



Kyocera FS-C5150DN

21 PPM Colour Laser Printer



Reliability.....	Excellent
Administrative Utilities	Very Good
Feedback to Workstations	Good
Ease of Network Setup.....	Very Good
Print Drivers.....	Good
Applications Compatibility.....	Excellent
Colour Print Quality	Good
Black Print Quality	Very Good
Colour Print Productivity.....	Very Good
Black Print Productivity.....	Very Good
Ease of Use.....	Very Good
Feature Set.....	Very Good
Security Features.....	Not Rated
Environmental Features	Not Rated
Toner Yield.....	Good
Cost per Page (Colour)	6.26p UK/0.0649€ Ger.

BLI RECOMMENDATION

The 21-ppm Kyocera FS-C5150DN gave a very strong overall performance in BLI's two-month lab evaluation, proving to be both productive and highly reliable, with a robust design that suits large or midsize workgroup environments. The FS-C5150DN also provides a strong feature set and a low cost per page. Offering above average ease of use, the unit has a USB port that allows for direct printing of files from a flash drive. The unit is easy to manage using KMnet Viewer, which can assign specific alerts to different recipients, while Kyocera Command Center provides users with good feedback about device status, paper size, approximate percentage of paper remaining and toner supplies. Its efficiency when outputting BLI's job stream using the PCL driver was the highest in its class. However, its productivity with the PostScript driver was the lowest in its class. Although skin tones in photographic images had a heavy red tint, output produced by the FS-C5150DN was very good overall, with text that was crisp and cleanly formed and above-average production of solids and closely spaced fine lines. The FS-C5150DN is highly recommended by BLI for large or medium size workgroups with monthly print volumes of up to 2,500 impressions.

Test duration: Two months, including a 25,000-impression durability test.

Maximum monthly duty cycle¹: Up to 50,000 impressions.

Manufacturer's recommended monthly volume: Up to 2,800 impressions.

BLI's recommended monthly volume for optimum performance: Up to 2,500 impressions.

More information on the Kyocera FS-C5150DN is available through bliQ (www.buyerslab.com/bliQ).

¹ The maximum monthly duty cycle is the maximum volume, as specified by the vendor, that the unit is capable of producing in a month; however, it is not recommended that the unit be run at this volume on a regular basis.

STRENGTHS

- Highly reliable—flawless durability performance
- Class-leading performance in BLI’s job stream test with the PCL driver; faster than average first-page times
- KMnet Viewer provides alerts for specific events to different recipients, on a device-by-device basis or on an entire group of devices
- Kyocera Command Center provides users with a good level of detailed information about consumables and device status
- Kyocera’s PRESCRIBE PDL enables graphics, logos and forms to be created independently of the system and then saved and updated on the unit
- Pop-up messages, icons and audible alerts can be set up to keep users well informed about device status and error conditions
- Bypass tray handles up to 220gsm media—higher than average for this group
- RAM Disk provides the added functionality of a hard drive, such as secure print, without needing to purchase a hard drive
- Above average standard and maximum memory and maximum paper capacities; standard automatic duplexing helps to save on paper
- USB port on control panel allows users to print files from a flash drive
- Standard security features include IPsec, SSL/TLS, SNMPv3, 802.1x authentication and IPv6 support
- Kyocera’s ECOSYS technology employs long-life consumables to reduce TCO and minimize environmental impact

WEAKNESSES

- Heavily reddish skin tones in photographic images
- Below average job stream efficiency from the PostScript driver
- Slower than average first-page time from energy-save mode
- Misfeeds can only be accessed via a door at the back of the unit, which usually involves turning the device around, especially if it’s located against a wall or partition

TEST RESULTS AND OBSERVATIONS

+ , – and ○ represent positive, negative and neutral attributes, respectively.



RELIABILITY

EXCELLENT

- + The FS-C5150DN is certified highly reliable by BLI, completing a 25,000-impression durability test without any misfeeds and no service calls required.
- + The amorphous silicon imaging drum is guaranteed for 100,000 impressions or three years, which far exceeds that of any competitive A4 colour laser/LED device.

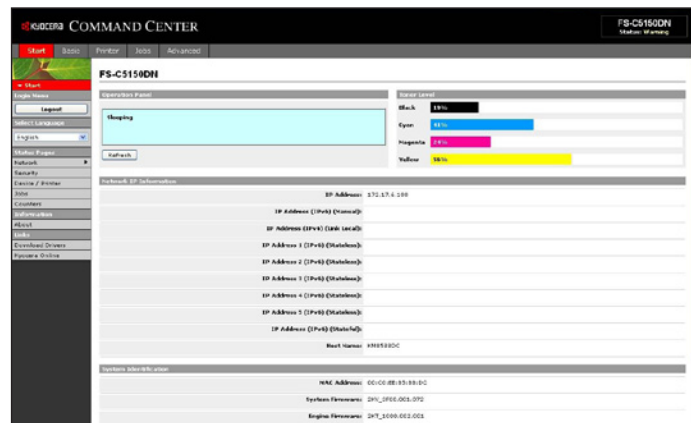
PMS/Malfuctions	Service Required	Meter Count (Impressions)	Impressions Between Service
Meter Count (Beginning of Test)		0	
End of Test Period		25,000	
Total Misfeeds/Misfeed Rate	0/Not applicable		
Total Service Calls	0		



ADMINISTRATIVE UTILITIES

VERY GOOD

- + Kyocera’s administrative utility suite, which comes on the CD with the drivers and documentation, includes KMnet Viewer, Printer Status Monitor and the embedded Web server.
- + KMnet Admin is a unified solution for network device management for Kyocera and compatible network printing devices. The utility allows the administrator to view page count and status, and view and configure alerts for groups of devices. Administrators can also access detailed information on individual devices such as amount of toner remaining, configuration settings and event logs.
- + KMnet Viewer enables device discovery and management of Kyocera and compatible hardware on the network. Administrators can sort devices by name or IP address and specify which information on monitored devices is shown.
- + KMnet Viewer allows administrators to create groups of products based on reporting or error notification requirements. Within a “report group”, an administrator can receive reports via e-mail outlining a variety of device statistics, including printed page volumes and consumable levels, at defined time intervals.
- + An office map can be downloaded and each device can be dragged and dropped to its specific location, allowing for faster navigation for technical support.
- + Kyocera Command Center, the embedded Web server, provides administrators with information about the FS-C5150DN and lets them change settings, view status, and monitor toner levels (on a sliding scale from 1-100%) and approximate paper supplies (empty, not empty, or 100%).



Kyocera Command Center provides feedback on consumable levels and device status.

- + Command Center enables administrators to send e-mail alerts to three recipients for error conditions, including when there’s a jam, the cover is open, and toner or paper needs to be replenished.
- + Command Center also includes a software utility, KM-NET for Direct printing, that enables direct printing of PDF, PostScript, PRN and Kyocera’s PRESCRIBE files without having to have the respective applications installed on the PC. Multiple files can be sent at one time, with the user able to change settings such as quantity, duplexing, N-up printing and resolution.



FEEDBACK TO WORKSTATIONS

GOOD

- The pop-up Status Monitor provides a colour-coded icon that resides on the Windows toolbar and an audible alert for events such as cover open, paper jam, add paper/toner and printing/print completed. A pop-up image of the device is displayed which changes to indicate when the cover is open, for example. The Status Monitor also provides a link to the Kyocera Command Center.
- + Command Center provides users with a good level of detail regarding the FS-C5150DN, including device status, paper size, remaining paper and toner supplies.
- + KMnet Viewer allows administrators to assign specific e-mail alerts or events to different recipients, either on a device-by-device basis or on an entire group of devices.
- Each alert has to be set up separately, which is more time consuming than combining alerts set up together.



EASE OF NETWORK SETUP VERY GOOD

- + Kyocera recommends that two people should lift the FS-C5150DN out of its box, due to weight concerns. Starter cartridges with a rated yield of 1,200 impressions each are provided: users just have to remove the packaging before installing them. The amount of packaging used for the device is not excessive, and drums are not exposed to any risk of damage.
- + Installation of the drivers, driver tools, utilities and documentation is highly automated; users will be up and running in minutes. The CD auto-launches upon insertion in the drive. When selected, the install software option launches a menu-driven installation routine. The IP address is automatically assigned using DHCP, and the port is created automatically. It takes 10 clicks to install the drivers and Status Monitor in Express Mode. Custom Mode also enables KM-NET for direct printing and KMnet Viewer to be installed, in addition to Status Monitor.
- Administrators can't clone settings from one device to another, and they can't simultaneously install the drivers at multiple workstations on the network. Kyocera reports that SMS packages can be prepared on request for customers to facilitate fleet distribution and setup of drivers across the network.

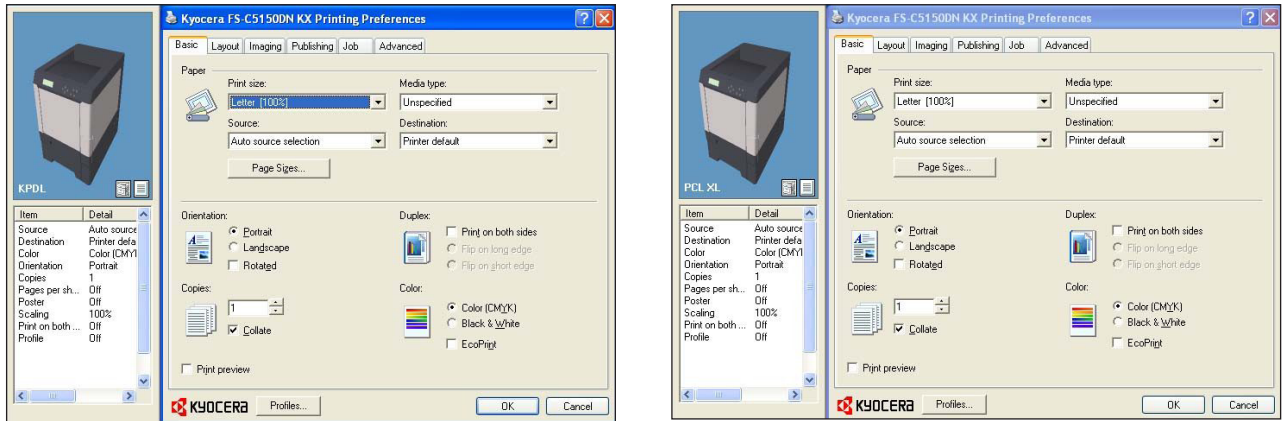


PRINT DRIVERS

GOOD

- The FS-C5150DN ships with Kyocera's KX driver for various Windows operating systems, as well as Mac OS X 10.2+. Other supported environments include Novell NPDS, UNIX and Linux. The driver combines PCL XL (PCL 6 emulation), PCL 5e and KPD (the company's PostScript emulation) into one, which facilitates a more streamlined installation procedure and uses fewer network resources.
- + The well-designed drivers are graphical, including a summary list of features and

a graphical display indicating what paper trays are to be used, or to view different document types. All the features for typical print jobs are accessible on the main screen, eliminating the need to navigate multiple tabs.



Kyocera's KPDL (PostScript) and PCL drivers have an identical interface.

- The layout of the PCL and PostScript drivers is the same, which makes use easier for those who switch between them. Note, however, that users cannot switch between emulations from within applications. Users have to close or minimize the application and then open the driver properties screen to switch from one driver to the other. Customers who regularly switch emulations are recommended by Kyocera to install the driver twice with different configuration settings—one for PCL and one for KPDL for PostScript emulation.
- The drivers offer a good feature set, including booklet printing, collation, N-up printing, quantity selection up to 999, reduction/enlargement from 20 to 500 percent, and the abilities to save settings, secure print and custom watermarks. The PCL XL driver also offers a 'Skip printing blank pages' feature, and both drivers offer 'Enable smart duplex printing', so that single-page originals and the last page of odd-numbered originals are not duplexed, which helps to save paper.
- + File size remains the same when printing multiple sets, regardless of whether collate is selected from the properties screen of the driver or from the print screen within an application.
- + The PCL XL and KPDL drivers feature PRESCRIBE—Kyocera's page design and control language—that enables graphics, logos and forms, including multi-part forms, to be created independently of the system and then saved and updated on the unit.

Kyocera FS-C5150DN Print Driver Features

Features	PCL XL	PostScript 3
Auto Feature/Device Detection	Yes	Yes
Booklet Printing	Yes (no folding, no stapling)	Yes (no folding, no stapling)
Collate Sets	Yes	Yes
Max Paper Sources per Job	4	4
Mirror Image	No	Yes
Negative Image	No	Yes
N-up Printing	25 on 1	25 on 1
Overlays	No	No
Paper Gauge	No	No
Print and Hold	Yes	Yes
Proof Print	Yes	Yes
Quantity Selection	Up to 999	Up to 999
Reduction/Enlargement	20% to 500%	20% to 500%
Resolution Modes (dpi)	300, 600, 1200, 9,600*	300, 600, 1200, 9,600*
Save Settings	Yes	Yes
Secure Print	Yes	Yes
Watermarks/Custom Watermarks	Yes/Yes	Yes/Yes
Cover Mode	Yes	Yes
Poster Mode	Yes	Yes
Blank-Page Removal	Yes	No
Toner Save	Yes	Yes

* With Kyocera's MultiBit technology.



APPLICATIONS COMPATIBILITY

EXCELLENT

+ No problems were experienced with any of the test files used in the applications compatibility tests. Units are tested for compatibility on the Windows XP platform with Microsoft Word 2000, PowerPoint 2000 and Excel 2000, as well as Adobe PageMaker 7.0, Photoshop 6.0 and Acrobat 8.0, using 25 application test files that contain text, graphics, halftone images, tables, etc., enabling BLI technicians to evaluate memory usage, file processing, font rendering and greyscale capability.



COLOUR/BLACK PRINT QUALITY

GOOD/VERY GOOD

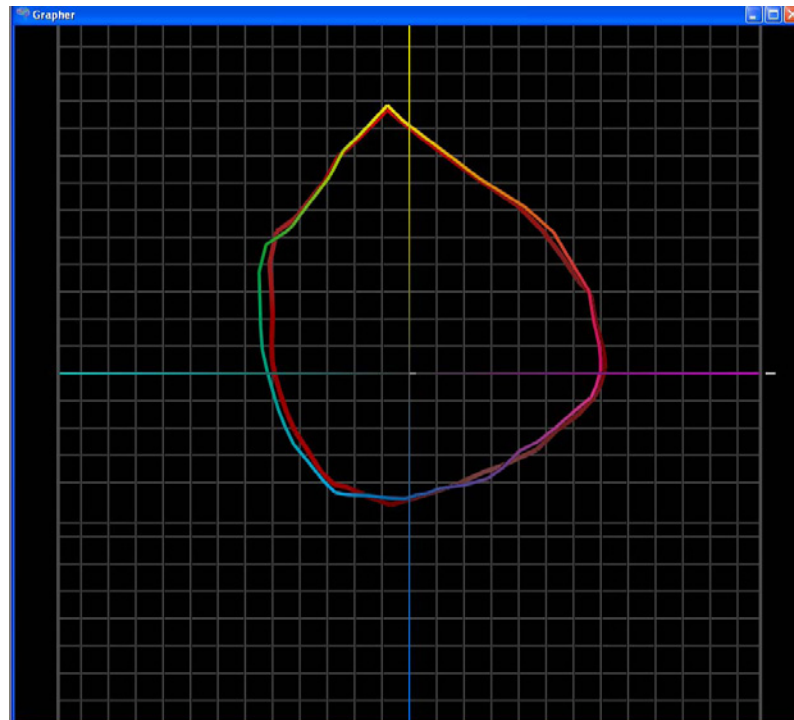
- Business graphics displayed above average consistency of solids and sharpness of fine details, with average production of pastel shades and backgrounds, while saturation was not bright enough.
- Photographic image output was smooth, with average sharpness and halftones, but flesh tones had a heavily reddish hue.
- + Over the course of testing, the colour gamut remained stable, with minimal reduction. A group of test images printed at the beginning of the test period did

not display any noticeable changes from the same group of images printed at the end.

- + Text was characterized by fully formed characters that had above average darkness and sharpness; an average amount of toner overspray was visible, but only when output was viewed under magnification. Line art displayed smooth vertical and horizontal lines, diagonal lines showed an average amount of stair-stepping, closely spaced fine lines remained distinct, and there was above average consistency of line thickness; no haloing or toner overspray was visible in a visual examination, though a minimal amount of overspray was visible when output was viewed under magnification. Halftones were only visible over a fair range, from the 4 to 95 percent dot-fill levels, and distinct transitions were lacking between some lower and higher levels; toner coverage within levels showed a minimal amount of banding parallel to the short edge throughout the halftone pattern. Solids showed smooth and dark fill areas, consistent toner coverage and average density readings.

Print Quality

Text	Very Good
Line Art	Very Good
Halftone Pattern	Very Good
Halftone Range	Fair
Solids	Very Good
Colour Business Graphics	Good
Colour Photographic Images	Good
Colour Gamut Shift	Very Good



Kyocera FS-C5150DN Colour Gamut at the beginning (multi-colour) and end of testing (in red), showing slight shrinkage in the blue and green regions.

Comments:

Colour gamut size is tested using a 1400-colour patch which is printed at five evenly spaced points during the test, including the beginning. Samples are also taken when any major component on the device is changed. The colour patch is read using the EFI ES1000 Colour Spectrophotometer and the gamut assessed using Chromix ColorThink v3.0 software. The FS-C5150DN uses an internal automatic colour calibration.

Colour Density Readings

	Cyan	Magenta	Yellow
Kyocera FS-C5150DN	1.26	1.50	1.07

Density of a printed image with blocks of all solid colours (based on the average of two readings for each colour).



COLOUR/BLACK PRINT PRODUCTIVITY

VERY GOOD

- + The unit’s productivity with the PCL driver in BLI’s job stream, which simulates the type of traffic experienced in a multi-user environment, is well above the average for comparable colour printers tested – in fact its efficiency was the highest in its group in both colour and black.
- + First-print times for all five file types used in testing (Word, PowerPoint, TIFF, PDF and JPEG) are faster than average when compared to those of comparable models tested, with 10.75 seconds for the Word document being the fastest in the group.
- Overall simplex and duplex productivity is competitive when producing multiple sets in both colour and black.
- First-page time from sleep mode is slower than competitive models.
- Job stream performance with the PostScript driver was much slower. BLI technicians attribute this to the device pausing between each job.

First-Print Time from Overnight Sleep Mode in Seconds

Kyocera FS-C5150DN	55.25
Average for devices in this class tested to date	41.40

Device sits idle overnight; a single-page black Word document is then sent. First-print time indicates the time it took to RIP, image and deliver the first page of the test document to the output tray.

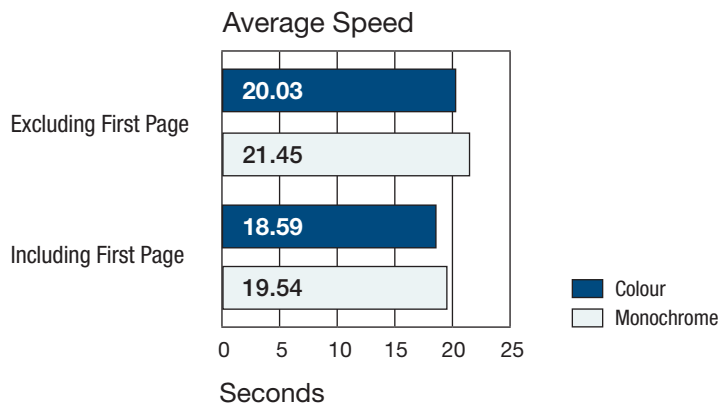
First-Print Times in Seconds

Windows XP	Word	PowerPoint	Photoshop	Acrobat	Photoshop
File Type	Black Text	Colour Graphic/Text	Colour Graphic	Black Graphic/Text	Colour Graphic
File Extension	DOC	PPT	TIF	PDF	JPG
Pre-Raster File Size	114 KB	99 KB	20 MB	426 KB	248 KB
Post-Raster File Size	10.3 KB	269 KB	15.2 MB	564 KB	850 KB
First-Page Time	10.75	11.81	20.44	12.38	10.84
Tested Competitive Average	13.93	18.07	25.49	16.65	13.74

First-print time indicates the time it took to RIP, image and deliver the first page of the test document set to the output tray. Speeds were tested using the PCL driver at 600 dpi.

Kyocera FS-C5150DN's rated speed:
21 ppm in colour and black

BLI's Tested Print Speeds



Print speed is tested using BLI's Monochrome Test Original (with 6% page coverage). The test page is printed in a quantity equal to double the vendor's rated print speed for the device in each mode tested (e.g., if the vendor's rated print speed is 20 ppm, 40 pages are printed). The FS-C5150DN's print speeds were tested at the default 600 dpi using the PCL XL driver.

Job Stream

	SPEED IN PPM		PERCENT OF RATED SPEED	
	Kyocera FS-C5150DN	COMPETITIVE AVERAGE	Kyocera FS-C5150DN	COMPETITIVE AVERAGE
PostScript FULL COLOUR	3.1	9.3	14.7	39.2
PostScript BLACK	3.2	12.0	15.0	46.7
PCL FULL COLOUR	18.8	13.6	89.5	54.8
PCL BLACK	18.8	16.7	89.4	64.9

BLI's job stream includes Word documents, Outlook e-mail messages, Excel spreadsheets, PowerPoint, HTML and Acrobat PDF files, totaling 19 pages. This test simulates the type of traffic a typical device might experience in a real-world, multi-user environment. All of the files are sent to the device as a group, at which time the stopwatch begins; timing ends when the last page of the last file exits the device. Job stream efficiency is determined by the percentage of the rated speed at which the device operates when producing real-world jobs. The closer the rate is to 100%, or if it exceeds 100%, the more efficient the device.

Problems encountered:
The unit paused between jobs when using the PostScript driver.

Average Print Productivity

	SPEED IN PPM		PERCENT OF RATED SPEED	
	Kyocera FS-C5150DN	COMPETITIVE AVERAGE	Kyocera FS-C5150DN	COMPETITIVE AVERAGE
FULL COLOUR 1:1	17.2	16.9	81.9	76.8
FULL COLOUR 1:2	9.5	10.0	45.4	47.5
BLACK 1:1	17.2	17.9	81.9	77.9
BLACK 1:2	9.5	10.7	44.9	48.6

Efficiency is tested using a 10-page full-colour document and a 10-page black document. BLI obtains the overall efficiency for each mode by averaging the efficiency ratings (derived by dividing the tested speed of the device by the rated speed and then multiplying by 100) for each run length (1, 5 and 10 sets). The unit's efficiency was tested using the PCL driver at 600 dpi.



EASE OF USE

VERY GOOD

- + The control panel consists of eight hard keys, including four arrow keys, and a two-line, 32-character LCD display. BLI technicians found navigation of the menu system's settings for administrator, job box, paper, print, network, security and job accounting to be more intuitive than with most other devices in this class. If a misfeed should occur the LCD provides clear written instructions for removing paper jams.



Kyocera FS-C5150DN Control Panel is easy to navigate.

- + Changing cartridges is a simple, mess-free procedure as they simply lift out and slot back in. Changing the waste toner bottle, which is supplied with each box of toner, is also very straightforward.



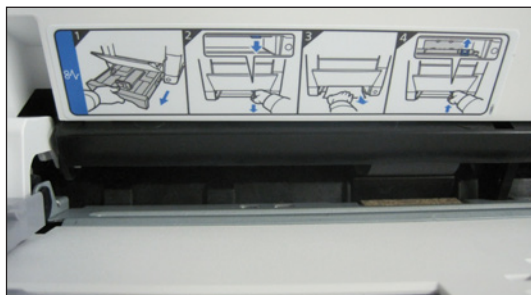
Toner cartridges are easily accessed on the FS-C5150DN.

- Misfeeds can only be accessed via a door at the back of the unit, which usually involves turning the device around, especially if it's located against a wall or partition.



Misfeeds can only be accessed from the rear of the device.

- + Opening the rear door allows access to the entire paper path, so that there is no risk of the drum is being exposed during misfeed removal.



Instructions for removing misfeeds are clearly displayed.

- + BLI technicians noted that adjusting the trays is easy, with sliding guides and a rotating dial on the side of the drawer to set paper size, eliminating the need to program media changes on the display.
- + Paper in the upper tray can be replaced while the lower tray or trays are feeding, thus minimizing downtime.



FEATURE SET

VERY GOOD

- + Standard (300 sheets) and maximum (1,300 sheets) paper capacities are competitive and above average, respectively, for laser/LED models in this group, both of which include the 50-sheet bypass.
- The 50-sheet capacity of the bypass is competitive with the group. Many competitors only offer a single-sheet bypass, while several others offer a 100-sheet capacity.

- + Media-handling abilities from the drawers (up to 163 gsm) and bypass (up to 220 gsm) are competitive and above average, respectively, for the group.
- + Automatic duplexing is standard and contributes to less paper waste. Both drivers offer 'Enable smart duplex printing', so that single-page originals and the last page of odd-numbered originals are not duplexed, which also helps to save paper.
- + A USB port on the front of the unit allows users to print from a flash drive.
- + The unit is equipped with 256 MB of standard memory, which is well above average, and tied for the highest in its class. Maximum memory of 1,280 MB is more than twice as high as the average offered by competitive units.
- + Kyocera's PRESCRIBE PDL offers custom print programming features for specialized printing.
- + Kyocera's RAM Disk option allows a portion of the device's RAM to be treated like a hard disk to facilitate secure job storage without incurring the added expense of a hard drive. Another advantage of using RAM in lieu of a hard drive is that it is volatile memory, so it can only retain data while connected to a power supply or a device, so users should not be concerned about data security.
- + KM-NET for Direct Printing is a user friendly utility allowing for simple submission of PDF files to the device without the need to open the PDF, with users able to choose one or multiple PDF files and submit them to the direct print workflow, using either drag and drop, right click or browse as the file submission selection process. Users can also set up print profiles which further simplify the submission process. This is ideal for users operating the device as a short run, print on demand resource.



SECURITY FEATURES

NOT RATED

Administrator password length (characters)	24 alphanumeric
Authentication	
Network user authentication	Yes
Windows	Yes
Novell NetWare NDPS	Yes
LDAP authentication	Yes
802.1x wireless authentication	Yes
Kerberos protocol support	Yes
Authentication via department or user ID codes that are registered on the machine	Yes
Number of codes	100
Restrict usage of colour	Yes
Restrict usage of other features	Yes
Authenticated printing	Yes
Common Criteria Certification	No
Control panel lock/disablement	Yes
Digital user signature	Yes (for sending e-mail alerts)
Encrypted PDF mode/encrypted scanning	No
Encrypted secure print	Yes (SSL + Private Print)
Hard drive encryption	No
Hard drive lock	No
Hard drive overwrite	No
Max number of overwrites after every job	NA
Overwrite method	NA
IP address filtering	Yes (up to 10 addresses)
IPsec	Yes
Job logs (e.g., activity monitoring, compliance auditing)	Yes
MAC address filtering	Yes
Password-protected mailboxes	No
Password-protected Web page	Yes
Port disablement	Yes
Removable hard drive	No
Secure print	Yes (standard)
Secure Sockets Layer (SSL)	Yes
SNMPv3 support	Yes
Third-party security features	Authorisation, Accounting, Secure Pull Printing
Transport layer security	Yes
Unauthorised copy prevention (secure watermark)	Standard
USB block	Standard
Additional security features	RAM disk feature

NA: Not applicable



ENVIRONMENTAL FEATURES

NOT RATED

Specified capable of running 30% post-consumer recycled paper	Yes
Specified capable of running 50% post-consumer recycled paper	Yes
Specified capable of running 100% post-consumer recycled paper	Yes
Instant/Quick Fusing	No
Duplexing	Yes
Toner-save mode	Yes
Energy-save mode/modes	Yes
RoHS compliant	Yes
Percent of product made from previous devices	1.5
Percent of product made from post-consumer materials	0
Percent of product made from pre-consumer materials	0
Percent of product made from bio-based materials	0
Product designed for recycling (easily disassembled, no binding agents)	Yes
Please list types of items that can be recycled	Fixing frame, fuser guide
Hardware remanufacturing program for this product	No
Toner cartridge recycling program for this product	No
Pre-paid label for return of toner cartridges/bottles for this unit	No
Toner recycling system	No
Ability to program features such as duplexing and auto shut-off over entire fleet	Yes
What tool can be used to do this?	User Print Setting Command
Green packaging materials for the product	Yes
Green packaging materials for its consumables	Yes
Packaging materials used	Corrugated paper; cardboard; EPS; EPP; LDPE (bag)
Typically, who is responsible for getting rid of packaging materials after products are shipped to the customer location (e.g., customers, dealers, shippers)?	Dealers or customers
Eco-Label Certifications	
ENERGY STAR	Yes (1.2)
Other	
Tested energy consumption levels of the device (watts):	
Ready/Idle	57
Energy-save	NA
Sleep mode	6
During Printing	360
How fast can this product be programmed to go into the following modes (seconds):	
Ready/Idle	Immediately after warm-up
Energy-Save	NA
Sleep mode	60-240
Can the above settings be programmed by a walkup user?	No
First-print time out of sleep mode (seconds)	28.5
Emissions output from this device for the following substances (mg/h):	
Carbon Monoxide	0
Ozone	0.17
Styrene	0.11
Benzene	0.02
TVOC	4.6
Dust	Below detectable limits
Other	0



TONER YIELD

GOOD

- Based on an average of two cartridges per colour, tested toner yields for all colours are below average compared with colour laser/LED printers in this speed range tested to date.
- Tested impressions-per-gram yields are above average for cyan, below average for black, and competitive for magenta and yellow compared with models in this class tested to date.
- + In BLI's testing, all the cartridges tested exceeded their rated yield.

Tested Toner Yield (ISO 24712)

	Black	Cyan	Magenta	Yellow
Manufacturer's Rated Toner Yield (Impressions)	3,500	2,800	2,800	2,800
COMPETITIVE AVERAGE	6,063	5,337	5,337	5,337
BLI's Tested Yield (Impressions) ¹	4,082	3,627	3,012	3,057
COMPETITIVE AVERAGE	6,283	5,554	5,367	5,484
Net Weight (Grams)	68.3	38.9	38.8	39.1
Impressions per Gram	59.81	93.24	77.73	78.18
COMPETITIVE AVERAGE	66.67	77.81	80.72	75.44
Manufacturer's Rated Drum Yield (Impressions) ²	100,000	100,000	100,000	100,000
COMPETITIVE AVERAGE	22,625	22,238	22,238	22,238

¹ Based on BLI's testing of two high-yield print cartridges per colour using the ISO 24712 toner yield test original.

² Some devices in the competitive group employ an all-in-one cartridge that includes the toner and drum in a single component. In those cases, rated toner yield is used as the rated drum yield in calculating the average.

Tested Supplies Cost per Page (ISO 24712)

	France	Germany	Italy	UK
Toner cost per page	0,0754€	0,0612€	0,0714€	5.32p
Supplies cost per page	0,0754€	0,0612€	0,0714€	5.32p

¹ Toner cost per page is based on Kyocera's pricing and BLI's tested toner yields (based on an average of two print cartridges) from the PCL XL driver using the ISO 24712 five-page toner yield test original.

² The supplies cost per page is based on Kyocera's pricing and BLI's tested toner yields for the high-yield print cartridges.

SUPPORTING TEST DATA

Test Environment: Testing was conducted in an environment monitored daily by Dickson Seven-Day Temperature/Humidity Chart Recorder, in Buyers Lab's test facility at Unit 1 Station Industrial Estate, Wokingham, Berkshire RG41 2YQ. All products lab tested by BLI are powered by dedicated circuits that are protected by ESP (Electronic Systems Protection, Inc.) surge protectors to prevent transient power and communication disturbances from impacting equipment under test.

Test Equipment: BLI's dedicated test network, consisting of Windows 2007 server, Windows XP workstations, 10BaseT/100/1000 BaseTX network switches and CAT5e/6 cabling.

Test Duration: Products are tested for two months, three weeks of which consists of a durability test during which the product is run at half of its manufacturer-rated maximum monthly volume. BLI's daily test usage is designed to replicate real-world use over an eight-hour workday, and as such includes a mix of various-size documents, simplex and duplex modes, and a mix of short, moderate and long run lengths, and on/off cycles, throughout the day.

Tested Configuration: Kyocera FS-C5150DN base unit, plus optional 500-sheet paper drawer.

Test Procedures: The test methods and procedures employed by BLI in its lab testing include BLI's proprietary procedures and industry-standard test procedures, including a BLI-developed variation of ASTM's 1318-90 Test Method for Determination of Productivity using Electrostatic Copy Machines. In addition to a number of proprietary test documents, BLI uses an industry-standard KATUN test original for evaluating black image quality and test suites from Quality Logic to evaluate applications compatibility. In addition to a visual observation, gamut size and stability are tested using a 1,400 colour test target, which is read using an EFI ES-1000 colour spectrophotometer and assessed using Chromix ColorThink Pro v3.0 software. In addition, density of black and colour output is measured using an X-Rite 508 Densitometer.

BUYERS LABORATORY North America • Europe • Asia

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CERTIFICATE OF RELIABILITY

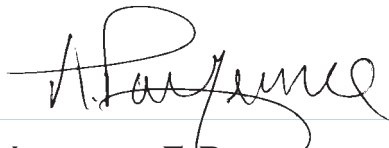
Awarded to

KYOCERA MITA EUROPE

for the performance of the

Kyocera FS-C5150DN

in BLI's in-house durability test.



ANTHONY F. POLIFRONE
MANAGING DIRECTOR



APRIL 2011

DATE

This is to certify that when subjected to an approximately 25,000-impression Buyers Lab durability test, the Kyocera FS-C5150DN proved to be a highly reliable product.

BUYERS LABORATORY INC.

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