

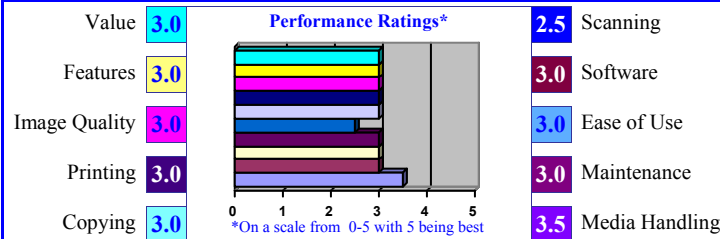
Wirth Consulting - Office ©Head2Head Comparison

Make	Hewlett-Packard	Imaging	Laser
Model	LaserJet M4345x MFP	Functions	Print/Copy/Scan/Fax
Base Price	\$3,699.00		
Monthly Duty Cycle (pages)	200,000		
BW/Color Print Speed (ppm)	45		
Max Media Width (inches)	8.50		
Classification	A4 B/W 40-49 PPM MFPs		



Background Information

To date, HP has shipped some 100 million LaserJets, and this 45-ppm A4 MFP is based on the tried-and-true LaserJet platform. Based on a 45-ppm print engine and driven by a 480 MHz CPU, it is also noteworthy for optional document finishing and a broad range of optional workflow solutions, including document management, document-storage, accounting, LAN fax, and document routing. This "x" version of the LaserJet M4345x MFP features standard automatic duplexing and Super Group 3 fax (both of which are optional with the \$2,599.99 base configuration). It features HP's industry-leading Web Jetadmin for device management on the network and remote monitoring. Options include a 3-Bin Mailbox and 500-Sheet Stapler/Stacker (30-sheet stapling).



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
30.0	\$0.01604	

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$4,462.30		
2,000 pages per month	\$5,624.27		
3,000 pages per month	\$6,586.90		
4,000 pages per month	\$7,549.53		
5,000 pages per month	\$8,512.17		

*Base Price

- | Strengths | Limitations |
|--|---|
| <ul style="list-style-type: none"> •Microsoft Windows 7 ready. HP Universal Print Driver for Microsoft Windows (only a single print driver to deploy for printing to HP network printers and MFPs). •Standard 33.6 Kbps fax and 50-sheet reversing automatic document feeder. •Broad range of optional workflow, management, document-storage, accounting, LAN fax, and document-routing solutions, as well as optional HP Jetdirect network interfaces. •Web Jetadmin for device management over the network and for remote monitoring, as well as for job tracking/accounting and supplies re-ordering. •Print on up to 110 lb. index (53 lb. bond) via bypass tray. •Color scan to e-mail (supports LDAP) and network folder. •Optional Digital Sending Software 4.3 for sending to FTP sites and fax services (including LAN fax, Internet fax (Windows 2000/XP fax services). Optional Auto Store software (send scanned documents to document management and collaboration platforms). •IPv6-ready Jetdirect Fast Ethernet (100Base-T) network interface. •Security includes IPv6, Secure IPP, secure print, hard-drive erase/encryption, network authentication, optional 801A1, SNMP, HTTPS, secure IPP. •All-in-one toner cartridge (no need to replace separate toner cartridge and drum). | <ul style="list-style-type: none"> •Relatively higher Total Cost of Ownership (TCO). |

- | Notes |
|---|
| <ul style="list-style-type: none"> •Pricing for toner cartridge is manufacturer's list price. •Rated at 725 watts printing, 830 watts copying. •Optional Hard Drives feature AES hardware-based encryption. •Optional Secure EIO Hard Drive is removable. •ADF Maintenance kit yield (\$90) is 90,000 ADF scans. |

Best Use

Offices and mid to large-size workgroups, and enterprises, that require a highly manageable (via Web Jetadmin) office MFP and have primarily A4 (letter- or legal-size paper) B/W print, copy, fax, and color scan applications, and may also require document finishing. Web Jetadmin for device management on the network is a particular strength for many enterprises.

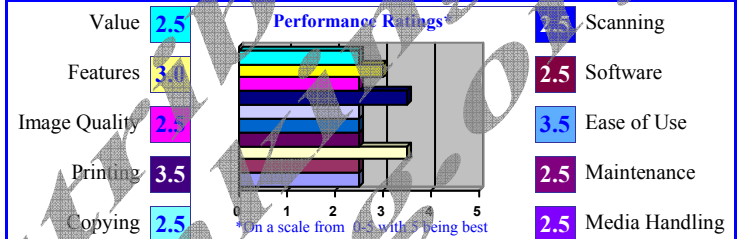
Wirth Consulting - Office ©Head2Head Comparison

Make	InfoPrint	Imaging	Laser
Model	1930 MFP	Functions	Print/Copy/Scan/Fax
Base Price	\$966.00		
Monthly Duty Cycle (pages)	80,000		
BW/Color Print Speed (ppm)	40		
Max Media Width (inches)	8.50		
Classification	A4 B/W 40-49 PPM MFPs		



Background Information

Introduced in April 2009, two versions of this 40-ppm A4 office MFP are available: the 1930 MFP (\$966), and the 1940 MFP (\$1,159), the latter of which adds walk-up fax. Both configurations feature a new 7" color touch screen and an energy-saving Eco Mode. When Eco Mode is enabled: the print engine doesn't start until a job is ready to print, the system enters Power Save mode after one minute of inactivity, the scanner lamp is only activated when a scan job is started, automatic duplexing is applied, etc. Note that optional document finishing is not available for either the 1930 or 1940 MFP.



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
27.5	\$0.01842	

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$1,970.00		
2,000 pages per month	\$3,176.00		
3,000 pages per month	\$4,281.00		
4,000 pages per month	\$5,386.00		
5,000 pages per month	\$6,491.00		

*Base Price

- | Strengths | Limitations |
|---|---|
| <ul style="list-style-type: none"> •Print from and scan to USB memory drives. •Eco Mode reduces power consumption and applies automatic duplexing. •50-sheet duplexing automatic document feeder rated at 35/20 opm. •Preview scanned images on new 7" color touch screen (optional 80-GB hard drive is required). •Capable MarkVision Professional for device management over the network and for remote monitoring. •With Job Waiting, jobs will continue to print even though one job may lack the resources to be printed (such as an installed paper size or type), preventing job back-ups. •Security includes IPSec, SNMPv3, 802.11x, network authentication, data encryption, hard-drive erasing. •PostScript 3, PCL 6 print drivers, as well as PPDS Migration Tool, PF v1.7 emulation. •Color scan to e-mail, FTP sites, Microsoft Windows network folders (requires installing embedded scan-to-folder application), LDSS, network-connected PCs, and to USB memory drives. •Fax forwarding to e-mail, FTP, and fax (requires optional Super Group 3 fax). •Rapid fuser technology for lower energy consumption and faster warm-up. | <ul style="list-style-type: none"> •Relatively lower standard and optional media capacity. •No document finishing available. •Relatively higher Cost Per Page (CPP) and Total Cost of Ownership (TCO). |

- | Notes |
|--|
| <ul style="list-style-type: none"> •Pricing for consumables is list pricing. Pricing for options was obtained from Web sources, and is not list pricing. •ADF Maintenance Kit (\$60) yields 120,000 ADF scans. |

Best Use

Offices and mid to large-size workgroups, and enterprises, that require a manageable (via MarkVision) office MFP and have primarily A4 (letter- or legal-size paper) B/W print, copy, fax, and color scan applications, and who may also require extensive support for alternative/legacy platforms, but which do not require document finishing.

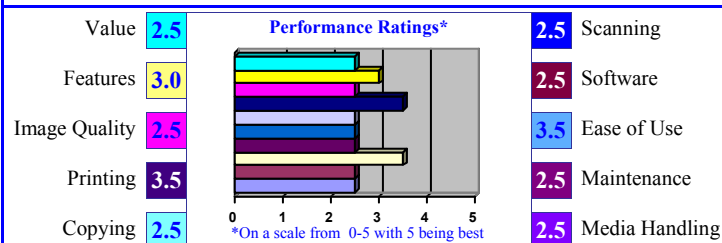
Wirth Consulting - Office ©Head2Head Comparison

Make	Lexmark	Imaging	Laser
Model	X463de	Functions	Print/Copy/Scan/Fax
Base Price	\$999.00		
Monthly Duty Cycle (pages)	80,000		
BW/Color Print Speed (ppm)	40		
Max Media Width (inches)	8.50		
Classification	A4 B/W 40-49 PPM MFPs		



Background Information

Introduced in April 2009, this A4 office MFP is available in several configurations. The X463de (\$999) includes network print, copy and color network scan. The X464de (\$1,199) adds Super Group 3 walk-up fax, while the X466de (\$1,499) adds additional memory, Lexmark's Embedded Solutions Framework (ESF) open-development platform, and 80-GB hard drive. The X466dwe (\$1,599) adds wireless network connectivity to the X466de. The systems also feature Lexmark's Rapid Fuser Technology for lower energy consumption and faster warm-up. Note that optional document finishing is not available. The following report is for the X436de.



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
27.5	\$0.01848	

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$2,007.00		
2,000 pages per month	\$3,217.00		
3,000 pages per month	\$4,326.00		
4,000 pages per month	\$5,435.00		
5,000 pages per month	\$6,544.00		

*Base Price

Strengths	Limitations
<ul style="list-style-type: none"> •Print from and scan to USB memory drives. 50-sheet duplexing automatic document feeder. •Color scan to e-mail, network folders (requires 256 MB of memory), and USB memory drives. •Optional 80-GB hard drive enables Lexmark's Embedded Solutions Framework (ESF) open-development platform for creating custom applications accessible at the touch screen •PCL 5e, PCL 6 and PostScript 3 print drivers, as well as Personal Printer Data Stream (PPDS), XHTML, PDF 1.6, Direct Image, and Microsoft XPSC XML •MyMFP enables users to save and re-access personal touch-screen settings and local address books on a memory drive. With Remote Copy, scan an original in color, and print it in color on a networked Lexmark color printer or MFP. •With Lexmark's Universal Print Driver, deploy only one print driver for printing to all networked Lexmark MFPs and printers. •Capable MarkVision Professional for device management over the network and for remote monitoring. •With Job Waiting, jobs continue to print even though one job may lack the resources to be printed (such as an installed paper size or type), preventing job back-ups. •Security: IPsec, SNMPv3, 802.11x, net. authentication, encryption, hard-drive erasing. 	<ul style="list-style-type: none"> •Relatively lower standard and optional media capacity. •No document finishing available. •Relatively higher Cost Per Page (CPP)..
Notes	Notes
<ul style="list-style-type: none"> •Pricing for toner and drum is manufacturer's list price. All other consumables' pricing is obtained from Web sources and is not list pricing. •ADF Maintenance Kit (120,000 ADF scans - \$60). 	<ul style="list-style-type: none"> •Pricing for toner and drum is manufacturer's list price. All other consumables' pricing is obtained from Web sources and is not list pricing. •ADF Maintenance Kit (120,000 ADF scans - \$60).

Best Use

Offices and mid to large-size workgroups, and enterprises, that require a manageable (via MarkVision) office MFP and have primarily A4 (letter- or legal-size paper) B/W print, copy, fax, and color scan applications, and who may also require Lexmark's extensive support for alternative/legacy platforms, but who do not require document finishing.

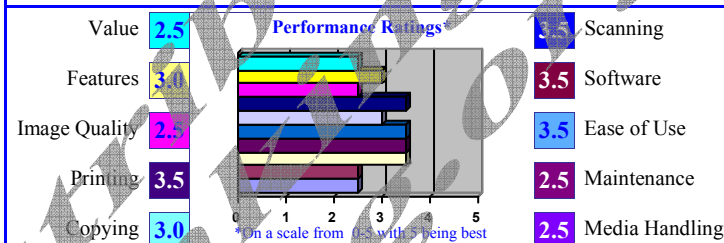
Wirth Consulting - Office ©Head2Head Comparison

Make	Lexmark	Imaging	Laser
Model	X466de	Functions	Print/Copy/Scan/Fax
Base Price	\$1,499.00		
Monthly Duty Cycle (pages)	80,000		
BW/Color Print Speed (ppm)	40		
Max Media Width (inches)	8.50		
Classification	A4 B/W 40-49 PPM MFPs		



Background Information

Introduced in April 2009, the X466de is based on the X463de, but adds additional standard memory (256 MB in total), standard 80-GB hard drive, Super Group 3 walk-up fax, and Lexmark's Embedded Solutions Framework (ESF) open-development platform. ESF is used for creating custom applications that are accessed at the touch screen. For instance, one such application might involve a single touch-screen key that, when pressed, automatically applies particular scan settings to a document and then automatically routes the scanned document to a pre-defined network folder. The X66dwe (\$1,599) adds greater standard paper capacity and wireless network connectivity.



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
30.0	\$0.01827	

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$2,507.00		
2,000 pages per month	\$3,691.00		
3,000 pages per month	\$4,787.00		
4,000 pages per month	\$5,883.00		
5,000 pages per month	\$6,979.00		



*Base Price

Strengths	Limitations
<ul style="list-style-type: none"> •Print from and scan to USB memory drives. Eco Mode reduces power consumption and applies automatic duplexing. 50-sheet duplexing automatic document feeder. •Color scan to e-mail, network folders (requires 256 MB of memory), and USB memory drives. •Lexmark's Embedded Solutions Framework (ESF) open-development platform for creating custom applications accessible at the touch screen. •PCL 5e, PCL 6 and PostScript 3 print drivers, as well as Personal Printer Data Stream (PPDS), XHTML, PDF 1.6, Direct Image, and Microsoft XPSC XML. •MyMFP enables users to save and re-access personal touch-screen settings and local address books on a memory drive. With Remote Copy, users scan an original in color, and it's automatically printed in color on a networked Lexmark color printer or MFP. •With Lexmark's Universal Print Driver, deploy one print driver for printing to all networked Lexmark MFPs and printers. •Capable MarkVision Professional for device management over the network and for remote monitoring. •With Job Waiting, jobs will continue to print even though one job may lack the resources to be printed (such as an installed paper size or type), preventing job back-ups. •Security: IPsec, SNMPv3, 802.11x, net. authentication, encryption, hard-drive erasing. 	<ul style="list-style-type: none"> •Relatively lower standard and optional media capacity. •No document finishing available. •Relatively higher Cost Per Page (CPP) and Total Cost of Ownership (TCO).
Notes	Notes
<ul style="list-style-type: none"> •Pricing for toner and drum is manufacturer's list price. All other consumables' pricing is obtained from Web sources and is not list pricing. •ADF Maintenance Kit (120,000 ADF scans - \$60). 	<ul style="list-style-type: none"> •Pricing for toner and drum is manufacturer's list price. All other consumables' pricing is obtained from Web sources and is not list pricing. •ADF Maintenance Kit (120,000 ADF scans - \$60).

Best Use

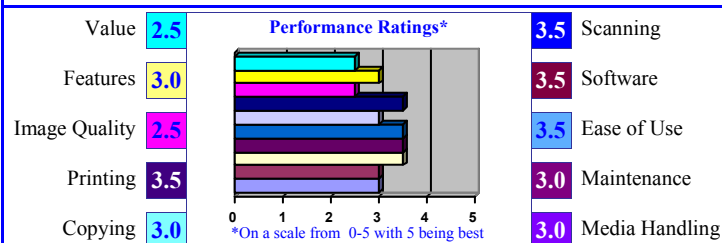
Offices and mid to large-size workgroups, and enterprises, that require a manageable (via MarkVision) office MFP and have primarily A4 (letter- or legal-size paper) B/W print, copy, fax and color scan applications, and who may also require extensive support for alternative/legacy platforms, but don't require document finishing. The system's ESF enables creating custom workflow, for instance, a scan-and-distribute application.

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Make	Lexmark	Imaging	Laser
Model	X651de	Functions	Print/Copy/Scan/Fax
Base Price	\$1,954.00	 	
Monthly Duty Cycle (pages)	200,000		
BW/Color Print Speed (ppm)	45		
Max Media Width (inches)	8.50		
Classification	A4 B/W 40-49 PPM MFPs		

Background Information

Lexmark introduced the X651de in October 2008 as part of its X650 family, which feature a 7" color touch screen, and were the first Lexmark MFPs to feature MyMFP. With MyMFP, users can save personal touch-screen settings and local address books on a memory drive, then after inserting their USB memory drive, re-access their settings and address books for a custom touch-screen display. The X651de also incorporates Lexmark's Embedded Solutions Framework (ESF) for creating custom applications accessible that can be accessed and activated at the touch screen.



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
31.0	\$0.01825	

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$3,048.80		
2,000 pages per month	\$4,143.60		
3,000 pages per month	\$5,238.40		
4,000 pages per month	\$6,333.20		
5,000 pages per month	\$7,428.00		



*Base Price

Strengths	Limitations
<ul style="list-style-type: none"> •Print from and scan to USB memory drives. Microsoft Windows 7 ready. •Color scan to e-mail, FTP sites, computer desktop; preview scanned images on touch screen. •MyMFP enables users to save and re-access personal touch-screen settings and local address books on a memory drive. With Remote Copy, users scan an original in color and it's automatically printed in color on a networked Lexmark color printer or MFP. •With Lexmark's Universal Print Driver, deploy one print driver for printing to all networked Lexmark MFPs and printers. •Lexmark's Embedded Solutions Framework (ESF) open-development platform for creating custom applications accessible at the touch screen. •Capable MarkVision Professional for device management over the network and for remote monitoring. •Security: IPsec, SNMPv3, 802.11x, net. authentication, encryption, hard-drive erasing. •All-in-one toner cartridge--no need to replace separate toner cartridge and drum. 	<ul style="list-style-type: none"> •Pricing for toner cartridge is manufacturer's list price. Other consumables' pricing is obtained from Web sources and is not list pricing. •ADF Maintenance Kit (\$199.95) (300,000 ADF scans).

Best Use

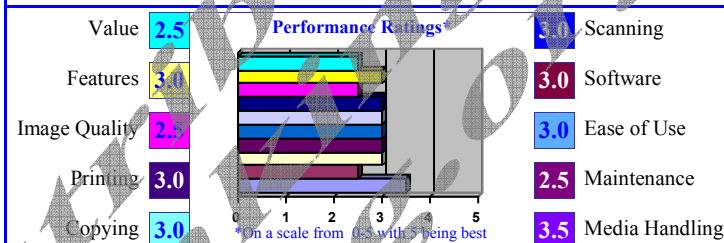
Offices and mid to large-size workgroups, and enterprises, that require a manageable (via MarkVision) office MFP and have primarily A4 (letter- and legal-size paper) B/W print, copy, fax and color scan applications, and who may also require extensive support for alternative/legacy platforms, but don't require document finishing. The system's ESF enables creating custom workflow, for instance, a scan-and-distribute application.

Wirth Consulting - Office ©Head2Head Comparison

Make	Samsung	Imaging	Laser
Model	MultiXpress SCX-6545N	Functions	Print/Copy/Scan/Fax
Base Price	\$4,999.00	 	
Monthly Duty Cycle (pages)	200,000		
BW/Color Print Speed (ppm)	45		
Max Media Width (inches)	8.50		
Classification	A4 B/W 40-49 PPM MFPs		

Background Information

Samsung introduced the SCX-6545N in July 2009, marketing it as an alternative to A3 MFPs with all of the "functionality and benefits of a high-end A3 copier at an A4 price." For instance, it features an 80-GB hard drive (for advanced functions such as secure print and file storage), as well as optional document finishing, and expandable paper capacity (up to 3,240 sheets). The SCX-6545N is situated at the high-end of Samsung's A4 MFP family—at a rated print speed of up to 45 ppm, only the 55-ppm SCX-655N is faster. It also features Samsung's XOA Express Application, an open-development platform that enables creation of custom applications and workflows that may be accessed from the touch screen.



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
29.0	\$0.00864	

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$5,490.75		
2,000 pages per month	\$6,035.47		
3,000 pages per month	\$6,553.71		
4,000 pages per month	\$7,071.94		
5,000 pages per month	\$7,590.18		

*Base Price

Strengths	Limitations
<ul style="list-style-type: none"> •Print on up to 120 lb. index (58 lb. bond) via bypass tray. •With Samsung's Universal Print Driver, deploy only one print driver for printing to both Samsung and third-party network printers and MFPs (note that many universal print drivers only enable users to print to the vendors' devices). •Color scan to e-mail (supports LDAP), SMB, and NetScan clients. TWAIN and WIA scan drivers are also included. •Print from and scan to USB memory drives. •SyncThru Web Admin Services for device management over the network and for remote monitoring. •SmarThru Office Document Management Software for creating, storing and editing scanned images and for OCR. •Supports Samsung's XOA Express Application, an open-development platform that enables creation of custom applications and workflows that may be accessed from the touch screen. •SmarThru Office Document Management Software for creating, storing and editing scanned images. •Optional SmarThru Workflow for document capture and routing. 	<ul style="list-style-type: none"> •Relatively higher Total Cost of Ownership (TCO).

Notes

•Pricing for consumables and options was obtained from Web sources, and is not list pricing.
 •125,000-page Maintenance Kit is \$129.15; 250,000-page Maintenance Kit is \$205.15.

Best Use

Offices and mid to large-size workgroups that require an office MFP and have primarily A4 (letter- or legal-size paper) B/W print, copy, fax, and color scan applications, and may also require document finishing. The system's open-platform architecture allows for creating custom workflow applications, for instance, a custom automatic scan-and-distribute application that's accessed at the touch screen.

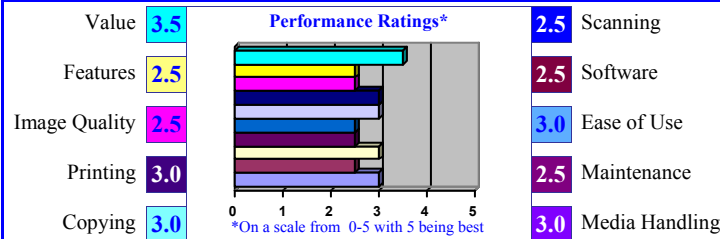
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Make Samsung	Imaging Laser
Model SCX-6345N	Functions Print/Copy/Scan/Fax
Base Price	\$2,995.00
Monthly Duty Cycle (pages)	200,000
BW/Color Print Speed (ppm)	45
Max Media Width (inches)	8.50
Classification A4 B/W 40-49 PPM MFPs	



Background Information

As part of Samsung's A4 office-MFP family, the company markets the SCX-6345N as "an economical and alternative" MFP that can "match the output of large contract-based A3 copiers." As such, it incorporates network print, copy, color network scan, and optional Super Group 3 fax. Office-level features include optional 40-GB hard drive (for collation, printing, proof printing, file storage), and optional document finishing, as well as security provisions such as network authentication (SMB, LDAP, Kerberos) and SSL for scan to e-mail.



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
28.0	\$0.00614	

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$3,336.75		
2,000 pages per month	\$3,731.47		
3,000 pages per month	\$4,099.71		
4,000 pages per month	\$4,467.94		
5,000 pages per month	\$4,836.18		

*Base Price

Strengths

- Low cost per page of 0.89 cents.
- With Samsung's Universal Print Driver, deploy only one print driver for printing to both Samsung and third-party network printers and MFPs (note that many vendors' universal print drivers only enable users to print to the vendors' devices).
- Color network scan to e-mail (supports LDAP, FTP sites, client, network and SMB. TWAIN and WIA scan drivers are also included).
- 50-sheet duplexing automatic document feeder.
- SmarThru Office Document Management Software for creating, storing and editing scanned images, and for OCR.
- SyncThru Web Admin Services for device management over the network and for remote monitoring.
- Super Group 3 fax option includes fax-to-e-mail, secure fax and color fax.
- Security includes SSL, network authentication (SMB, LDAP, Kerberos).

OPTIONS: 256 MB RAM (\$149.99) Super Group 3 fax (\$298) Stand (tall--\$198) Stand (short--\$159) 520-sheet paper drawer (\$249); Sorter/Stapler (\$494).

Limitations

Notes

- Pricing for consumables and options was obtained from Web sources, and is not list pricing.
- Two Maintenance Kit and are required, one for 100,000 pages and a second for 200,000 pages.

Best Use

Offices and mid to large-size workgroups that require an office MFP and have primarily A4 (letter- or legal-size paper) B/W print, copy, fax, and color scan applications, and may also require document finishing.

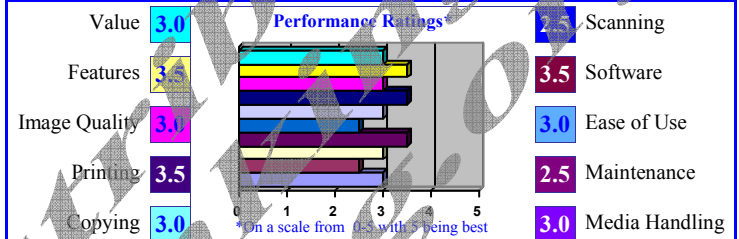
Wirth Consulting - Office ©Head2Head Comparison

Make Xerox	Imaging Laser
Model WorkCentre 4250/S	Functions Print/Copy/Scan/Fax
Base Price	\$2,499.00
Monthly Duty Cycle (pages)	200,000
BW/Color Print Speed (ppm)	45
Max Media Width (inches)	8.50
Classification A4 B/W 40-49 PPM MFPs	



Background Information

Xerox markets the WorkCentre 4250 in several configurations. The "X" configuration, priced at \$3,099, features standard network print, copy, scan, Super Group 3 and LAN fax, while with this "S" version (\$2,499), fax is optional. It is also available as a copier-only system as the WorkCentre 4250/C, which is priced at \$2,199. The top-of-the-line WorkCentre 4250/XF includes Super Group 3 fax and LAN fax, as well as a greater standard paper capacity (2,100 sheets).



Total Ratings Score	Black Consumables Cost Per Page	Color Consumables Cost Per Page
30.5	\$0.00745	

Total Cost of Ownership*	Black	Color	Mixed
1,000 pages per month	\$2,847.00		
2,000 pages per month	\$3,195.00		
3,000 pages per month	\$3,543.00		
4,000 pages per month	\$4,286.99		
5,000 pages per month	\$4,733.99		

*Base Price

Strengths

- Adobe PostScript 3 print driver (not a PostScript emulation).
- Color scan to e-mail (supports LDAP), network, and USB memory drives at 55 (B/W)/25 (color) opm. Network scan to TWAIN/WIA applications also included.
- Print from and scan to USB memory drives.
- 100-sheet duplexing automatic document feeder.
- Print on up to 110 lb. index stock (53 lb. bond).
- Optional Scan to PC Desktop software provides OCR, image viewing and file management, and an Image Retriever utility (automated retrieval of scanned images directly from a WorkCentre system).
- Capable CentreWare for device management over the network and for remote monitoring, and standard Xerox accounting software.
- Security includes hard-drive overwrite, network authentication, secure fax, 802.1x, SNMPv3, IPSec, LDAP, IPv6.

OPTIONS: 500-sheet paper drawer (\$449); 2,000-sheet High Capacity Feeder (\$849); Internal Finisher (\$599); Stand (\$199); Stand + 3 paper drawers (\$179); 256 MB of memory (\$419); Network Accounting Enablement (\$299); Network Fax Server (\$299); Magstripe Card Reader (\$795); Mifare/Hid Iclass Card (\$895); Hid 125Hz Card Reader (\$895).

Limitations

Notes

- Pricing for toner, drum, and maintenance kit is manufacturer's list price.

Best Use

Offices and mid to large-size workgroups, and enterprises, that require a manageable (via CentreWare) office MFP and have primarily A4 (letter- or legal-size paper) B/W print, copy, fax, and color scan applications, and may also require document finishing.