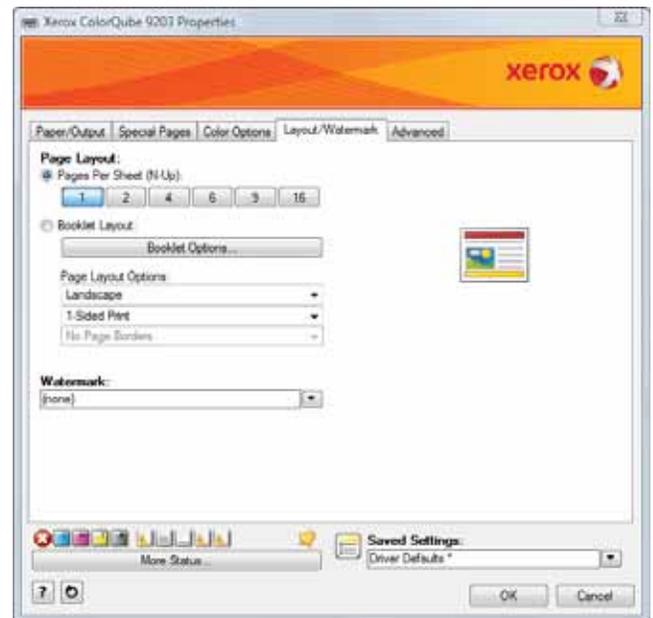
The center table in the dialogue screen provides a summary of the special pages set for the print job. Up to 250 inserts and up to 250 exception pages can be included in the table.



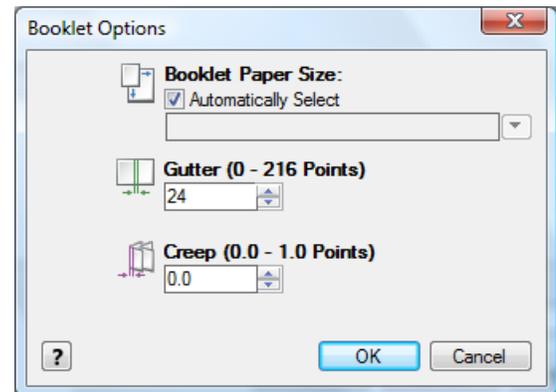
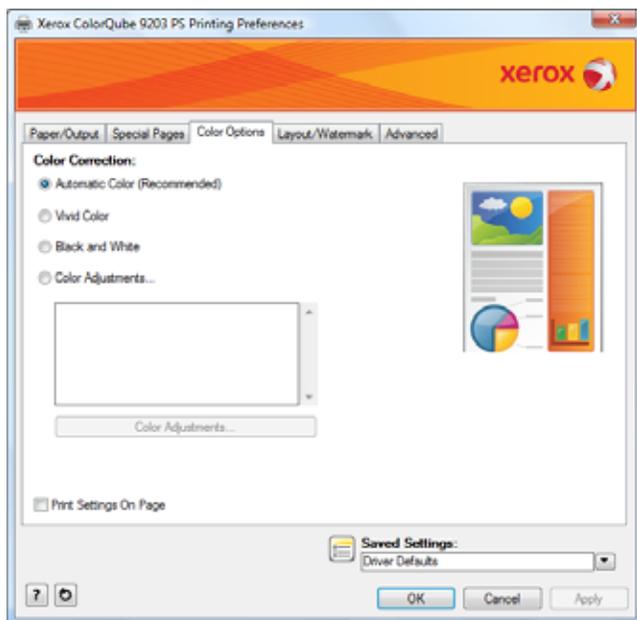
Users can create their own front and back cover sheets and select the type of paper they are printed on.



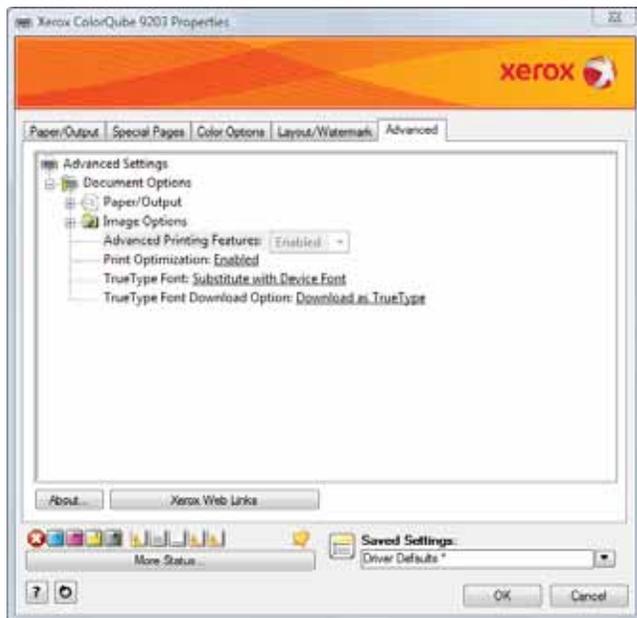
**Above and below:** The Color Options tab allows users to choose color correction. The Postscript driver has the added feature of Color Adjustments which enable users with the ability to adjust the color in their print job. This feature provides users with color matching options used to match the printer's colors as closely as possible to those of a computer screen or a printing press, or converting the colors to grayscales.



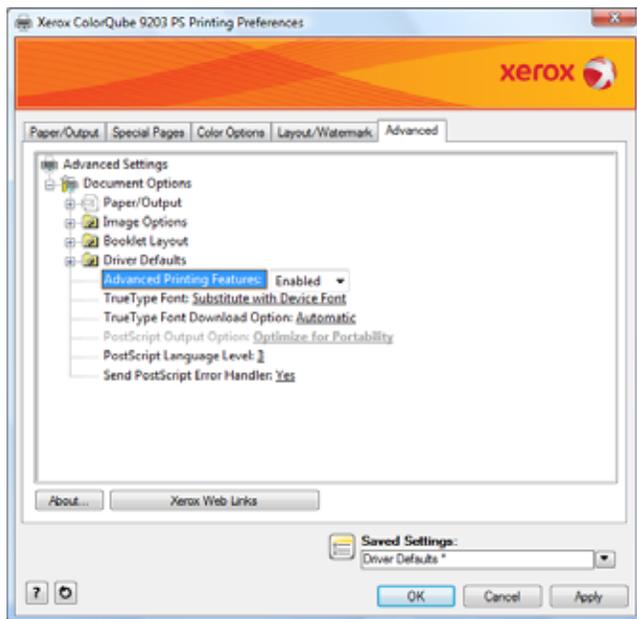
The Layout/Watermark tab contains some added options that insert effects to the print jobs such as Page Layout (N-up), Booklet Layout, and Watermarks.



With the Booklet options, users can change paper sizes and are given the option of adjusting both the Gutter and Creep.



**Above and below:** The Advanced options tab provides users with the ability to select advanced printing options that are rarely changed. The Postscript driver has the added feature of booklet layout.



The About button provides the print-driver version information.

## ROUTINE MAINTENANCE

The Xerox ColorQube 9203 displays animated, step-by-step instructions for routine tasks, such as clearing paper misfeeds or replacing ink. BERTL found these animated screens very helpful when performing these routine maintenance tasks. Also contributing to the Xerox's ease of use is that there is just one replacement component (cleaning unit) which makes it easier for the user to maintain.

### Maintenance Checklist

Load ink/toner while running?	Yes
Requires rear access for maintenance items?	No
Requires side access for access to maintenance items?	No*
All-in-one imaging units?	N/A
User-disposable waste item(s)?	Yes

\*The CU ans Waste Unit Ink Tray are accessible from the front.



Since 1991 Xerox has been designing solid ink sticks. These ink sticks are easy to use, cartridge free and are environmentally responsible and produce great color.

## REPLACING SOILID INK STICKS



**Above and below:** BERTL Analyst found replacing the ColorQube 9203's solid ink sticks to be extremely easy. The user must first lift up the top panel of the left side of the device, and then simply drop in the cartridge. As many as six sticks can be loaded at a time. Users can also drop the sticks in while the device is printing for uninterrupted jobs.



## CHANGING THE SOILD INK WASTE CONTAINER



**Above and below:** Users must periodically empty the device's ink waste container. The container is accessible by opening the front panel door and sliding it out. Xerox has done a great job of labeling all the devices consumables for easy access.



## REPLACING CLEANING UNIT



Users can also replace the device's cleaning unit by opening the front panel door and sliding the unit out.

## MISFEED ACCESS

If a misfeed occurs on the ColorQube 9203's, its location is indicated on the touch screen, which displays the misfeed-access area.



In order to access any misfeeds that may occur in the duplex automatic document feeder, the user lifts up this cover.



To access the front misfeed areas, the user first opens the front door. Once open, the user can use the green dials and levers to clear any misfeeds. There are LED sensor lights to help guide users during this process.



**Above and next page:** When a finisher or a z-fold unit is attached; all misfeeds can be cleared by opening the doors and following the instructions on the panels and using the green levers to direct them out.



Misfeeds can be cleared in the bypass feeder by opening this door and clearing any misfeeds.

## CLIENT UTILITIES AND DEVICE MANAGEMENT

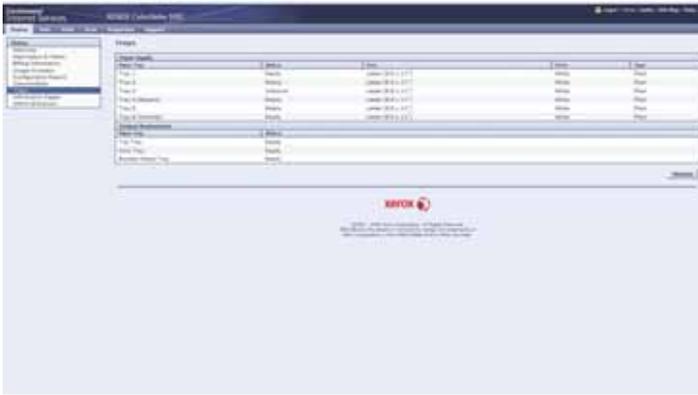
In order to take the best and most efficient advantage of a device and its capabilities, as well as ensure maximum uptime, clients need an efficient way to access and monitor the device. Xerox offers many features and options to help productivity for all users.

CentreWare® Internet Services – Integrated Device Web Page	
<b>Xerox CentreWare Web</b>	<p>A Web-based server application for network administrators that permits Web browser-based device management from any workstation, whether running Windows or UNIX or any other operating system</p> <ul style="list-style-type: none"> <li>• Works with any SNMP-managed printer from any manufacturer</li> </ul>

CentreWare® Internet Services – Integrated Device Web Page	
	<ul style="list-style-type: none"> <li>• Provides help with device discovery and installations, health checks and troubleshooting, and device upgrades, as well as basic accounting and asset management</li> </ul>
<b>Device Status</b>	<p>Web server embedded in SMart Controller:</p> <ul style="list-style-type: none"> <li>• Tray status/contents</li> <li>• Consumables status</li> <li>• Alerts</li> </ul>
<b>Scan Template Management</b>	<p>Support 250 scan templates                  Create device specific CentreWare scan templates                  Select confirmation sheet options                  Share scan templates via device cloning</p>
<b>Web-based Job Submission</b>	<p>Print ready files: PS, PCL, TIFF, PDF                  Output feature selection (2-sided, staple, fold, hole punch, paper select)                  Delivery options (Immediate, proof, delay and secure)</p>
<b>Device Administration</b>	<p>Allows simple, remote installation setting of configuration options and management of the device</p>
<b>Browsers</b>	<p>Netscape 7.x, 9.x                  Internet Explorer 6.x                  Safari 3.0                  Mozilla Firefox 2.x                  Opera 9.x                  Chrome 1.0</p>



Xerox provides several solutions for monitoring the device and jobs. Among them is CentreWare Internet Services, a web-based solution that enables clients to view device status and configuration, and enables administrators to manage and configure system and network settings.



With CentreWare Internet Services, clients can view current device status and installed paper sizes, types, and status levels.



From CentreWare Internet Services, users can check the status of the following consumables: ink levels, cleaning unit, document feeder feed rollers and etc.



Users have the ability to log on to the CentreWare Internet Services and submit a print job directly from the web interface.



Smart eSolutions provide administrators with secure automatic meter reads and supply replenishment information. Administrators have the option of accessing this information directly from the device or via the web client interface.

Device Management Options	
<b>Management Support</b>	<ul style="list-style-type: none"> <li>• SNMP Version 1, SNMP Version 2c and SNMP Version 3</li> <li>• MIB access (IETF-MIB II RFC 1213), Host Resources</li> <li>• MIB RFC 2790, Printer MIB RFC 1759 v. 2</li> </ul>
<b>Xerox CentreWare Internet Services</b>	Allows simple remote installation setting of configuration options and management of the device
<b>Xerox CentreWare for Unicenter TNG</b>	Provides added identification to the general discovery performed by Unicenter TNG and the ability to see the ColorQube® under a Unicenter TNG Business Process View
<b>Xerox CentreWare for Tivoli Netware</b>	Provides for the identification of Xerox ColorQube®, WorkCentre® and Phaser® printers and multifunction printers in the general discovery performed by Tivoli NetView
<b>Xerox CentreWare Web</b>	<p>A web-based server application for network administrators that permits web browser-based device management from any workstation, whether running Windows, UNIX or any other operating system:</p> <p>Works with any SNMP-managed printer from any manufacturer</p> <ul style="list-style-type: none"> <li>• Provides help with device discovery and installation, health checks and troubleshooting, and device upgrades, as well as basic accounting and asset management</li> <li>• Requires Windows XP, Vista, Server 2003, Server 2008 and Internet Explorer 6.0 and higher</li> </ul>

Device Management Options	
<b>Xerox CentreWare for HP OpenView</b>	<ul style="list-style-type: none"> <li>• Provides for the identification of Xerox N-Series printers and ColorQube multifunction devices in the general discovery performed by HP OpenView</li> <li>• Provides the ability to see the current status of discovered Xerox printers/devices under a Xerox PrinterMap and IP Map via color-coded icons</li> <li>• Provides traps and message updates to the OpenView alarm browser and the ability to launch CentreWare Internet Services for device management directly from OpenView Xerox Device Manager</li> </ul> <p>Xerox Device Manager collects and manages the data that drives fact-based decisions for your enterprise device management environment. It is a single tool to install print queues and configure, manage, monitor and report on both networked and locally connected devices – regardless of vendor – across your enterprise. Xerox Device Manager provides:</p> <ul style="list-style-type: none"> <li>• Device monitoring and troubleshooting</li> <li>• Extensive reporting and discovery of new devices</li> <li>• Usage collection, chargeback, and billing capabilities</li> </ul>
<b>Xerox Device Types for SAP R/3</b>	<p>Simplifies printing in SAP R/3 environments by providing users of SAP R/3 3.x, 4.x, 4.5x, 4.6x, SAP Enterprise 4.7x, ERP applications with enhanced ColorQube printing functionality (PostScript and PCL):</p> <ul style="list-style-type: none"> <li>• One- to two-sided printing</li> <li>• Finishing provides single or dual stapling</li> <li>• Tray pull location from any tray</li> <li>• # of copies – provides the ability to print multiple copies</li> <li>• Paper Type and color – provides ability to select paper types and colors, such as transparency, red, etc.</li> <li>• Print security via PIN ID capability</li> <li>• Job Based Accounting (JBA) – Provides capability to add JBA UserIDs to SAP print jobs</li> <li>• Printer banner sheet – Provides the ability to enable/disable printer banner sheets</li> <li>• Barcode printing – Xerox standard PostScript device types available at <a href="http://www.xeroxofficesapsolutions.com">www.xeroxofficesapsolutions.com</a> supports Intelligent Barcode Printing with Xerox Barcode Pro PS. This Barcode Pro PS can be purchased at <a href="http://www.font.net">www.font.net</a></li> </ul>

Device Management Options	
<b>Xerox SAP R/3 Intelligent Barcode Utility (Optional)</b>	<p>Provides built-in process intelligence that allows the printing of barcodes on any appropriately configured PostScript printer on the SAP R/3 4.x (or higher) network. Used in conjunction with Xerox Device Types for SAP R/3 Environment and Xerox Font Center Barcode Fonts. Utility automatically calculates checksum, placement of start/stop characters, and encoding of data string</p> <p>Web server embedded on SMarT network controller</p> <ul style="list-style-type: none"> <li>• Tray status/contents</li> <li>• Consumables status</li> </ul>
<b>Xerox Barcode Pro PS</b>	<p>Enables intelligent PostScript printing on Xerox multifunction printers by storing Xerox software as well as the barcode fonts on the printer hard disk. Enables the printing of barcodes from any application (client or mainframe) that supports PostScript printing. Automatically calculates the check digit, places start/stop and middle bar characters in the data string, compresses and encodes the data string, and rotates the barcode through 90 or 270 degrees.</p>

Automated Services Platform	
<b>Meter Assistant</b>	Automatically collects and securely submits your device meter reads to Xerox using a built-in audit process to increase billing accuracy
<b>Supplies Assistant</b>	Proactively manages ink stick supplies and monitors usage to ensure you have the right supplies at the right time
<b>Maintenance Assistant</b>	Offers a fast (and free) way to resolve potential issues and receive assistance and automate the troubleshooting/repair process. Diagnostic data is sent to Xerox, allowing for problems to be solved faster with increased uptime.

## WHAT WE LIKED

---

- The control panel's hard keys are large, well-organized and clearly labeled, while the touch screen features large text for easy viewing, as well as a simple design for easy navigation. The touch screen is virtually the same as other Xerox ColorQube devices' touch screens, which will make it especially easy for ColorQube users to quickly acclimate to it.
- The Xerox EIP software platform found inside the ColorQube 9203 device enables personalized solutions that users can access right from the device touch screen.
- The ColorQube 9203's touch screen displays the most common and frequently used copier settings on the Copy screen. This enables copy users to quickly and easily make typical settings without having to navigate through sub-menus, and significantly reduces the time to make copy-job settings. BERTL was able to make frequently used copier settings in a matter of only 1 or 2 key presses. Some functions required up to 6 key presses (see "Selections Required for Frequently Used Copy Functions" chart on page 19).
- For network and device management, Xerox provides users with the CentreWare Web Software Suite. CentreWare Internet Services provide an easy-to-use Web-based interface, and can be used to view detailed system and consumables' status. It also enables administrators to manage and configure device and network settings. This web-based solution enables administrators to monitor and manage a fleet of devices from any workstation on the network.
- Network-management and configuration of the Xerox ColorQube 9203 can easily be handled via CentreWare Internet Services Network Setup Utility. Administrators can clone multiple devices with settings obtained from one device.
- CentreWare Internet Services provides automatic e-mail alerts when the system requires attention.
- Both PCL and PostScript drivers are relatively easy to use and logically organized. Both drivers have nearly the same exact user interface. This will enable users to quickly and easily switch between drivers and allow them to find the settings they need from one driver to another with ease.
- Both PCL and PostScript feature bi-directional communication, so that users can view device status directly withing the print drivers.
- Different speed and image quality options within the printer drivers.
- Internet fax transmits faxes digitally via the internet with support for SMTP andPOP3.
- Fax send and receive two-sided fax documents. Supports printing received faxes on 11" x 17" (A3) paper.

- Standard Network server fax enablement — allows faxes to be sent and received digitally over the network.
- Animated videos on the control panel for step-by-step instructions to replace ink sticks and misfeeds.
- With the ColorQube 9203 multifunction device, print and scan drivers can be deployed centrally, thereby eliminating the need for IT staff to perform desk-to-desk manual installation of the driver software.
- CentreWare Web wizards provides users with aid in the installation process, troubleshooting and upgrading print and scan drivers, while freeing up IT administrators.
- Driver support is delivered for Windows (2000 / Server 2003 / XP / Vista), including most operating systems with 32-and 64-bit drivers; Macintosh OS 10.3 and above; and multiple Linux platforms.

## WHAT WE WOULD LIKE TO SEE

---

- BERTL found that the ColorQube 9203 was extremely easy to use and maintain on a daily basis.

## MEDIA INPUT

The ColorQube 9230 comes standard with 3,300-sheet paper capacity from Trays 1-3 and the Bypass tray. For high-volume printing, a High Capacity Feeder option increases the total capacity to 7,300 sheets. A wide range of paper sizes and weights are supported. Paper sizes up to 12"x18" (330 x 483 mm) are supported through the bypass tray. Labels and card stock run effortlessly with great reliability. All trays support media up to 80 lb. cover (220 gsm).



The ColorQube 9203 shown above comes standard with two 550-sheet paper drawer, a 2,100 sheet paper drawer and a 100 sheet bypass tray. An optional 4,000 sheet high capacity feeder brings a maximum paper capacity of 7,300 sheets.

Media Handling Checklist	
Minimum/Maximum Media Weight	
Duplex Automatic Document Handler	13 lb bond to 43 lb bond (50 to 160 gsm)
Three Front Loading Trays - Paper Trays 1, 2 and 3	20 lb bond (75 gsm)
Bypass Tray	20 lb bond (75 gsm)
High Capacity Feeder	16 lb bond to 57 lb bond/80 lb cover (60 to 220 gsm)
Offsetting Catch Tray	500 sheets of 20 lb bond (75 gsm)
Office Finisher	16 lb to 57 lb bond/80 lb cover (60 to 220 gsm)
High Volume Finisher	13 lb to 57 lb bond/80 lb cover (60 to 220 gsm)
High Volume Finisher with Booklet Maker	16 lb to 57 lb bond/80 lb cover (60 to 220 gsm)
Booklet Maker	16 lb to 57 lb bond/80 lb cover (60 to 220 gsm)
Z-Fold/C-Fold Unit	16 lb to 32 lb bond (60 to 120 gsm)
Post Process Inserter	16 lb to 57 lb bond/80 lb cover (60 to 220 gsm)
Feeds maximum media weight from all sources?	Yes
Offset Stacker	No
Finisher	Yes
Hole Punch	Yes
Saddle Stitch	Yes

## LOADING MEDIA

Paper Loading Checklist	
Maximum media weight from all media sources?	Yes
Drop-in loading of a full ream of paper?	Yes
Corner separators in paper trays?	No
Spring-loaded ramps in paper trays?	No
Geared media size side guides?	No
Captured rear media guide?	No
Automatic paper size detection?	Yes



The 100-sheet bypass tray can be adjusted by sliding these levers into place. The feeder can be adjusted for envelope printing.



**Above and below:** In order to adjust the 550-sheet paper drawers to accommodate different paper sizes, the user squeezes and slides these green guides into place. BERTL found it easy to adjust all the paper drawers.



The high capacity feeder can hold up to 4,000 letter size sheets for large uninterrupted print runs.



**Above and next column:** In order to adjust the 2,100 sheet paper drawer, the user turns and lifts these green dials into place.

## WHAT WE LIKED

- 100-sheet bypass tray is easily adjusted to accommodate different paper sizes including envelopes.
- Easy to adjust and fill paper drawers
- Paper capacity can be expanded to a substantial 7,300 sheets with the High Capacity Feeder.
- Versatile media handling and flexibility, with the ability to print on stock as heavy as 80lbs. cover (220 gsm) and paper sizes up to 12"x 18" or SRA3.
- Advanced finishing options that include; booklet-making, stapling, hole-punching and z-fold.
- Output bin (when office and high volume finisher is installed) can hold up to 3,250 sheets for large jobs.

## WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the ColorQube 9203's paper-handling capabilities.

## INK CRACKING

**Scoring and Folding** – Scoring and folding should be done with the grain of the media in order to prevent paper or ink from cracking (this is similar to grain considerations with traditional printing and finishing).

The test files printed by the Xerox ColorQube 9203 were used specifically by BERTL for evaluating its numerous spot colors or solids. The best test for ink cracking is with a densely covered sheet. The most creative marketing materials that require folding utilize heavy coverage. These particular sheets were folded and scored in both directions and there was no more or less cracking on either fold – inside or outside. They were printed on 220 gsm media.

The photos to the right are examples of what used to be problems when producing booklets with heavy coverage. Normally, designs gave way to the shredded edges that were synonymous with heavy ink on the spine of a booklet.

**Test Results:** Prints produced by the Xerox ColorQube 9203 can be folded with a slight ink cracking using heavier weight stocks. In all the BERTL tests performed for ink cracking the ColorQube 9203 performed admirably.

BERTL's benchmark test of printing 100% solids on 220 gsm media, and then scoring and folding the printed pages reveals how well a device can handle the challenge of ink cracking. Again, the Xerox ColorQube 9203 was able to fold with minimal cracking.



BERTL Analysts also ran a Temperature Adhesive Test to see if the output generated by the Xerox ColorQube would fuse together under extreme temperatures. During BERTL's evaluation, several full bleed pages were printed and left on the dashboard of a car with temperatures in the car as high as 101 degrees over a period of 9 hours. During this evaluation, none of the pages left on the dashboard stuck together, nor did they curl, or experience any toner scratching off or flaking.

Xerox has really stepped up to the plate with the introduction of their ColorQube series. These innovative solid ink color MFPs deliver beautiful vibrant image quality with reasonable print productivity as well as excellent ease-of-use. What is truly the crown jewel of the Xerox ColorQube series is its Hybrid Plan allowing customers to choose different pricing plans enabling monochrome and useful color pages to be at the same cost per page. During BERTL's extensive testing of the Xerox ColorQube 9203, this office-color, ink-based MFP designed for mid-size to large workgroups performed exceptionally well. BERTL observed the following when testing the Xerox ColorQube 9203:

- Tested simplex color network-print speed with the PCL driver was as fast as 44.6 ppm, closely matching Xerox's rated speed of 50 ppm.
- Tested simplex color network-print speed with the PostScript driver was as fast as 47.7 ppm.
- Tested duplex black-and-white network-printer productivity was extremely productive up to 46.0 ppm with the PCL driver and 45.1 with the PostScript driver.
- Tested simplex monochrome network productivity up to 37.8 ppm with the PostScript driver.
- Tested black-and-white copier productivity was up to 39.8 ppm in simplex mode and up to 32.8 ppm in duplex mode, closely matching Xerox's rated copy speed of up to 50 ppm.
- Tested color productivity in simplex mode was as fast as 32.5 ppm, and as fast as 34.6 ppm in duplex color mode.
- Photo prints displayed good image quality. Density for all four colors in both print and copy modes was very good, as was resolution, halftone reproduction, and line and dot control.
- Ease of maintenance was exceptional with the animated help videos loading the ink sticks and clearing any misfeeds was effort-less.
- PCL and PostScript drivers feature bi-directional communication, so that users can view device status from the print drivers. Both drivers also offer different speed options.
- Xerox's Hybrid Color Plan offer customers with multi-tiered billing and metering options based on color coverage per page resulting in new standards for color per-page pricing.
- Xerox's CentreWare Internet Services, which provides detailed device and consumables' status, and provides network configuration, access management and accounting controls for administrators, is easy to use and very capable.
- Xerox Extensible Interface Platform (EIP) enables enterprises and developers to develop custom applications, accessible from the touch screen, that can automate and streamline frequent workflows, such as scan-and-distribute.
- Security features include; Secure Print, Audit log, Image Overwrite, IP filtering, Hide Print Jobs, Hard Drive Encryption and Secure Access option.
- Versatile media handling and flexibility, with the ability to print on stock as heavy as 80lb. cover (220 gsm) and paper sizes up to 12"x 18 or SRA3".
- Ability to expand paper capacity to up to 7,300 sheets.
- Duty Cycle up to 300,000 pages per month.
- Advanced finishing options that include; booklet-making, stapling, hole-punching and z-fold.
- The Xerox ColorQube 9203 is Energy Star compliant and uses cartridge-free solid ink sticks reducing the office waste to 90% for a greener environment.
- Managers will appreciate Xerox's support services, the ColorQube's ease of use and maintenance, support and training; job tracking/accounting capabilities; and the ease of device monitoring.

Considering the Xerox ColorQube 9203 MFP's superior overall performance in testing, excellent ease of use, and high-quality office-color image quality, BERTL awards the Xerox ColorQube 9203 it's Five-Star *Exceptional* rating and highly recommends the device for mid-size to large offices that require a fully functional color MFP.

## About BERTL

---

The success of an organization depends on its ability to manage its information and assets. An effective workflow process requires the complex integration of information, devices, software and people.

IT managers, office managers, and other knowledge-management professionals need to know what digital imaging devices would best serve their specialized workflow processes.

BERTL's services are designed around this real-world framework, delivering business consumers the independent analysis and insight needed to make critical decisions about digital imaging's role in their organization.

## Independent Analysis and Insight

---

BERTL's reports, comparative data, and strategic guides look at digital imaging through the eyes of the business user. The research examines not only the technical features, but also vertical market applications, and business benefits. The impact on worker productivity is a primary concern.

BERTL is 100 percent independent. It receives no funding from manufacturers and all product evaluations and reports are published at BERTL's own expense for its subscribers. Business users worldwide trust BERTL for objective, unbiased analysis of digital imaging systems.

## BERTL Services

---

### Reports and Star Ratings

BERTL analysts provide detailed reports on the technical and practical benefits of thousands of color and monochrome workgroup, office, graphic arts, and production devices.

### Product Specifications

DataCheck Gen II provides the most current competitive data on printers, copiers, MFPs, fax devices, wide format printers, scanners, and more.

### News, Interviews, and Analysis

The ITchat online magazine provides insight into the dynamics and trends of the digital imaging marketplace through interviews, feature articles, and software reviews.

## BERTL Awards

---

BERTL analysts recognize the leading devices and software solutions in the annual BERTL's Best awards. BERTL also honors the performance of manufacturers in the annual Readers' Choice selections.

## Contact BERTL

---

BERTL Inc.  
363 Route 46 West, Suite 100  
Fairfield, NJ 07004  
Phone: 1-973-882-0200  
Fax: 1-973-882-0201  
Email: [info@bertl.com](mailto:info@bertl.com)  
[www.BERTL.com](http://www.BERTL.com)