

Xerox® ColorQube® 9202/9203 vs. Canon imageRUNNER ADVANCE C5045/C5051 Competitive Assessment



This document has been prepared from internal analysis as well as data prepared by Buyers Laboratory Inc. (BLI), the imaging industry's leading source of unbiased and reliable competitive intelligence. Data was collected in BLI's 10,000 square-foot lab in Hackensack, New Jersey and has been published in BLI's Lab Test Reports, Environmental Test Reports, and BLI Side-By-Side Comparison publications, among others.

Summary: ColorQube® 9202/9203 advantages

Compared to the Canon imageRUNNER ADVANCE C5045/C5051, the ColorQube 9202/9203 has the following advantages:

Productivity*

- Better print drivers
- User-replaceable consumables
- Easier to set up
- Faster tested job stream printing (all modes tested)
- More efficient simplex printing (auto-color mode)
- More efficient duplex printing (auto-color mode)
- Faster tested simplex printing (auto-color mode)
- Faster tested duplex printing (auto-color mode)
- Faster tested black printing (one set; simplex and duplex modes)
- More efficient overall simplex printing (black mode)
- Faster tested first-copy times (most modes)
- Faster tested first-copy times from the document feeder (black mode)
- Faster tested simplex copying (auto-color mode)
- Faster tested duplex copying (one set; auto-color mode)
- Superior paper handling
- Higher standard and maximum paper capacity
- More standard paper drawers
- Better finishing options including post process insertion and C-/Z-folding
- Better multitasking

Cost Control

- Comprehensive color access controls
- Better administrative utilities
- Black and White-Only print driver
- Easier usage tracking
- Better reporting

Security

- More security features are standard
- Encrypted job logs are standard
- Follow-You Printing is standard
- More user I.D. codes
- Password-protected Web page
- Common Criteria certified

Environmental considerations

- Meets ENERGY STAR 1.1 standard
- Uses cartridge-free solid ink sticks that avoid the excessive packaging of conventional toner cartridges
- Uses less energy when printing
- Pre-paid labels for easy recycling returns
- Xerox recognized for environmental responsibility

Image quality

- Rated higher in print quality by BLI (most categories)
- Higher measured black print density
- Higher measured color print density
- Rated higher in copy quality by BLI (most categories)
- Higher measured black copy density
- Higher fax resolution

The ColorQube 9200 Series received a BLI “Outstanding Achievement Award,” Spring 2009

BLI honored the ColorQube 9200 Series with an “Outstanding Achievement Award.” The award announcement praised the machines’ “innovative pricing structure that allows users to get useful color output for the same cost as black and white.” It also commended the Series’ product design.

“In addition to offering excellent ease of programming jobs from both its well-designed control panel and its print drivers, the units’ ease of user maintenance far outshines the toner-based products it competes with in this speed range,” said BLI Assignments Editor George Mikolay.

“Other than the ink sticks, the devices feature only one customer-replaceable component, a long-life cleaning unit with an average yield of 200,000 prints,” said BLI Manager of Laboratory Testing Pete Emory. “In contrast, the ColorQube Series’ toner-based competitors require much more user intervention, requiring not only replacement of four toner cartridges, but sometimes four drums and developer as well.”

* BLI tested the Xerox ColorQube 9203 and Canon imageRUNNER ADVANCE C5051 for this report. Feature sets are typically common among product families of the same class; therefore, the advantages highlighted in this report can apply to all products mentioned. The caveat to this is when page per minute productivity figures are quoted, these apply specifically to the products tested.

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Test conditions:

BLI tested the Xerox ColorQube 9203 and Canon imageRUNNER ADVANCE C5051 for this report. Feature sets are typically common among product families of the same class; therefore, the advantages highlighted in this report can apply to all products mentioned. The caveat to this is when page per minute productivity figures are quoted, these apply specifically to the products tested.

The device(s) to be tested, lab test equipment and paper are tested with daily conditions maintained between 20 and 25.6 degrees Celsius/68 and 78 degrees Fahrenheit and 35 % to 65 % RH. A4/Letter-size 80 gsm/20-lb. bond paper is used for all testing. Electricity is automatically regulated to <1 % variation at 115 VAC using a Powerstat voltage regulator. Energy measurements used in Environmental Test Reports are recorded using a Yokogawa WT210 digital power meter. Devices with multiple energy level settings are set to use the lowest amount of energy for energy-save mode and/or sleep mode and to go into each mode at the shortest interval possible. The Job Stream Test conducted for BLI Environmental Reports is started from sleep mode after overnight dormancy and the running mode tests are started from idle mode.

This document is intended for internal use and is provided for self training purposes. All testing and observations recorded in this document are subject to change.

Productivity

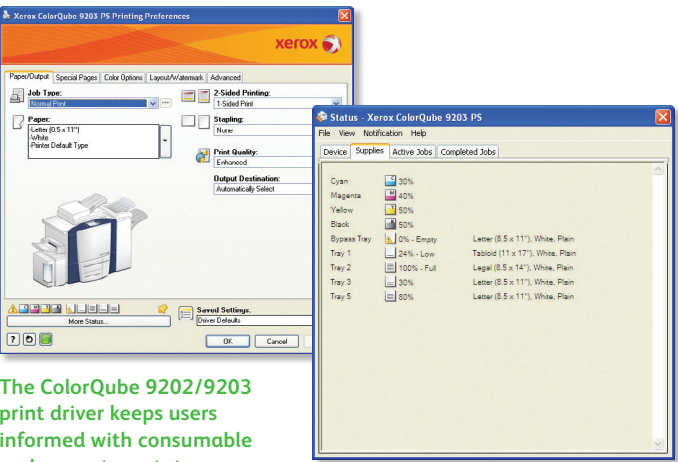
Productivity Analysis

Productivity is influenced by a variety of factors, ranging from the obvious (rated engine speed, rated scan speed) to the subtle (streamlined administrative procedures, for example), and overall ease of use. We will examine numerous factors that contribute to the overall productivity advantages of the ColorQube 9202/9203 in this section.

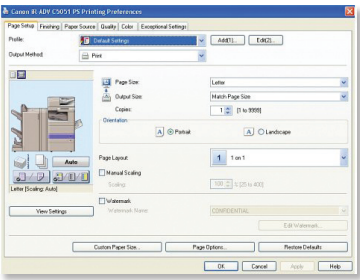
Ease of use is a critical factor in determining productivity. If users have to spend time figuring out how to use a function properly, they're not doing the jobs they're paid to do and their productivity suffers dramatically.

Better print drivers that keep workers more productive

ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
Toner gauge in print driver uses one-percent increments	No toner gauge in print drivers
Paper gauge in print drivers	Drivers display inaccurate information on remaining paper supply unless users first update the information, which is an impractical, multi-step process
Award-winning mobile print driver	
Default settings by application	No default settings by application



The ColorQube 9202/9203 print driver keeps users informed with consumable and paper tray status.



Canon imageRUNNER ADVANCE C5045/C5051 drivers do not feature a point-and-click interface or consumables feedback.

The ColorQube 9202/9203’s user-replaceable consumables means no waiting for technician visits

“Other than the ink sticks, the devices feature only one customer-replaceable component, a long-life cleaning unit with an average yield of 200,000 prints,” said BLI Manager of Laboratory Testing Pete Emory. “In contrast, the ColorQube Series’ toner-based competitors require much more user intervention, requiring not only replacement of four toner cartridges, but sometimes four drums and developer as well.”

— BLI “Outstanding Achievement Award,” Spring 2009



The ColorQube 9202/9203 uses cartridge-free, environmentally friendly ink that is simple to load.



The Canon imageRUNNER ADVANCE C5045/C5051 is far more complicated to load and generates more waste.

BLI rated the ColorQube 9203 “Excellent” for Ease of Network Setup versus “Very Good” for the imageRUNNER ADVANCE C5051

According to BLI Lab Tests...

ColorQube 9203	imageRUNNER ADVANCE C5051
“The ColorQube 9203 comes with one disk containing PCL 5c/6 and PostScript print drivers, TWAIN and WIA scan drivers and user guides. The disk auto launches, taking 10 clicks to install the PCL and PostScript driver.”	“The device comes with separate UFR II and PCL print driver installation CDs...Installation of the PCL 6 driver required 16 clicks in total; a UFR II driver only installation also required 16 clicks in total.”

BLI productivity analysis: Faster job stream printing (all modes tested)

BLI’s job stream test simulates how well a device will handle the demands of a busy workgroup.

Tested job stream speed in auto-color mode (19 pages total; in PPM)*

	ColorQube 9203	imageRUNNER ADVANCE C5051
PCL	31.3	16.6
PostScript	32.1	16.6

Tested job stream speed in black mode (19 pages total; in PPM)*

	ColorQube 9203	imageRUNNER ADVANCE C5051
PCL	31.2	16.8
PostScript	32.7	17.1

* Data from BLI Lab Test Reports on both devices. BLI’s job stream includes Word documents, Outlook e-mail messages, Excel spreadsheets, PowerPoint, HTML and Acrobat PDF files totaling 19 pages, released to the device simultaneously.

BLI productivity analysis: More efficient simplex printing (auto-color mode)

Tested overall simplex print efficiency rate in auto-color mode using the PCL print driver*

ColorQube 9203	imageRUNNER ADVANCE C5051
69.2 %	53.0 %

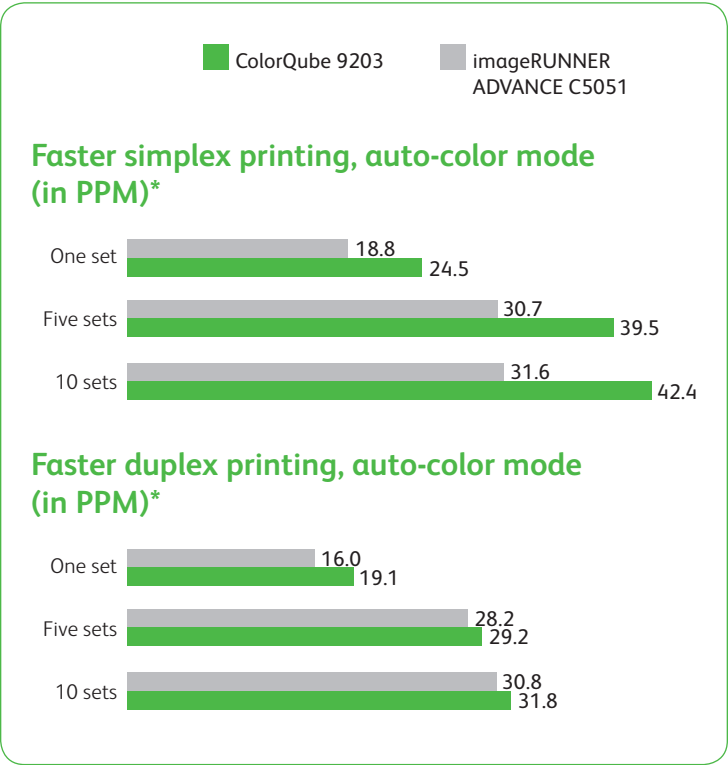
* Data from BLI Lab Test Reports

BLI productivity analysis: More efficient duplex printing (auto-color mode)

Tested overall duplex print efficiency rate in auto-color mode using the PCL print driver*

ColorQube 9203	imageRUNNER ADVANCE C5051
52.7 %	49.0 %

* Data from BLI Lab Test Reports



* Data from BLI Lab Test Reports

BLI productivity analysis: Faster black printing (one set)

Tested black print speeds using the PCL print driver (one set; in PPM)*

	ColorQube 9203	imageRUNNER ADVANCE C5051
Simplex mode	26.7	21.1
Duplex mode	20.8	18.6

* Data from BLI Lab Test Reports

BLI productivity analysis: More efficient overall simplex printing (black mode)

Tested overall simplex print efficiency rate in black mode using the PCL print driver*

ColorQube 9203	imageRUNNER ADVANCE C5051
73.0 %	69.8 %

* Data from BLI Lab Test Reports

BLI productivity analysis: Faster tested first-copy times (most modes)

Tested first-copy times (auto-color mode; in seconds)*

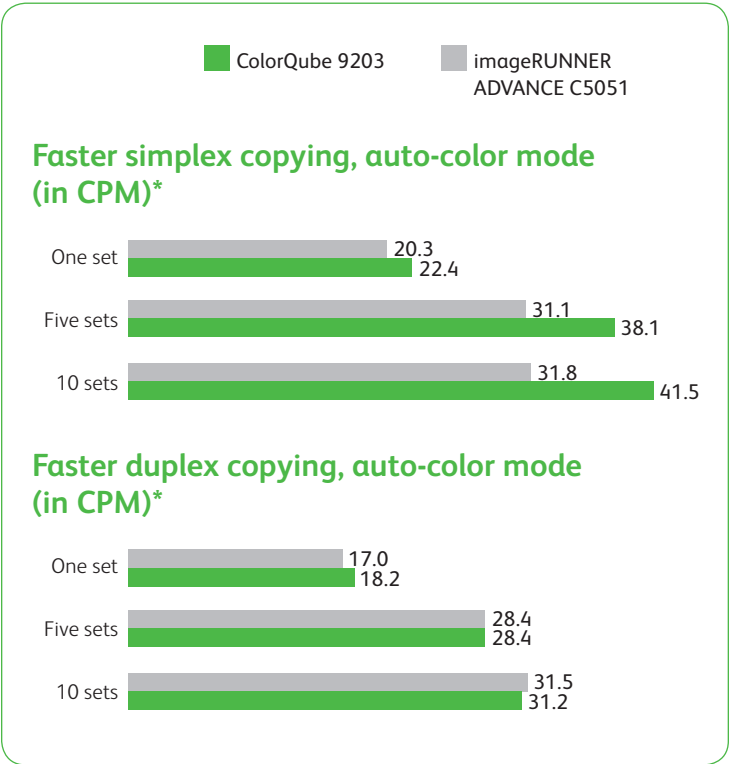
	ColorQube 9203	imageRUNNER ADVANCE C5051
From the platen	9.89	11.00
From the document feeder	9.41	14.20

* Data from BLI Lab Test Reports.

BLI productivity analysis: Faster tested first-copy times from the document feeder (black mode; in seconds)*

	ColorQube 9203	imageRUNNER ADVANCE C5051
From the platen	9.4	7.2
From the document feeder	9.6	11.0

* Data from BLI Lab Test Reports.



* Data from BLI Lab Test Reports.

BLI productivity analysis: Superior paper handling

The ColorQube 9202/9203 handles more sheets

ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
3,300 sheets (standard) 7,300 sheets (maximum)	1,100 sheets (standard) 5,000 sheets (maximum)

More standard paper sources

ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
Three standard drawers	Two standard drawers

Only the ColorQube 9202/9203 offers

- Optional C- and Z-folding
- Optional post-process inserter

BLI productivity analysis: Superior multitasking simplifies workflow and enhances productivity

BLI rated the ColorQube 9203 “Excellent” at Multitasking versus “Very Good” for the imageRUNNER ADVANCE C5051

ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
Reserve unlimited number of copy jobs while a copy is in progress is limited only by memory	Reserve a maximum of 20 copy jobs while a copy job is in progress
Users can program the next copy or scan job while the originals of the current copy or scan job are still being scanned by the device	Users have to wait until all the pages of the current copy job have been scanned before they can program a new copy or scan job
The screen automatically clears when a new document is placed into the document feeder	If a copy job has been scanned from the automatic document feeder, users have to press the “Close” key and then the Reset or Clear key to clear the previous job’s settings; the screen does not automatically clear

Cost control

Reducing the cost of color

Most cost-per-copy plans consist of one billing rate for black-and-white pages and one rate for color pages. This may be good for full coverage or black-only documents, but this fails to take into account the range of color documents that customers actually print.

With the ColorQube 9200 series, unique metered price plans are based on the actual color used on the page. No more paying 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 more color pages you print, the more you save. On most color pages, the price will drop significantly.

The ColorQube 9200 series creates images by printing tiny spots (called pixels) of black and color on the page. The MFP automatically counts how many color pixels are used to produce each printed page. Individual pages are tallied on three separate meters in the machine based on how many color pixels are on a particular page.

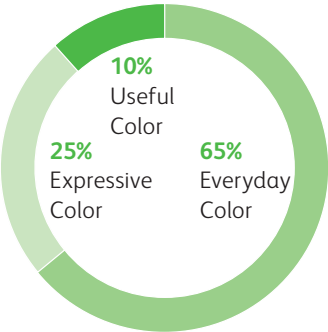
The only factor that determines which meter is incremented by a given printed page is the number of color pixels used in printing that page. Therefore, you only pay for the amount of color used on each page, independent of paper size and independent of the print quality mode a user has selected.

Ranges of Color Documents



Typical office document color distribution

Office color documents can be classified by the amount of color used. According to Xerox research, the breakdown of color documents in a typical office environment is:



Useful Color



Everyday Color



Expressive Color



This distribution may vary by customer location and does not include black-only pages.

Advantages for a company’s Chief Technology Officer or IT Director

Easier tracking and better reporting

Can the MFP track and report on total number of...

	ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
Pages?	Yes	Yes
Copies?	Yes	Yes
Prints?	Yes	Yes
Simplex pages?	Yes	No
Duplex pages?	Yes	No
Scan/Send pages?	Yes	No
E-mail messages sent?	Yes	No

The ColorQube 9202/9203 incorporates standard accounting software that includes built-in report templates to streamline reporting. Accounting capability is optional for the imageRUNNER ADVANCE C5045/C5051.

Comparing Xerox CentreWare Web with Canon imageWARE Enterprise Management Console

Does the utility...

	Xerox CentreWare Web	Canon iW EMC
Generate reports?	Yes	Yes
Include standard report templates?	11	No
Support remote firmware upgrades?	Yes	No
Support remote print queue management?	Yes	No
Support remote applica-tion installation?	Yes*	No
Support automated toner requests?	Yes	No
Support automated meter submission?	Yes*	No
Offer remote device discovery?	Yes	Yes
Offer Active Directory?	Yes	No
Offer dynamic device grouping?	Yes	No
Provide a mobile print driver?	Standard	Optional

* Xerox only

Security

The ColorQube 9202/9203 offers better standard security features

Does the MFP offer...

	ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
14-character administrator passwords?	Yes	No (max. 7)
2,500 department/user ID codes?	Yes	No (max. 1,000)
Secure Print?	Standard	Optional
Hard drive encryption?	Standard	Optional
Hard drive overwrite?	Standard (3x)	Standard (1x)/Optional (3x)
Password-protected Web page?	Standard	No

Safeguard against attacks

External device:

The ColorQube 9202/9203 leverages port blocking and fax securities to ensure product safety.

Internal device:

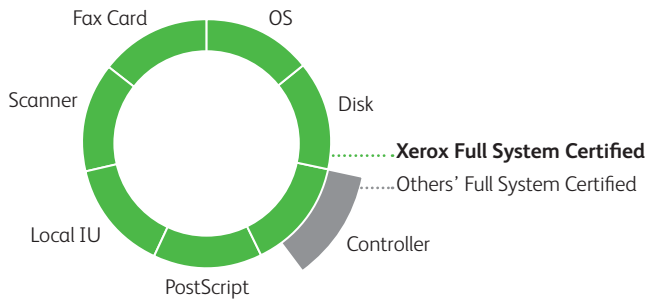
With scan securities and role-based access along with CAC or SMARTcard access restrictions, the ColorQube 9202/9203 defends against any breach attempts.

Xerox has submitted for full product Common Criteria Certification to ensure product security. The imageRUNNER ADVANCE C5045/C5051 has no current Common Criteria certification.

On the ColorQube 9202/9203, an administrator has the ability to set security levels to meet their requirements with Xerox. Xerox allows setting hard disk overwrite and encryption as needed. Hard disk overwrite can be ad hoc now or set to occur after every print or scheduled daily, weekly, monthly.

Full system Common Criteria Certification

- Every function of the machine is individually certified
- Most rigorous testing in the world
- Xerox has more devices certified than any competitor



Environmental considerations

The ColorQube 9202/9203 meets the new ENERGY STAR 1.1 requirements. It leverages all of the latest, most energy-efficient technologies, including electronics, power supplies and insulation for the components that need to stay warm. It also uses new software algorithms to lower power consumption. The ENERGY STAR program has stringent requirements and is designed so that only 25 % of products in the marketplace meet the requirements.

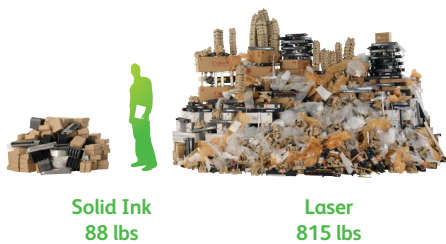
The ColorQube 9202/9203 generates less waste – and less hassle

The ColorQube 9202/9203 uses cartridge-free solid ink sticks that avoid the excessive packaging of conventional toner cartridges. This means fewer resources are used and less energy is invested in manufacturing and transporting solid ink. It also translates to 90 % less waste in your office and a smaller carbon footprint across the product lifecycle. Toner-based competitors such as the imageRUNNER ADVANCE C5045/C5051 can't compete on this important attribute.

Solid ink waste vs. laser waste

Cartridge-free solid ink is a true consumable; no empty toner cartridges to dispose or recycle.

The ColorQube® 9200 series produces 90 percent less waste during use than a comparable laser device.



Total waste produced from printing 22,000 pages per month for 4 years.

The ColorQube 9202/9203 uses less energy while printing

ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
750 watts	1,082 watts

The ColorQube 9202/9203 is more environmentally friendly

Does the MFP offer...

	ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
A hardware remanufacturing program for this product?	Yes	No
Pre-paid labels for returning recyclable material?	Yes (cleaning unit)	No
Toner recycling program?	Yes (for cleaning unit oil; because ink sticks are completely used up, there is no need to recycle them).	No

Xerox's Recent Environmental Awards:

- Corporate Leader by US EPA
- Climate Protection Award
- FTSE4Good Index
- World's Most Ethical Companies List

Comparing image quality

Comparing BLI Print Quality Ratings*

	ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
Text	Good	Very Good
Line art	Good	Fair
Halftone pattern	Very Good	Good
Halftone range	Very Good	Very Good
Solids	Very Good	Good
Color business graphics	Very Good	Good
Color photographic images	Fair	Fair

* Ratings published in BLI Lab Test Reports

Comparing BLI Copy Quality Ratings*

	ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
Text	Good	Good
Line art	Fair	Good
Halftone pattern	Very Good	Good
Halftone range	Very Good	Very Good
Solids	Very Good	Fair
Color business graphics	Very Good	Good
Color photographic images	Good	Good

* Ratings published in BLI Lab Test Reports

Higher black print density results in sharper, clearer images

Measured black print density range*

ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
1.49 to 1.55	1.32 to 1.38

Higher copy density delivers sharper, truer copies

Measured black copy density range*

ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
1.64 to 1.65	1.50 to 1.52

* Data from BLI Lab Test Reports

Measured color print density (based on average of two readings)*

	ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
Yellow	1.04	0.68
Magenta	0.89	1.13
Cyan	1.29	0.94

* Data from BLI Lab Test Reports

Higher fax resolution for clearer, more readable faxes

Fax resolution (max. dpi)

ColorQube 9202/9203	imageRUNNER ADVANCE C5045/C5051
600 x 600	400 x 400

Key positioning strengths of the imageRUNNER ADVANCE C5045/C5051 and how to combat them with prospective customers

Lower MSRP

What the Canon sales rep could say:

"The imageRUNNER ADVANCE C5045/C5051 costs significantly less than the ColorQube 9202/9203."

How to respond:

Sometimes you get what you pay for. The ColorQube 9202/9203's innovative solid ink technology and flexible pricing plans enable some of the most competitive color operating costs on the market today. Customers are saving up to 62 % off their color pages with the ColorQube Hybrid Color Plan. Total cost of ownership savings over the life of the device will far exceed the difference in hardware costs. In addition, the ColorQube 9202/9203 is a better value than the imageRUNNER ADVANCE C5051 because of its significantly higher standard paper capacity, better productivity and superior ease of use. What's more, the ColorQube 9202/9203 includes standard PCL and PostScript printing capability (each requires a separate additional purchase for the imageRUNNER ADVANCE C5045/C5051) as well as standard 3x hard disk drive overwrite functionality (another option for the imageRUNNER ADVANCE C5045/C5051).

Solid Ink is Unproven Technology

What the Canon sales rep could say:

"The ColorQube Series is unproven technology and any buyer is taking a chance because it is still new to Xerox."

How to respond:

The underlying solid ink technology found in the ColorQube Series has been on the market since the introduction of the first solid ink printer in 1991. That device received numerous industry awards and led to the successful development of a broad line of printers and MFPs based on solid ink technology. Xerox has leveraged this core technology and migrated it to higher speeds in the ColorQube Series. Many respected research organizations, including Buyers Laboratory, have tested solid ink devices such as the ColorQube and recognized it with awards.

Faster Rated Engine Speed

What the Canon sales rep could say:

"The imageRUNNER ADVANCE C5051's rated engine speed is 51 pages per minute, while the ColorQube 9203's engine is rated slower at 50 pages per minute."

How to respond:

A manufacturer's specification for rated engine speed is not the best indicator of real world speed. During BLI lab testing, equipment is run through a series of tests that reveal its actual speed and productivity. For example, the ColorQube 9203 was faster than the imageRUNNER ADVANCE C5051 during the print job stream test in both black and auto-color modes, and also proved faster in numerous print and copy tests conducted by BLI. It is also worth mentioning that the ColorQube Series is unique in offering flexible engine speeds. The ColorQube 9203 is capable of running at a speed of up to 85 ppm in color if the user is willing to make a small trade-off in image quality.

Specifications at a glance



	Xerox ColorQube 9202/9203	Canon imageRUNNER ADVANCE C5045/C5051
Engine Speed (black, default)*	50 ppm	51 ppm
Engine Speed (color, default)*	50 ppm	51 ppm
Max. Engine Speed (black)*	85 ppm	51 ppm
Max. Engine Speed (color)*	85 ppm	51 ppm
Std. Paper Capacity	3,300 sheets	1,100 sheets
Std. Paper Trays	4	2
Max. Paper Capacity	7,300 sheets	5,000 sheets
Standard RAM	2 GB	2 GB
Standard Hard Drive	80 GB	80 GB
PCL 6 print driver	Standard	Optional
PostScript print driver	Standard	Optional
Post-Process Inserter	Optional	No
C-/Z-fold finishing	Optional	Not available
Dedicated Fax Memory (in fax option)	512 MB	Shared

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For more information, call **1-800-ASK-XEROX** or visit us at **www.xerox.com/office**