

Wirth Consulting

B2B Digital Imaging Product Evaluation

Thursday, April 09, 2009 1:39:52 PM

WYSK

"What You Should Know"

Make	Ricoh	Model	Aficio SP C420DN
Functions	Print	Imaging Technology	Laser
Classification Color Duplex Printers From \$1,000 To \$1,500			



The Aficio SP C420DN is situated at the high end in Ricoh's desktop color laser printer family (only the 40-ppm Aficio SP C811DN is faster). This printer features a robust 800 MHz CPU, and of note is a nice range of connectivity options, including optional wireless, Bluetooth wireless, Gigabit Ethernet, etc. Optional direct printing from PictBridge-compatible digital cameras is a useful capability especially in vertical sectors such as insurance, real estate and legal. Standard paper capacity is 550 sheets, but can be expanded to a very substantial 2,300 sheets for longer uninterrupted operation.



Specifications

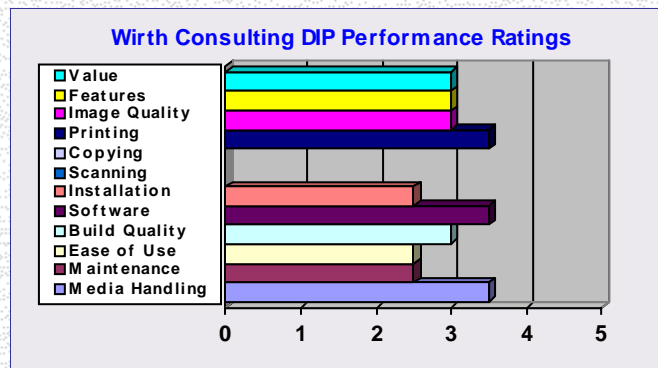
Monthly Duty Cycle	150,000	Max Media Width (inches)	8.5	215.9 mm	Price	\$1,099.00	€789.08
BW/Color Print Speed (PPM)	31/31	Max Media Length (inches)	14.0	355.6 mm	Duplex		
Max. Print Resolution (DPI)	600x600	Max Media Wt. (bond, lbs.)	57.0	192.4 gsm	Print		
Standard Memory (MB)	256.00	Height (inches)	19.0	482.6 mm	Network		
Std Media Capacity (sheets)	550	Width (inches)	18.0	457.2 mm	Scan		
Max Media Capacity (sheets)	2,300	Depth (inches)	23.0	584.2 mm	Doc Feeder		
Power Consumption (watts)	990W	Weight (pounds)	110.0	49.9 kg	Full System	\$1,099.00	€789.08

Feature Checklist

Value Add	Print	Scan	Copy
USB Convenience Port <input type="checkbox"/>	Duplex Printing <input checked="" type="checkbox"/>	Color Scanning <input type="checkbox"/>	Duplex Document Feeder <input type="checkbox"/>
Scanner <input type="checkbox"/>	Network Printing <input checked="" type="checkbox"/>	Network Scanning <input type="checkbox"/>	Ease of Use
Walk-Up Fax <input type="checkbox"/>	Microsoft Windows <input checked="" type="checkbox"/>	Software	Graphic Display <input type="checkbox"/>
LAN Fax <input type="checkbox"/>	Apple Mac <input checked="" type="checkbox"/>	Desktop Software <input checked="" type="checkbox"/>	Touch Screen <input type="checkbox"/>
Image Quality	Linux <input checked="" type="checkbox"/>	Web Utilities <input checked="" type="checkbox"/>	Navigation Keys <input checked="" type="checkbox"/>
BW Office IQ <input checked="" type="checkbox"/>	GDI Printing <input type="checkbox"/>	Media Handling	Maintenance
Color Office IQ <input checked="" type="checkbox"/>	PCL <input checked="" type="checkbox"/>	Feeds Index Stock <input checked="" type="checkbox"/>	All-in-One Toner Cartridge <input type="checkbox"/>
Professional IQ <input type="checkbox"/>	PostScript <input type="checkbox"/>	Max Weight from all Sources <input type="checkbox"/>	Finishing
Photographic IQ <input type="checkbox"/>	Adobe PostScript <input checked="" type="checkbox"/>	Holds Full Ream of Media <input checked="" type="checkbox"/>	Finishing <input type="checkbox"/>

Wirth Consulting Ratings* *On a scale of 0-5, with 5 being the best

Value	3.0
Features	3.0
Image Quality	3.0
Printing	3.5
Copying	
Scanning	



2.5	Installation
3.5	Software
3.0	Build Quality
2.5	Ease of Use
2.5	Maintenance
3.5	Media Handling

Ratings Scoreboard* *Highest possible scores: Overall, 60; Copier, 45; Printer, 50; Scanner, 40; Usability, 25

Overall Score	30.0	Copier Score		Printer Score	30.0	Scanner Score		Usability Score	14.0
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Make **Ricoh** Model **Aficio SP C420DN** Classification **Color Duplex Printers From \$1,000 To \$1,5**

Consumables Pricing and Yields* *All supply yields are based on an original area coverage of 5% per color

Black Ink/Toner Price	\$84.99	Magenta Ink/Toner Yield (pages)	15,000	Maintenance Kit Price	\$326.98
Black Ink/Toner Yield	15,000	Yellow Ink/Toner Price	\$181.99	Maintenance Kit Yield	200,000
Cyan Ink/Toner Price	\$181.99	Yellow Ink/Toner Yield	1,500	Other Type	Black and Color Drums
Cyan Ink/Toner Yield	15,000	Multicolor Ink Price		Other Price	\$564.98
Magenta Ink/Toner Price	\$181.99	Multicolor Ink Yield		Other Yield	100,000
Black Consumables Cost per Page		\$0.0113	Color Consumables Cost per Page		\$0.1602

Total Cost Per Page*

Total Cost of Ownership**

*Cost Per Page and **Total Cost of Ownership include the purchase price depreciated over a five-year period. ***Mixed=Based on print usage of 66% Black and 33% Color

Monthly Volume	Black CPP	Color CPP	Monthly Volume	Black TCO	Color TCO	***Mixed TCO
50 pages	\$0.378	\$0.527	50 pages	\$1,128.04	\$1,574.63	\$1,264.14
100 pages	\$0.194	\$0.343	100 pages	\$1,157.09	\$2,050.26	\$1,440.26
250 pages	\$0.085	\$0.233	250 pages	\$1,244.21	\$3,477.14	\$1,968.64
500 pages	\$0.048	\$0.197	500 pages	\$1,389.43	\$5,855.28	\$2,849.26
1,000 pages	\$0.030	\$0.178	1,000 pages	\$1,679.85	\$10,611.56	\$4,610.52
2,000 pages	\$0.020	\$0.169	2,000 pages	\$2,260.71	\$20,124.12	\$8,133.03
3,000 pages	\$0.017	\$0.166	3,000 pages	\$2,841.56	\$29,636.69	\$11,655.54
4,000 pages	\$0.016	\$0.165	4,000 pages	\$3,814.79	\$39,541.62	\$15,566.50
5,000 pages	\$0.015	\$0.164	5,000 pages	\$4,493.74	\$49,152.28	\$19,186.12

Wirth Consulting Commentary

Strengths

- Low B&W consumables cost per page of 1.1 cents.
- Adobe PostScript 3 print driver.
- Security provisions include SNMPv3 authentication, data encryption, PDF Direct Print password-protection, secure print, 500 users account codes, user authentication, Wi-Fi Protect Access Support.
- Print on specialty media such as magnetic paper, stickers, waterproof paper.
- Capable SmartDevice for Admin network management.
- 256 MB can be expanded to 512 MB.
- 10/100BASE-TX Ethernet interface, optional wireless, Bluetooth wireless, Gigabit Ethernet.
- Optional direct printing from PictBridge-compatible digital cameras.

Limitations

- High color consumables' cost per page at 15 cents, high Total Cost of Ownership for color, and no solution for limiting color printing.
- Multi-part imaging system (both toner cartridges and imaging drums must be periodically replaced).

Best Use

Small to mid-size businesses and workgroups, as well as some enterprise use, where a relatively fast color printer that can produce good image quality and can be efficiently managed is required. The relatively high color consumables' cost per page might make it a better fit where it will be predominantly used for B&W printing, with color printing more limited.