

## Wirth Consulting - Office ©Head2Head Comparison

<b>Make</b> <b>Panasonic</b>	<b>Imaging</b> Laser
<b>Model</b> <b>DP-MC210</b>	<b>Functions</b> Print/Copy/Scan/Fax
<b>Base Price</b>	\$1,999.99
<b>Monthly Duty Cycle (pages)</b>	35,000
<b>BW/Color Print Speed (ppm)</b>	21/21
<b>Max Media Width (inches)</b>	8.50
<b>Classification</b> A4 Color MFPs	



### Background Information

Just recently introduced by Panasonic (March 2009), the DP-MC210 is Panasonic's first-generation A4 color MFP. It features a single-pass 21-ppm color tandem print engine. While some A4 color MFPs only provide a limited two-line LCD display, the DP-MC210 incorporates a brilliant 3.6" color LCD display. Not only will this make choosing selections easier, but users can preview scanned documents, as well as images downloaded from SD memory cards, on the LCD display. They can then make sure images are correct before further processing them (i.e., send them to a specified e-mail address, etc.)



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
29.5	\$0.01785	\$0.09395

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$2,914.99	\$7,480.99	\$4,392.62
2,000 pages per month	\$4,141.99	\$13,273.99	\$7,114.13
3,000 pages per month	\$5,212.99	\$18,910.99	\$9,681.20
4,000 pages per month	\$6,283.99	\$24,547.99	\$12,248.27
5,000 pages per month	\$7,354.99	\$30,184.99	\$14,815.34

\*Base Price

### Strengths

- Low B&W and color consumables' cost per page of 1.7 and 9.1 cents respectively.
- Secure Digital High Capacity (SDHC) card slot for print from/scan to SC cards.
- Panasonic Multifunction Station software suite include PCL 6 print driver, TWAIN scan driver, remote management utility, device address-book editor, and Quick Image Navigator software. Also included is READiris 7.0 OCR software.
- 10BASE-T/100BASE-TX Ethernet network interface; IPv6 protocol.
- Brilliant 3.6" color LCD display; while not a touch screen, this color LCD display is much easier to use than text-only LCD displays. Users can also preview scanned documents, as well as SD card images, on the LCD screen..
- Scan to PC, FTP sites, SD memory cards, e-mail.
- Print from FTP sites.

### Limitations

- No PostScript print driver; however, a GDI Apple Macintosh print driver will be available by May 2009.
  - No document finishing.
- NOTE: Color Drum (\$241) for cyan, magenta and yellow.

### Notes

### Best Use

Small to mid-size offices and workgroups that require a color MFP for print, copy, scan and fax, and for B&W and color office printing.

## Wirth Consulting - Office ©Head2Head Comparison

<b>Make</b> <b>Ricoh</b>	<b>Imaging</b> Laser
<b>Model</b> <b>Aficio SP C222SF</b>	<b>Functions</b> Print/Copy/Scan/Fax
<b>Base Price</b>	\$1,049.00
<b>Monthly Duty Cycle (pages)</b>	
<b>BW/Color Print Speed (ppm)</b>	21/21
<b>Max Media Width (inches)</b>	8.50
<b>Classification</b> A4 Color MFPs	



### Background Information

Available in several configurations, the Aficio SP C222SF is situated at the low end of Ricoh's Aficio digital-imaging family, which ranges from A4 color MFPs such as the Aficio SP C222SF, up to light production systems rated at up to 75/70 ppm. Some features of note Presto!PageManager with Scan Central software for OCR and management of scanned files, and a PictBridge interface for directly printing photos downloaded from PictBridge-compatible digital cameras.



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
28.5	\$0.01672	\$0.08172

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$2,052.48	\$5,952.18	\$3,318.85
2,000 pages per month	\$3,055.95	\$10,855.35	\$5,599.20
3,000 pages per month	\$4,059.43	\$15,758.53	\$7,879.54
4,000 pages per month	\$5,062.91	\$20,661.71	\$10,159.88
5,000 pages per month	\$6,066.38	\$25,564.88	\$12,440.23

\*Base Price

### Strengths

- Low B&W and color consumables' cost per page of 1.6 and 8.1 cents respectively.
- PictBridge interface for directly printing photos downloaded from PictBridge-compatible digital cameras.
- Scan to FTP sites, folders, e-mail; TWAIN and WIA scan drivers.
- 10/100BASE-TX Ethernet network interface, optional wireless.
- Capable SmartDevice Monitor for Admin network management.
- Presto!PageManager with Scan Central for OCR and document management.

### Limitations

- No duplex document feeder.
- No document finishing.

### Notes

### Best Use

Small offices and workgroups, as well as enterprises that require a color MFP for print, copy, fax, small workgroup scanning and for B&W and color office printing. Low color consumables' cost per page makes it an economical choice for environments with a higher percentage of color applications.

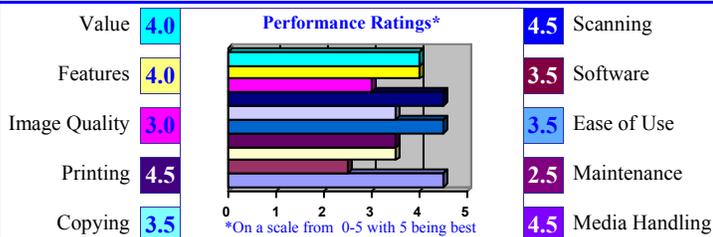
## Wirth Consulting - Office ©Head2Head Comparison

<b>Make</b> Sharp	<b>Imaging</b> Laser
<b>Model</b> DX-C311	<b>Functions</b> Print/Copy/Scan/Fax
<b>Base Price</b>	\$7,095.00
<b>Monthly Duty Cycle (pages)</b>	150,000
<b>BW/Color Print Speed (ppm)</b>	31/31
<b>Max Media Width (inches)</b>	8.50
<b>Classification</b> A4 Color MFPs	



### Background Information

As part of Sharp's new Frontier DX Series, this A4 color MFP is powered by a robust 800 MHz CPU, features a Gigabit Ethernet network interface for fast transmission of data, and is rated at up to 31 ppm in B&W and color. It features a large 8.5" color touch screen, which will make configuring settings very easy compared to competitors' LCD display/navigation-key control panels. With color network scanning, users can scan and send to a mixed group of destination types in a single procedure. A 300-sheet Inner Document Finisher is optional, as is fax (\$625).



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
37.5	\$0.00975	\$0.04839

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$7,467.67	\$9,786.17	\$8,158.10
2,000 pages per month	\$8,265.33	\$12,902.33	\$9,712.89
3,000 pages per month	\$8,850.50	\$15,806.00	\$11,057.31
4,000 pages per month	\$9,435.67	\$18,709.67	\$12,401.73
5,000 pages per month	\$10,020.83	\$21,613.33	\$13,746.15

\*Base Price

### Strengths

- Low B&W and color consumables' cost per page of 0.98 and 4.8 cents respectively (based on SRP pricing).
- Security provisions include IP/MAC filtering, protocol filtering, port management, user authentication, e-mail server user authentication for LDAP and Active Directory. Network management.
- Touch screen for easy operation; preview scanned images on it.
- PCL 6/5c, PostScript 3 print drivers, optional XPS driver.
- ImageSEND enables users to scan and send to a mixed group of destinations in a single procedure. Send-to-Group function allows users to send a mixed group broadcast to E-mail, Fax, and Internet Fax in a single procedure.
- Print from/scan to USB memory cards; USB port can also be used for wireless keyboards.
- Optional Inner Finisher for stapling, sorting, stacking; conserves space.
- Sharpdesk document-management software (1 user license).
- Standard 80-GB hard drive for collation, secure print, etc.
- Sharp OSA open platform development for access to network applications, such as Enterprise Resource Planning software, workflow applications, etc., from the touch screen/control panel.

### Limitations

Wirth Consulting has determined that this device does not have any notable limitations and should provide good functionality.

NOTES:  
•All pricing (including device, options and consumables) is Suggested Retail Pricing (SRP). Expect discounted pricing from

### Notes

### Best Use

Mid-range print volumes in small to mid-size businesses/workgroups, and enterprises, that require a versatile and easy-to-use A4 color MFP, and for users with higher-volume scanning tasks, as scanned documents can be sent to multiple destinations in a single operation, and custom scanning applications can be created with Sharp's OSA technology. Most economic at higher monthly print volumes--4,000 pages per month and higher (total cost per page,

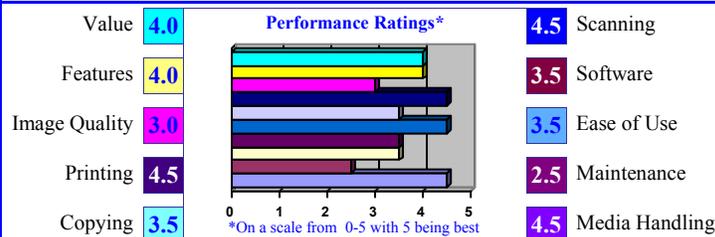
## Wirth Consulting - Office ©Head2Head Comparison

<b>Make</b> Sharp	<b>Imaging</b> Laser
<b>Model</b> DX-C401	<b>Functions</b> Print/Copy/Scan/Fax
<b>Base Price</b>	\$7,995.00
<b>Monthly Duty Cycle (pages)</b>	150,000
<b>BW/Color Print Speed (ppm)</b>	40/40
<b>Max Media Width (inches)</b>	8.50
<b>Classification</b> A4 Color MFPs	



### Background Information

Along with a 31/31-ppm A4 color MFP, this 40/40-ppm color MFP is one of the first new models in Sharp's Frontier Series of A4 color MFPs. It features a 1 GHz CPU (versus 800 GHz), and is rated at a faster 40/40 ppm, making it suitable for higher-volume use in mid-size workgroups and businesses. It features a large 8.5" color touch screen that also provides previews of scanned images. With color network scanning, users can scan and send to a mixed group of destination types in a single procedure. A 300-sheet Inner Document Finisher is optional, as is fax (\$625).



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
37.5	\$0.00975	\$0.04839

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$8,367.67	\$10,686.17	\$9,049.10
2,000 pages per month	\$9,165.33	\$13,802.33	\$10,603.89
3,000 pages per month	\$9,750.50	\$16,706.00	\$11,948.31
4,000 pages per month	\$10,335.67	\$19,609.67	\$13,292.73
5,000 pages per month	\$10,920.83	\$22,513.33	\$14,637.15

\*Base Price

### Strengths

- Low B&W and color consumables' cost per page of 0.98 and 4.84 cents respectively (based on SRP pricing).
- Security provisions include IP/MAC filtering, protocol filtering, port management, user authentication, e-mail server user authentication for LDAP and Active Directory. Network management.
- Touch screen for easy operation; preview scanned images on it.
- PCL 6/5c, PostScript 3 print drivers, optional XPS driver.
- ImageSEND enables users to scan and send to a mixed group of destinations in a single procedure. Send-to-Group function allows users to send a mixed group broadcast to E-mail, Fax, and Internet Fax in a single procedure.
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### Best Use

Mid-range print volumes in small to mid-size businesses/workgroups, and enterprises, that require a versatile and easy-to-use A4 color MFP, and for users with higher-volume scanning tasks, as scanned documents can be sent to multiple destinations in a single operation, and custom scanning applications can be created with Sharp's OSA technology. Most economic at higher monthly print volumes--4,000 pages per month and higher (total cost per page,

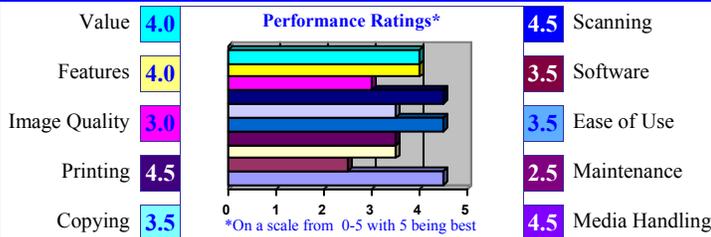
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<b>Make</b> Sharp	<b>Imaging</b> Laser
<b>Model</b> MX-C311	<b>Functions</b> Print/Copy/Scan/Fax
<b>Base Price</b>	\$7,095.00
<b>Monthly Duty Cycle (pages)</b>	150,000
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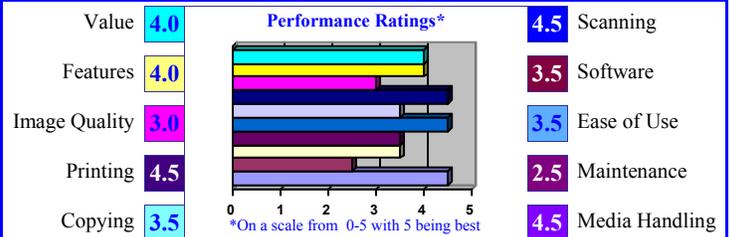
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<b>Model</b> MX-C401	<b>Functions</b> Print/Copy/Scan/Fax
<b>Base Price</b>	\$7,995.00
<b>Monthly Duty Cycle (pages)</b>	150,000
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<b>Classification</b> A4 Color MFPs	



### Background Information

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\*Base Price

### Strengths

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### Notes

### Best Use

Mid-range print volumes in small to mid-size businesses/workgroups, and enterprises, that require a versatile and easy-to-use A4 color MFP, and for users with higher-volume scanning tasks, as scanned documents can be sent to multiple destinations in a single operation, and custom scanning applications can be created with Sharp's OSA technology. Most economic at higher monthly print volumes--4,000 pages per month and higher (total cost per page,

## Wirth Consulting - Office ©Head2Head Comparison

<b>Make</b>	<b>Xerox</b>	<b>Imaging</b>	Solid Ink
<b>Model</b>	<b>Phaser 8560MFP/D</b>	<b>Functions</b>	Print/Copy/Scan/Fax
<b>Base Price</b>	\$1,849.00		
<b>Monthly Duty Cycle (pages)</b>	85,000		
<b>BW/Color Print Speed (ppm)</b>	30/30		
<b>Max Media Width (inches)</b>	8.50		
<b>Classification</b>	A4 Color MFPs		

Well Worth Consideration!



### Background Information

This system uses Xerox's solid-ink imaging technology, and is driven by a 600 MHz PowerPC CPU. Solid-ink imaging technology provides faster printer speeds than liquid-ink technology, very easy maintenance, and has less impact on the environment (for instance, there are no empty toner cartridges to discard). The Phaser 8560MFP/D is essentially the same as the Phaser 8860MFP/D except that the Phaser 8560MFP/D has a much lower purchase price, while the Phaser 8860MFP/D's color ink-supply costs are lower.



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
35.0	\$0.02540	\$0.12433

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$3,373.20	\$9,308.73	\$5,298.20
2,000 pages per month	\$4,897.41	\$16,768.47	\$8,765.88
3,000 pages per month	\$6,421.61	\$24,228.20	\$12,233.57
4,000 pages per month	\$7,945.82	\$31,687.93	\$15,701.26
5,000 pages per month	\$9,470.02	\$39,147.66	\$19,168.94

\*Base Price

Strengths	Limitations
<ul style="list-style-type: none"> <li>•512 MB can be expanded to 1 GB.</li> <li>•Scan to PC Desktop software enables users to scan and automatically route documents to desktops (PC and Mac) and e-mail. With standard 40-GB hard drive, users can scan to private and public folders in hard-drive memory. Also provides is OCR software, ability to convert scanned files into searchable PDFs, and ability to integrate with enterprise-management systems (Microsoft SharePoint, Xerox DocuShare).</li> <li>•Global print driver (print to most printers with one driver); Mobile Express print driver (print to most PS printers). PhaserSMART remote diagnostics.</li> <li>•Very capable CentreWare network management, as well as tools for job monitoring and accounting.</li> <li>•Color-matching software (match to computer monitors); color-matching for SWOP Press, EuroScale Press, Commercial Press, SNAP Press, ISO.</li> <li>•True Adobe PostScript print driver.</li> <li>•Optional hard drive for collation, secure print, saved print, etc.</li> <li>•Secure printing and hard-drive overwrite; IPv6.</li> <li>•10/100BASE-TX Ethernet network interface, optional wireless.</li> <li>•Broad range of optional software solutions, including job accounting/billing, variable data printing, enterprise content/process management.</li> </ul>	<ul style="list-style-type: none"> <li>•No touch screen.</li> <li>•No document finishing.</li> </ul>
Notes	Notes

### Best Use

Small to mid-size workgroups and businesses, as well as enterprise use, for both B&W and color printing, and especially for environments with high color print volumes of 2,000 color prints per month that require a fast, durable and economic color MFP. True Adobe PostScript, PANTONE color-matching and other color-matching standards also make the system suitable for graphic-arts and proofing applications.

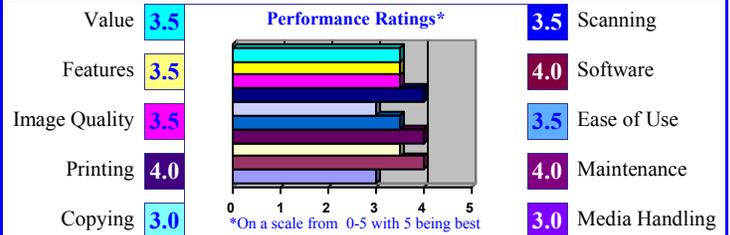
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<b>Make</b>	<b>Xerox</b>	<b>Imaging</b>	Solid Ink
<b>Model</b>	<b>Phaser 8860MFP/D</b>	<b>Functions</b>	Print/Copy/Scan/Fax
<b>Base Price</b>	\$3,999.00		
<b>Monthly Duty Cycle (pages)</b>	120,000		
<b>BW/Color Print Speed (ppm)</b>	30/30		
<b>Max Media Width (inches)</b>	8.50		
<b>Classification</b>	A4 Color MFPs		



### Background Information

Xerox introduced the Phaser 8860 MFP/D in 2007 with the promise of "color for the price of black-and-white." This is essentially true, as the cost of each color ink (CYM) is one-third the cost of black ink. Xerox recommends that customers have monthly color print volumes of at least 2,000 pages in order to obtain the most savings. This MFP uses solid-ink imaging technology, which is similar to liquid-ink ink-jet printers, but ink comes in solid ink form ("bullets"). Solid-ink advantages include faster print speeds than ink-jet printers, very easy replacement of ink, and less waste (no cartridges to dispose of).



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
35.5	\$0.01676	\$0.03352

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$5,004.65	\$6,010.22	\$5,286.44
2,000 pages per month	\$6,010.30	\$8,021.43	\$6,613.87
3,000 pages per month	\$7,015.95	\$10,032.65	\$7,941.30
4,000 pages per month	\$8,021.61	\$12,043.87	\$9,268.74
5,000 pages per month	\$9,027.26	\$14,055.09	\$10,596.17

\*Base Price

Strengths	Limitations
<ul style="list-style-type: none"> <li>•Low B&amp;W consumables' cost per page of 1.6 cents, and very low color consumables' cost per page of 3.2 cents (includes cost of ink and Maintenance Kit).</li> <li>•Optional 40-GB hard drive for collation, secure print, etc.</li> <li>•Global print driver (print to most printers, MFPs, with a single print driver); Mobile Express print driver (print to most PostScript printers without installing device print drivers). True Adobe PS 3 print driver.</li> <li>•750 MHz Power PC CPU; 10/100BASE-TX Ethernet network interface, optional wireless.</li> <li>•PANTONE color-matching, Apple ColorSync, CIE International Color Standards, ICC, ICM.</li> <li>•Scan to desktop, and e-mail. With optional hard drive, scan to private and public folders in hard-drive memory. TWAIN/WIA scan drivers.</li> <li>•Very capable CentreWare network management.</li> <li>•Optional DocuShare software provides document storage, automated document routing and retrieval (convert scanned documents into a searchable document-management system).</li> <li>•Optional Scan to PC Desktop software for OCR, and for automatically routing documents optional job-billing software.</li> </ul>	<ul style="list-style-type: none"> <li>•No touch screen.</li> <li>•No document finishing.</li> </ul>
Notes	Notes

### Best Use

Small to mid-size workgroups and businesses, as well as enterprise use, for both B&W and color printing, and especially for environments with high color print volumes of 2,000 color prints per month that require a fast, durable and economic color MFP. True Adobe PostScript, PANTONE color-matching and other color-matching standards also make the system suitable for graphic-arts and proofing applications.