

**XEROX®**

Technology | Document Management | Consulting Services

# 6050A Wide Format solution



## At a Glance

Xerox 6050A Wide Format Solution

Raising Image Quality for Speed-Conscious CAD Users

Stacking Up Advantages

Navigating the Competitive Landscape

Upgrade Strategies

Specifications

Extended Product Description



**FreeFlow™**

Accxes Print Server

8/7/07

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The Xerox 6050A Wide Format Solution takes productivity to a new high for hard-working CAD departments and other businesses whose profits depend on having technical documents available at need. From immediate check prints to high volume collated sets, customers can count on outstanding 600 dpi images printed at speeds up to 9 Ds per minute.

The 6050A monochrome printer combines the reliable 6050 print engine, proven in the field, with the Xerox FreeFlow Accxes Print Server as its native built-in controller. FreeFlow Accxes is the industry gold standard for wide format document throughput, user productivity and investment protection.

### Performance that matters

The 6050A excels in every dimension that matters, not just one or two. Whether it is easy-to-read output that reduces errors, end-to-end speed for every application or features like hot folders that increase productivity, the 6050A delivers everything customers tell us they want.

- **Premier Image Quality** — print: 600 x 600 dpi, copy: 400 x 600 dpi, scan: 600 x 600 dpi; Updated algorithms tightly couple the Wide Format Scan System and 6050A printer.
- **High Speed** — field upgrade from 7 Ds to 9 Ds; native FreeFlow Accxes firmware is the top RIP in class: 3 to 30X vs. competition. As noted in the sidebar and detailed on page 5, Release 12.5 includes significant enhancements.
- **High Productivity** — automatic features, proven client tools, field upgradeable options, regular enhancements, often at no added cost, unlike others in the market.
- **Outstanding Reliability** — solid field record, superb Xerox support.
- **Impressive TCO** — operating costs equal to or lower than any in class.

### Configurations that adapt

The Xerox 6050A can be configured as a printer only or combined with the Wide Format Scan System for concurrent copy, print and scan capability. Every component is field upgradeable or redeployable except media drawers, which are factory installs. Customers can choose a single two-roll drawer for departmental convenience or two two-roll drawers for full on-line media flexibility or high volume unattended operation.

### Xerox 6050A vs. 6030/50

	6050A	6030/50
<b>FreeFlow Accxes</b>	Native	Option: connects via native BPS server
<b>Speed</b>	7 Ds, field upgradeable to 9 Ds	6030: 6 Ds 6050: 9 Ds
<b>Media</b>	2 or 4 rolls, factory installs	6030: 2 rolls 6050: 4 rolls
<b>Scanner</b>	Wide Format Scan System, field upgr.	60xx Scanner factory install OR Wide Format Scan System field upgrade.

### Xerox 6050A, 6050 Similarities

- Print width up to 36 inches
- Lowest TCO in its class
- World class customer support
- Total Satisfaction Guarantee

### FreeFlow Accxes 12.5 Highlights

- Fully supports 6050A as well as 6204, 510, 60xx and 721 solutions
- Removable Hard Drive option for ultra high security environments
- New DGN support
- Enhanced scanning including 600 dpi, color PDF and more
- InstantAccxes (hot folders)



**Figure 1.** Configure the Xerox 6050A to support the document performance, business productivity and investment protection your customers require

**Raising Image Quality for Speed-Conscious CAD Users**

**Xerox 6050A — No bottlenecks**

**CAD productivity: must haves**

- Well-designed time-savers such as automatic rotation, automatic media mismatch correction and more
- Print from applications via Windows, PostScript, or HDI drivers
- Convenient client software for scanning images, collating sets, and managing printer operations
- More data formats processed faster than any other printer in class.
- Fast check prints (A-size: 23 seconds)

**Business productivity: cost edge**

- Low operating costs
- Unattended operations
- Field upgrades at time of need
- Full job accounting

**Security productivity: added value**

- Optional removable hard disk drive
- Image overwrite for confidentiality
- Operating system that impedes hackers and repels viruses or Trojan Horses.

When choosing CAD printers, buyers focus first on easy integration with work processes. This is not surprising since engineering document processing bottlenecks have implications far beyond the obvious. Whatever the industry, these bottlenecks cast costly ripples measured in terms of lost sales, late product releases, inefficient installations, unhappy customers, poor emergency response and/or costly engineering changes.

**Xerox 6050A: Fits Your Customer's Process**

Given competitive pressures, it is critical to continually shorten development cycles — for example by printing checkprints or a controlled number of collated review sets on demand. As projects are completed, the pressure shifts to efficient production cycles. Depending on the industry, this can mean disseminating large quantities of collated sets fast — engineering change notices, bid sets, and/or ongoing work orders, plus others noted below. The 6050A excels at meeting the ad hoc needs of busy design departments and is just as strong in high volume collated set production.

Smart companies also know that operating costs and upgrade flexibility differ substantially among CAD printers. As business needs fluctuate, these factors can be significant, especially if the firm has multiple printers.

With the Xerox 6050A you have a great overall story to tell, one that appeals equally to the serious economic buyer, the operating manager in charge of peak loads, and the professional under pressure to produce. When compared with other choices, productivity features are without peer, quality is at the very highest levels, operating costs are at the very lowest levels, and Xerox service is a major plus. You also have specific value to offer different environments.

- **Engineering or design groups/departments** — Focus on fast, accurate image processing, automatic image placement, and powerful client software.
- **Production departments** — Emphasize outstanding image quality, unattended operations, fast, automatic collated sets, extensive Job Accounting, security and remote administration.

AEC	Manufacturing	Utilities & Telecommunications	Government
			
Plan sets Construction work orders Bid sets	Bills of material Manufacturing work orders Engineering change notices	Installation orders Emergency maint. drawings As-builts	Plats Maintenance work orders Facility layouts

**Figure 2.** Typical, industry-specific collated sets that drive profits and costs

**Xerox 6050A: Solution characteristics****6050A configurations**

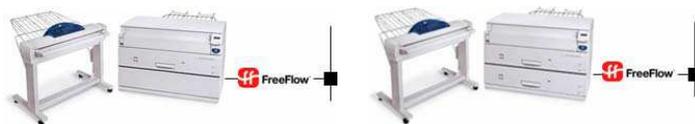
The Xerox 6050A comes in four primary configurations, as shown below. While the optional Wide Format Scan System can be added later, the roll configuration is factory install only.

**Xerox 6050A Printer (2 roll)**

Upgrade costly inkjet solutions

**Xerox 6050A Printer (4 roll)**

Upgrade aging LED solutions

**Xerox 6050A Copier/Printer (2 or 4 roll; optional Scan-to-Net)**

Upgrade aging multifunction solutions

**6050A Printer**

- 7 Ds per minute standard, 9 Ds with Feature Key
- Exceptional image quality:
  - 600 x 600 dpi print resolution using ink-efficient mono-component toner
  - 400 dpi native scan resolution with interpolation up to 600 x 600 dpi
- Smooth, uniform grayscales and solids
- Engine speed of 4.1 ips, FPOT 19 sec., FCOT 32 sec.
- Job Recall and Sample Print Features
- Print Job Interrupt with automatic restart
- Output size up to 36 inches by 49 feet<sup>1</sup>, rear exit
- 2 or 4 media rolls plus optional multi-sheet feeder
- Catch tray included (100 prints)
- GFI Folder Support

**Wide Format Scan System**

- Enhanced 600 x 600 dpi scanning (with FreeFlow Accxes 12.5)
- Scan speeds of 2 ips, field upgradeable to 4 ips (copying) or up to 8 ips (scanning)
- Fast batch scanning for same-size images; production scanning for standard sizes
- Auto width detection and centering, no dedicated PC for scanning
- Automatically adjusts speed based on image size/type, up to 2X faster for A/B sizes
- Job Recall and Sample Copy features
- Flexible placement: up to 25 feet from printer, any angle
- Thick document support up to 0.5 inches
- Max. documents width: 38 inches (36 inches image area); max length: 49 feet (copies)<sup>1</sup> 100 feet (scans)
- Field upgradeable to full color scanning (adds ability to save to JPEG files and Color PDF)

**FreeFlow Accxes Controller (see page 5 for new 12.5 features)**

- High security: built-in firewall, limited Ethernet ports, Image Overwrite and Removable Hard Drive options
- Automatic file recognition for HP-GL/2, TIFF, CALS and more; options for Adobe PostScript 3 / EPS / PDF V1.6, as well as Extended CAD (DWF, DGN) and Extended Raster (JPEG 2000, PNG, BMP) formats
- Real-time OS for top concurrency
- Automatic media-mismatch options
- Optimum image placement and rotation, automatically
- Field upgrades: Optional formats, Scan-to-Net/Print, Image Overwrite, Account Data Tracking, Removable Hard Drive

**Redeploying components**

Customers cannot upgrade an existing 6050 printer to a 6050A, and the 60XX Scanner is not supported. However, customers can redeploy the Wide Format Scan System and/or FreeFlow Accxes controller (YKE, YKEN or FRX).

<sup>1</sup> Copy lengths of up to 49 ft. are supported with no image quality defects. Copies of up to 80 ft. will work.

**Comparisons**

	6050A	60xx	510
<b>Rated speed</b>	7 Ds upgr. to 9 Ds	6 Ds OR 9 Ds, factory install	5 Ds, 7 Ds, or 10 Ds field upgr.
<b>Engine speed</b>	4.1 ips	4.1 ips	4.5 ips
<b>DPI</b>	600 x 600	600 x 1200	400 x 400
<b>Controller</b>	FreeFlow Accxes	BPS plus FreeFlow Accxes (option)	FreeFlow Accxes
<b>Scanner</b>	Wide Format Scan System	60xx Scanner factory install OR Wide Format Scan System field upgr.	Wide Format Scan System

**Xerox 6050A**

The Xerox 6050A is the optimum choice for mid-volume CAD customers who need the very highest productivity levels but also full 600 dpi image quality. Companies that will reap the greatest value from the 6050A tend to be those who regularly collate engineering document sets in order to run their core business — discrete manufacturing, the full range of AEC firms, utilities, transportation and telecommunications. Here is how 6050A advantages stack up:

**Image Quality** — The 6050A produces outstanding prints, copies and scans, using updated algorithms that tightly couple the Wide Format Scan System and 6050A printer to optimize appearance. In addition the 6050A supports 600 x 600 dpi scanning, a new scan feature.

**Full Native Speed** — FreeFlow Accxes connects directly to the 6050A, similar to the 6204 with FreeFlow Accxes. Compared to the 6050, this results in throughput improvements that are particularly great for collated sets. You can also increase speed at any time with the new ability to field-upgrade from 7 to 9 Ds.

**High Productivity** — The 6050A has all the productivity features of FreeFlow Accxes, including new ones with release 12.5, the first release to support this new solution. For over ten years, Xerox Wide Format has regularly enhanced FreeFlow Access for all customers under maintenance, often at no increased cost. Your customers can count on Auto Centering and Size Detection, auto media roll selection, media mismatch features and the flexibility of rapid, customer installable upgrades via Feature Key-enabled options.

**Design for reliability** — Reliability is the essential foundation for productivity; the 6030/6050 print engine that underpins the 6050A is a proven performer. With its tightly integrated connection to the equally proven FreeFlow Accxes controller, the 6050A sets a new benchmark for mid-volume Wide Format solutions.

**Total solution** — The 6050A offers full multifunctionality and easy upgrades.

**Impressive TCO** — The 6050A's operating costs are at the very lowest levels in its class, due to unique and highly efficient mono-component toner plus aggressive equipment and maintenance pricing. The 6050A is also highly scalable. Customers can manage their costs better and protect their investments.

**Outstanding throughput** — Native FreeFlow Accxes; fully compatible with other FreeFlow Accxes solutions.

**Application versatility** — True Adobe PostScript and Microsoft-certified drivers, as well as AutoCAD HDI; the greatest number of format choices, including DGN; optional scanner that can support full color and field-upgrades via movable feature keys.



### FreeFlow Accxes

The heart of every Xerox Wide Format mono solution, FreeFlow Accxes is a major reason these solutions win prestigious awards, most recently the Bertl Excellence award for the 6204. The 6050A continues this tradition of a great printer combined with a great controller.

#### ■ New value with v12.5:

- *Support for 6050A:* First and foremost, FreeFlow Accxes 12.5 fully supports the new 6050A, as well as every other current Xerox Wide Format monochrome solution.
- *DGN Support:* Xerox regularly adds optional formats to the impressive array that FreeFlow Accxes automatically recognizes. The new support for DGN<sup>1</sup>, native format of MicroStation, .is of particular interest to the construction industry.
- *Scanning improvements:* You can now scan to file with a resolution of up to 600 x 600 dpi and maximum speeds of up to eight ips. Note that higher resolution is an excellent interpolation, since the Wide Format Scan System has a native dpi of 400 dpi.
- *Image quality enhancements:* A new scaling algorithm produces significantly better copies and prints – particularly noticeable in half-size sets that include halftones. It is also effective when creating scan preview images.
- *PDF improvements:* In addition to improving overall scan to PDF throughput, Release 12.5 enables color PDF scans and upgrades the base PDF format to PDF/A-1b. This ISO standard specification simplifies long term document storage, search, and retrieval.
- *InstantAccxes:* Up to ten “hot folders”, can be created to boost productivity, especially among collaborating groups. Once initialized, you can drag and drop one or more documents to any of them for instant printing as a job with preset print characteristics.<sup>2</sup>

■ **Greatest throughput in market:** Comprehensive concurrency means that FreeFlow Accxes drives devices at rated speeds with full overlap of image processing, printing scanning, copying, access to Web Pages and retrieval of scans.

#### ■ Greatest operational productivity in market

- Automatically rotates images and handles any media mismatch conditions.
- Fastest, most accurate RIP on market, typically from 3 to 30X faster than other RIPs.
- Flexible client or Web-based software for creating sets with mixed sizes and formats, scanning files, remotely administering printers and updating controller firmware.

#### ■ Built-in security at many levels

- Linux-based operating system is inherently secure from hackers and viruses.
- FreeFlow Accxes has no external user interface.
- Extra options: Image Overwrite means that image content remains in controller memory only as long as needed to print it; Removable Hard Drive enhances physical security.

■ **Feature Key based Updates:** Downloadable Feature Keys enable option, usually with no service call required. Once purchased, users can move them from one controller to another.

### Performance Users Value

- Ten years of continuous improvement
  - Four major platforms moving from 1x to 18X performance
  - Thirteen major firmware releases, each adding new capabilities while maintaining earlier ones
- User downloadable releases, that keep printers operating at latest levels, usually at no added cost
- PJJ interface that allows customer to add special processing routines, easily and securely
- Entire operating system developed expressly to support the needs of wide format technical document applications
- Tight physical and software integration with specific printers as below

### FreeFlow Accxes Controller (back of 6060A printer)



<sup>1</sup> Initial release is limited to self-contained DGN files that do not call external references.

<sup>2</sup> See the Extended Product Description, page 22 for more detail and sample screen shots.

**Performance is Relative**

All Wide Format Solutions with FreeFlow Access offer the same ease of use, automatic productivity features and powerful Client Tools. Similarly, each solution embodies Xerox Wide Format's proven commitment to scalability, often via customer downloadable Feature Keys. This concept, which Xerox pioneered and remains as the industry leader, allows customers to upgrade systems on demand and/or redeploy components such as the Wide Format Scan System or FreeFlow Accxes controller.

\* Complex images have many different elements and/or large raster areas.

**Performance Considerations**

For many customers, choosing a Wide Format Solution is primarily selecting the one(s) with the right rated speed, and then weighing total operating costs. However there are other considerations that may make a real performance difference depending on the customer's workload and processes. For example, the 6050A and the 6050 with FreeFlow Accxes option have the same controller and rated speed, but because of the way the controllers are integrated, the 6050A is often, although not always, significantly faster. Check Table 1 below to see how this might relate to your customer's documents. Also check Table 2 to remind yourself of other factors that make a performance difference.

**Table 1. Performance considerations; FreeFlow Accxes**

Predominant Workload	6050A (vs. 6050 with FreeFlow Accxes)
<b>Single page</b>	
Simple image, one copy	Slightly faster
Simple image, multiple copies	Speed difference is negligible
Complex image*, one copy	Significantly faster, as much as 5X
Complex image, multiple copies	Speed advantage lessens as number of copies increases
<b>Collated sets</b>	
Single set	Significantly faster, particularly if images are also complex
Multiple copies of same set	Significantly faster, typically between 2X and 3X
Special features (e.g., reverse collation)	Increases speed advantage of above items noticeably

**Table 2. Performance considerations: other factors**

Factor	Wide Format Solutions					Comments
	6204	6030	6050	510	6050A	
<b>Engine Speed</b> ips Ds/min.	2.1 4 or 5	4.1 6	4.1 9	4.5 5, 7 or 10	4.1 7 or 9	Engine speed differences can matter if most jobs are one or two prints. Otherwise, the main driver will be the rated number of prints per minute.
<b># Rolls</b>	1 or 2	2	4	1, 2*, or 3*	2 or 4*	With two rolls, customer can automatically produce any four sizes without changing media (or have two sizes in two different media, such as draft and presentation). With three rolls, customers can produce all sizes in any given series or have multiple media types on line. With four rolls customers can produce multiple sizes and have different media on line.
<b>Scan Speed (if equipped)</b>	2 ips — 8 ips					If copying and scanning have equal weight (most likely case), similar scan and print speeds make sense. If scanning is more critical, customers can opt for higher scan speed. If both volumes are very low, low speeds make sense. FreeFlow Accxes enables customers to move Scan Speed Feature Keys from one solution to another.
<b>Image Quality</b>	600 dpi	600 x 1200 dpi	400 dpi	600 dpi		

\*Factory install; all other choices field upgradeable

Xerox Wide Format is very well positioned in the mid-volume wide format LED monochrome document solutions market. Customers increasingly favor suppliers that offer not only great speed and image quality, but also exceptional attention to user productivity, low operating costs and superior investment protection. Across the board, Xerox ranks at or near the top in every measure of customer-perceived value. Moreover, no competitor can compare with Xerox's worldwide customer service.

### **Major suppliers**

The breadth and depth of Xerox's expertise in engineering/technical applications and workflows, which spans nearly sixty years, is a prime competitive differentiator.

Within the wide format mid-volume LED monochrome market, Xerox, Océ and to a lesser extent, KIP, are the suppliers with the broadest strategic interest. All three offer a complete portfolio from low volume workgroup solutions through high volume production ones.

Two other suppliers, Ricoh and Kyocera-Mita have less market presence and a smaller range of wide format solutions. (Each has a stronger tradition in the narrow format arena.) While both have mid-volume offerings, they focus more strongly in the lower volume arena, due in large part to the nature of their dealer channels.

### **Face-off competitors**

The main face-off for the 6050A is the Océ TDS 700. Launched in late 2006, the TDS 700 is a mid-range offering (9 Ds) with many options that may appeal to companies looking to transition from aging digital and analog equipment. A few companies may choose the TDS 600, a 7 D solution, which has been on the market for some time.

You will also regularly encounter the KIP 5000. Launched in the summer of 2006, this modular mid-range solution (8 Ds) has a single footprint, a stylish user interface and a very attractive price.

The Ricoh 480W, launched October 2005, is also a lower-price solution that may appeal to companies that have Ricoh narrow format solutions. Unlike Xerox, Océ and KIP, Ricoh does not offer a full range of wide format solutions; at 8 Ds, the Ricoh 480W is their fastest printer.

Finally, you may occasionally encounter Kyocera Mita solutions, for example the 4850w, a 8 6 D solution.

Highlights of these solutions and comments on the respective vendor strategies follow, including typical claims and possible Xerox responses. There is also a comparison table of competitive offerings on pages 20–21.

In 2005, Xerox was #1 in shipments and revenue in the mid-range monochrome space in North America and Europe.

Source: InfoTrends

### **Competitive Links**

- [www.oceusa.com](http://www.oceusa.com)
- [www.kipamerica.com](http://www.kipamerica.com)
- [www.ricoh-usa.com](http://www.ricoh-usa.com)
- [usa.kyoceramita.com](http://usa.kyoceramita.com)



- Controller: Embedded Océ Power Logic with Windows XP
- Max. width: **36 in.**
- Long plot: **49 ft.**
- Printer resolution: 600 x 1200 dpi
- Printer speed: 8.5 **Ds**/min.
- Media rolls: 2 std., 4 or 6 opt.
- Scanner resolution: 600 dpi
- Scanner speed: 3.3 ips (B/W line art), 2.8 ips (gray & color)
- Max. original thickness: **0.12 in.**

**Océ TDS 700**

Part of a full line of wide format monochrome and color solutions, the Océ TDS700 features a new print head and several speed upgrades compared to the TDS 600. While the platforms are similar, service reps require additional training to be certified on the TDS 700.

Océ claims:	Xerox responds:
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<p>The TDS 700 is unmatched for unattended operations. With four media rolls and three cut sheet cassettes, businesses can print up to <b>10,000 sq. ft.</b> with no need to replenish media.</p>	<p>There is more to unattended operation than on-line media. For example, FreeFlow Accxes automatically resolves media mismatches without stopping. The 6050A also has four on-line rolls, more than enough for most needs. Rolls can be changed without stopping the printer. For cut sheets, the 6050A has an optional multiple sheet insert, again usually sufficient, considering that cut sheet media costs more.</p>
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<p>Océ offers a safe investment, with cost effective upgrades to make sure they keep delivering the performance and value to build your business.</p>	<p>Xerox consistently maximizes customer investment in large ways and small. Its total product line is second to none. Details matter too. Xerox regularly provides updates that improve the performance of installed solutions, often without cost. For example, most installed Wide Format Scan Systems can now have 600 dpi resolution at no cost. With Océ, you need a new printer, scanner or controller to get the latest enhancements.</p>
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<p>Océ is committed to productivity and part of that means having a printer that is ready to use. With patented Radiant Fusing technology, the printer is ready for use instantly so you get prints faster.</p>	<p>The Xerox 6050A's warm-up requirement is less than 3 minutes, even at a cold start. Considering how relatively seldom this occurs, it's far more important to have a printer that processes images fast, without slowing other printer operations. FreeFlow Accxes RIPs images from 3 to 30X faster than competitors and its concurrency is benchmark — full overlap of printing, copying, scanning and administrative operations.</p>
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<p>Our formal relationships with even major CAD vendors is extra insurance that your images will always process accurately — even with new software releases.</p>	<p>Xerox also has working relationships with major CAD vendors. In fact, FreeFlow Accxes Printer Drivers are included on the AutoDesk Software CD. More important, Xerox testing is intense. All printer drivers are independently certified or tested for exact conformance to demanding test suites. Most important, the FreeFlow Accxes controller processes even the most complex images accurately and fast.</p>
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<p>The TDS 700 is highly configurable, customers can protect their investments by adding media rolls and a scanner at time of need, not at original purchase.</p>	<p>With the 6050A customers can also add scanning support at time of need, although they cannot add media. On the other hand, the scope of available field upgrades is far greater and usually of more value — for example increasing printer speed from 7 <b>Ds</b> to 9 <b>Ds</b> without a service call. With Océ, you need a new printer to increase printer speed and there is no removable hard drive for the built-in Power Logic controller.</p>
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**Océ Strategy Comments**

In most cases, Océ will be using its direct sales force to address mid volume opportunities. Rarely if ever will they be the low price solution. Therefore, expect Océ to focus hard on the total business value they bring, in terms of improving productivity, profits and workflows. In addition to their own software, they have formal partnerships with every major CAD vendor as well as every major EDMS supplier and continually improve their automated linkages among these offerings. This strategy is easy to counter, given the strength of FreeFlow Accxes and Xerox's longstanding working relationships with PLP and ImageSite as well as consistent Xerox award-winning support.

### KIP 5000

The KIP 5000, which is based on the KIP5000 printer, is configured modularly with a KIP scanner and many software options that are all field upgradeable. The most powerful solution is for high production mono printing plus mono and color scanning and copying.



KIP claims:	Xerox responds:
Outstanding scanning technology with speeds ranging from 2 to 12 ips.	KIP only attains its highest speeds at 200dpi. At 400 dpi, the speeds are 2 to 6 ips. Also you need to swap out the scanner to upgrade speeds. The Wide Format Scan System scans at rated speeds from 2 ips to 8 ips. Moreover, customers can field upgrade speeds, with a Feature Key that can even be moved from one Wide Format Scan System to another. Finally, the KIP scanner is a simple repackaging of a model designed to operate much slower than the WFSS, which is inherently fast. As a result, customers can have problems if their scan volumes are heavy.
Easy network printing from your desktop or powerful Web Printing using your browser from anywhere with an Internet connection.	The 6050A supports network printing better than any other manufacturer because of its fast processing speeds and top concurrency. With respect to Web Printing, customers can define up to ten "hot folders". If you place files in these folders from anywhere in the world, the job prints immediately according to predefined parameters, for example reverse collation.
Image quality is outstanding, with 600 dpi printing and 400 dpi scanning.	The 6050A prints and scans at 600 dpi — the ideal solutions for speed-conscious CAD users who also need the very highest quality.
Includes Windows, HDI and PostScript Drivers as standard.	These drivers are also standard with the 6050A, although actual printing of PostScript/PDF files requires an option. The big difference is that each 6050A driver is certified, either by the format owner or via definitive commercial test suites. KIP uses a PostScript clone and does not formally certify their other drivers.
Real-time image viewing.	Depending on the type of document being scanned, this feature can be problematic since there is no way to delete the view after scanning is complete and no way to turn this feature off where sensitive documents might be scanned.
HDP Plus delivers excellent image quality.	Image quality is visibly better with the 6050A, especially fine lines and photos.
100% Toner Usage saves dollars.	In fact, true 100% toner usage is very difficult to maintain. While more feasible in high-volume solutions, there is a great tendency for toner to accumulate in low to mid-volume printers. Over time, the minute toner residue tends to deteriorate print quality, requiring a service call and probably costing more dollars in terms of lost productivity than was saved in toner.  In contrast, the 6050A uses a highly efficient toning process along with a toner waste bottle to minimize costs while protecting image quality and reliability.

- Controller: Embedded PC
- Max. width: **36 in.**
- Long plot: **xx ft.**
- Printer resolution: 600 dpi
- Printer speed: 8 **Ds/min.**
- Media rolls: 2 std., 4 opt.
- Scanner resolution: xxx dpi
- Scanner speed: up to 9.6 ips (mono), up to 3.4 ips (color)
- Max. original thickness: **0.xx in.**

### KIP Strategy Comments

KIP sells exclusively through dealers, with a particular focus on lower volume solutions such as the KIP 3000. Nevertheless, you will certainly encounter them in mid-volume situations where they are likely to be the low price solution. For example, they include DWF processing and PowerScript software (for PostScript 1, 2 or 3 files as well as PDF), at no charge. Depending on the customers and their particular files, this can be a plus. Since service is provided by many dealers across the nation, it may be spotty in some regions.



- Controller: Embedded or standalone Windows 2000 or newer
- Max. width: 36 in.
- Long plot: 49 ft.
- Printer resolution: 600 dpi
- Printer speed: 8 Ds/min.
- Media rolls: 2 std., 4 opt.
- Scanner resolution: 150–1200 dpi
- Scanner speed: 3.93 ips
- Max. original thickness: 0.3 in.

**Ricoh Aficio 480W**

The Aficio 480W is a low-cost, all-digital wide format copier or multi-functional solution (no printer only configuration).

**Ricoh claims:**

Compact single footprint with output returned to the front.

Full multifunctionality, including automatic processing of CGM files and many more formats plus rich scan-to-file options.

Designed for ease of use, even by office professionals. The similarity between Ricoh office and wide format solutions helped them win a Bertl Innovation award in 2006.

600 dpi printing and 1200 dpi scanning.

**Xerox responds:**

The Ricoh footprint is deceptive, since practical operations require much more space. Service is from the rear, so access is required for that purpose, as well as to remove jams. For printing, the required PC server must sit on a table close to the unit. Also, catch tray design is poor; after just a few prints, they overflow on the floor and/or block user input panels, making an extra table almost essential.

In fact, you have to figure that a front tray for a mid-volume solution is usually a poor idea if you value productivity. It causes frequent congestion in front of the scanner as people who want to retrieve prints bump elbows with someone working on a big scan or copy job.

The 6050A offers full multifunctionality with the highest concurrency of operation in the market, and thus the greatest potential throughput per minute. FreeFlow Accxes also automatically processes CGM files and many more besides — faster than any other wide format RIP in its class. Finally, unlike the Aficio 480W, the 6050A is available as a printer only, for the growing number of customers who work solely with digital files.

Ease of use is of course partly in the eye of the beholder. In most cases, the office professionals that may use narrow format Ricoh solutions simply do not use wide format technical document printers. We have over 60 years of experience learning what both engineering/design professional and reprographics support staff want and expect. Whether it is changing paper or printing files, the 6050A is built for real productivity.

Scans at 1200 dpi may be a good marketing claim, but hardly useful for wide format needs — the files would be gigantic. The 6050A prints and scans at 600 dpi. In addition, the 6050A mono-component toner produces exceptionally smooth solids and grayscales, and lowers costs. In contrast, the 480W uses toner and developer, which cost more and require a service call to add developer. The 6050A has a visible quality advantage.

**Ricoh Strategy Comments**

Ricoh sells products under several brands (Lanier, Savin, Gestetner, and Nashuatec). While they do have wide format solutions, they are stronger in narrow format markets.

Whatever the brand, they generally use dealer channels, only some of which actively pursue mid-volume opportunities. Ricoh is also likely to pursue a low price solution approach.

### Kyocera Mita 4850W

The 4850W, announced in 2000, is Kyocera's highest speed wide format solution. At 600 dpi, and two paper rolls (third roll optional), it is intended to support point-of-need environments.

KM claims:	Xerox responds:
People friendly, reliable, low TCO	<p>While Kyocera claims this, the TCO tracker they highlight on their website doesn't even cover wide format products. The Xerox 6050A has a proven tradition of high productivity, high reliability and low costs.</p> <p>Nothing is more people-friendly than a solution that is designed exactly for user needs, in this case, engineers and design professionals.</p>
Copy at 7 Ds print at 6 Ds per minute	The lowest speed model 6050A prints and copies at 7 Ds per minute. Upgrading to 9 Ds per minute is simply a matter of placing an order and performing a software download, not even a service call required.
Collated sets are easy	<p>Yes, but they can be quite limited in the number of copies per set, particularly if you choose Kyocera-Mita's own CADMaster controller. With standard memory this can be as few as eight, although the number does expand with extra memory.</p> <p>Of course you can choose the Ratio controller, which Ricoh products use. However, that negates many of the ease of use claims.</p>



- Controller: CADMaster, embedded
- Max. width: 36 in.
- Long plot: 20 ft.
- Printer resolution: 600 dpi
- Printer speed: 6 Ds/min.
- Media rolls: 2 std., 3 opt.
- Scanner resolution: 600 dpi
- Scanner speed: xxx ips 7 Ds/min.
- Max. original thickness: 0.0073 in.

### Kyocera Mita Strategy Comments

Kyocera Mita does not compete aggressively in the mid-volume wide format arena, in part because the 4850W is their fastest offering and in part because they only sell through dealers. If you do compete with Kyocera Mita dealers, they will almost certainly focus on low price as well as ease of use. The company supports its brand by actively promoting the ease of use of their narrow format solutions on TV and in other advertising venues.

**Key industries**

- Manufacturing
- AEC
- Utilities
- Government
- Transportation
- Telecom
- Geophysical
- Electronics
- Educations
- Energy
- Print for pay

**Key environments**

- Centralized/Departmental CAD
- Engineering Reprographic Departments
- Engineering Document Management Systems (EDMS)

**Typical Applications**

- Architectural product rendering
- Mechanical/electrical drawings
- Schematics, all types
- GIS mapping
- Engineering change notices
- Technical illustration
- Bid sets
- Work orders
- Facilities drawings
- Property maps
- Product specifications
- Disaster response

Mid-volume wide format LED or laser monochrome solutions are a mature market, although a very strong one for Xerox Wide Format. As the move to color inkjets gains strength, most new sales will come from replacing older equipment, whether Xerox or competitive. Customers will typically replace systems at the end of a lease or when moving to decentralize (more common) or centralize (less common) some business operations.

In a broad sense, therefore the 6050A targets two replacement markets: older mid-range products and replacements resulting from decentralization or other organizational change.

*Where are these customers?*

Opportunities are likely to exist within the key industries listed in the sidebar. While many solutions will be departmental, others may be in ERDs or print-for pay.

This section highlights how the 6050A can meet customer needs in four specific high potential situations, each of which may exist in your territory. Also generally be on the alert for companies that are reorganizing.

- Legacy 88xx solutions that are at end of life
- Existing 510 customers who want greater image quality
- Older Océ 9400, TDS 400, 9600/9700 and/or, TDS 600 solutions
- Other older competitive solutions, e.g., KIP Starprint 2000 or 6000

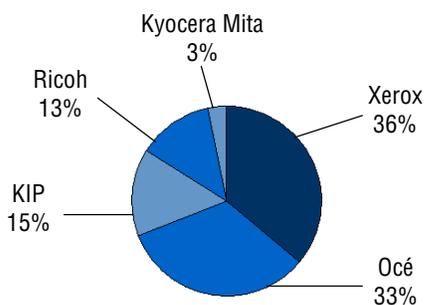
*Which Xerox alternative?*

When evaluating how best to address a customer’s wide format needs, make sure to:

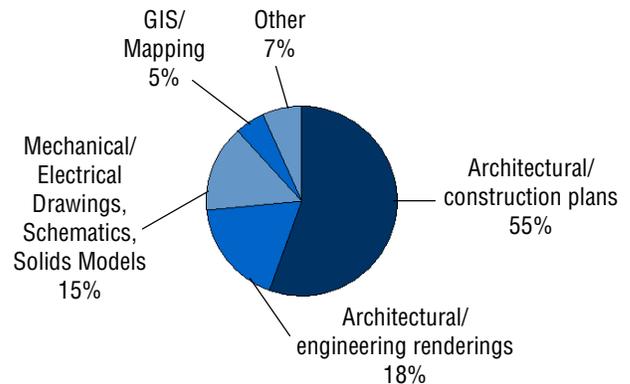
- Uncover all the functions that are needed, including how color is used
- Identify workflow fit and gaps
- Estimate impact of gaps and the effort required to close them

Depending on what you discover, you may recommend the 6050A, 510 or 6204 with Accxes or possibly a 60xx or 6204 with the Basic Print Server — for example, if space conservation is paramount and the customer does not already have a FreeFlow Accxes solution.

**NA & Europe WF Laser/LED Printer/Copiers, Mid-range**



**Technical Documents Breakdown**



Source: InfoTrends CAP Ventures

**Figure 3.** Technical document volume continues to grow but the number of installed mid-volume laser/LED printers is remaining the same as volume migrates to fast, color inkjets

### Focus on customers with legacy 88xx solutions

Xerox 8825/8830/8850 solutions are true workhorses, many of them in active use for close to ten years. However, with service costs increasing, these customers are increasingly open to a cost-effective upgrade strategy. The 6050A is a natural.

- The 6050A will rapidly return their investment in terms of lower operating costs alone
- Overall image quality is far better.
- FreeFlow Accxes performs in the same manner to which they are accustomed — but much faster and with more options that might interest them. Examples include InstantAccxes Folders and additional format support such as DGN and DWF.
- Scanning to Color PDF, as well as faster scanning throughput, may appeal to companies that are building specialized archives and/or expanding on-line viewing options.
- Print speeds are highly comparable to what they currently have.
- Finally, the very long lives of their current solutions is testimony to how well Xerox Wide Format delivers on the promise of reliable investment protection.

In these changing times, many companies with legacy solutions will also be concerned with data security — a factor to consider when upgrading. For these firms in particular, focus on the intrinsic security features of the 6050A, for example, the FreeFlow Accxes operating system, optional Image Overwrite and the Removable Hard Drive.

**Table 3.** Xerox 6050A vs. legacy 88xx solutions

Features	Xerox 6050A	Xerox 8825	Xerox 8830	Xerox 8850
Print resolution	600 dpi	400 dpi	400 dpi	400 dpi
Printer speed	7 or 9 Ds	7 Ds	7 Ds	10 Ds
Long plot, max.	49 ft.	Print: 80 ft. Copy: 100 ft.	Print: 80 ft. Copy: 100 ft.	Print: 80 ft. Copy: 100 ft.
Media rolls	2 or 4	1 or 2	3	3
Scanner resolution	600 dpi	400 dpi	400 dpi	400 dpi
Scanner speed	2-8 ips	2 to 4 ips, depending on scanner used		
Original thickness, max.	0.5 in.	0.059 in. or 0.5 in., depending on scanner used		

Consider Xerox 510 customers who want greater image quality

The 510 has proven itself as the most scalable offering in the Xerox Wide Format portfolio, arguably the most scalable offering on the market. However, its image quality, while very acceptable for most applications is 400 dpi and the underpinning technology is more costly to operate than many newer wide format solutions.

If customers express a direct interest in improving image quality, or decide to review other alternatives as a part of general fleet planning, the 6050A presents a solid upgrade strategy that is far superior to any competitive alternative they may investigate.

- At 600 dpi, overall image quality is noticeably improved
- Operating costs (consumables and maintenance) are lower
- FreeFlow Accxes speeds are comparable to the 510 and much faster than competitive RIPs
- No learning curve for copying or scanning, since Wide Format Scan System is the same
- Printer speeds are faster, comparable or slightly slower depending on the 510 model

**Table 4.** Xerox 6050A vs. Xerox 510

<b>Features</b>	<b>Xerox 6050A</b>	<b>Xerox 510</b>
Print resolution	600 dpi	400 dpi
Printer speed	7 or 9 Ds	5, 7 or 10 Ds
Long plot, max.	49 ft.	Print: 80 ft. Copy: 100 ft.
Media rolls	2 or 4	1, 2, or 3
Scanner resolution	600 dpi	400 dpi
Scanner speed	2 - 8 ips	2- 8 ips
Original thickness, max.	0.5 in.	0.5 in.

### Focus on older Océ 9400, TDS 400, 9600/9700 and/or TDS 600 solutions

The 6050A represents an excellent opportunity to upgrade customers who have older Océ solutions, such as the 9400, 9600, TDS 400, and TDS 600. Not only are they all 400 dpi solutions, but they also lack the advantage of the superior throughput of the FreeFlow Accxes Print Server.

Xerox is the only company in the market that can go head to head with Océ in terms of presenting an overall strategy for every aspect of document management. In many cases, the customer does not actually contract for added services, but their availability as an ingredient in the customer's own future planning can tip a decision.

Given the mature nature of the mid-volume wide format monochrome market, one can't ignore the opportunity the 6050A presents for displaced Océ solutions, perhaps with concerted team efforts. The following are some areas where various Océ products may be lacking in practice:

- Windows-based controller is more susceptible to security breaches than FreeFlow Accxes
- Media loading on any older 9400 is very awkward, as one of the rolls must be loaded from below, forcing you to get on your hands and knees.
- Toner is added to a charge of developer, which eventually degrades and requires replacement by a technician. Océ charges for this service. (The mono-component Xerox 6050A also uses just one-quarter the toner of the TDS 400 for equivalent coverage.)
- No A-size copying and printing on the 9400 and TDS 400.
- Users cannot just walk up to the TDS400 (or the 9400), enter a document and receive a correct copy, unless they are lucky enough to align the document to the right, enter the document in the correct orientation, and pick the right roll in the printer.
- No auto size detection, auto image rotation, auto centering or auto roll selection.

On the positive side, emphasize the overall advantages of choosing Xerox as your wide format supplier. These advantages are detailed on the next page since they deserve particular emphasis when working to penetrate any competitive environment, Océ or others.

**Table 5.** Xerox 6050A vs legacy Océ solutions

Features	Xerox 6050A	Océ TDS 400	Océ 9600
Print resolution	600 dpi	400 dpi	400 dpi
Printer speed	7 or 9 Ds	3 D	8 Ds
Long plot, max.	49 ft.	49 ft.	49 ft.
Media rolls	2 or 4	1 or 2	Up to 6
Scanner resolution	600 dpi	200 dpi	400 x 200 dpi
Scanner speed	4.7 ips	2 ips	3.8 ips
Original thickness, max.	0.5 in.	0.04 in.	0.04 in.

Focus on other older competitive solutions, e.g., KIP

The Xerox 6050A also provides an excellent opportunity for seeking out installations of older competitive equipment that is not Océ, for example the KIP 2000 and 6000 series.

Many of these will be coming off lease shortly, making these installations, relatively “low hanging fruit.”

In contrast to most customers with Océ installations, wide format competitors such as KIP are more likely to have a one-off installation or to be part of an eclectic fleet.

In either case, it is critical to emphasize not only the specific value of the 6050A but compelling value of an ongoing relationship. Xerox offers unparalleled advantages to help ensure that every investment in document solutions increases future profits, lowers current costs or both. These include:

- Full product lines that are adaptable to specific needs (production and departmental; color and monochrome; printing, copying, and scanning; graphic arts and technical)
- Proven technology and committed research
- Deep expertise in the unique needs of different industries
- Strong partnerships with complementary suppliers
- Financing options
- Tested supplies and media
- Talented professional services

Most important, Xerox has the premier service organization in the industry, ensuring top reliability to customers worldwide and the best trained sales channels, ensuring that solutions not only match present requirements but anticipate future ones.

**Table 6.** Xerox 6050A vs. legacy KIP solutions

Features	Xerox 6050A	KIP Starprint 2000	KIP Starprint 6000
Print resolution	600 dpi	400 dpi	400 dpi
Printer speed	7 or 9 Ds	4 D	8 D
Long plot, max.	49 ft.	200 ft.	100 ft.
Media rolls	2 or 4	1, 2, or 3	2 or 4
Scanner resolution	600 dpi	400 dpi	400 dpi
Scanner speed	4.7 ips	2–9.6 ips	2–9.6 ips
Original thickness, max.	0.5 in.	0.004 in.	0.004 in.

# At a Glance

## Specifications

# Xerox 6050A

## Wide Format Solution

### Xerox 6050A printer specifications

Feature	Xerox 6050A
<b>Printer</b>	
Controller	FreeFlow Accxes, attached
Print width, max.	36 in.
Plot length, max.	49 ft.
Resolution	600 dpi
Speed	7 or 9 Ds/min.
Warm-up time	<3 min.
<b>Media</b>	
Media width, max	36 in.
Media types	Bond, vellum, film
Media rolls	2 or 4 rolls, factory install
Cut sheet feeder	Optional multi-sheet feeder
<b>Scanner</b>	
Color	Mono
Resolution	100–600 dpi
Speed	4.7 ips
Scan width	36 in.
Scan length	8.3 in.–49 ft.
R/E	25–400%
Original thickness	0.5 in.
<b>Software</b>	
Print drivers	Windows: XP/2000/Server 2003/Vista AutoCAD: 2002, 2004, 2005, 2006, 2007, 2008 Adobe PostScript 3: Windows XP/2000/2003/Vista
Print file formats	Standard: HP-GL/2, HP-RTL, TIFF 6.1 (including LZW), CALS 1&2, CalComp 906/907/951/PCI, FileNET, NIRS, CGM, VCGL, VRF, Versatec Data Standards, Xerox Emulation 150, C4, JPEG Optional: Adobe PostScript 3, PDF (1.6), DWF, BMP, JPEG 2000, PNG, PICT, DGN

*Wide Format Scan System specifications*

<b>Feature</b>	<b>Description</b>
<b>Scan speed</b>	2 ips (std); 4 or 7.3 ips (opt)
<b>Resolution</b>	400 x 600 dpi
<b>Input document size</b>	Minimum: 4.5 in. x 5.5 in. Maximum: 42 in. x 100 ft.
<b>Max. scan width</b>	36 in.
<b>Max. document thickness</b>	0.5 in.
<b>Imaging system</b>	CMOS
<b>Halftone (grayscale)</b>	8-bit, 256 levels of gray
<b>Color scanning</b>	Optional (24 bit)
<b>Document feed</b>	Center — but can be fed to either left or right with automatic width detection enabled
<b>Document width detection</b>	Either of two modes: <ul style="list-style-type: none"> <li>▪ <i>Auto width</i> — detects actual document width (+/- 1mm) with document pre-scan</li> <li>▪ <i>Productivity width</i> — detects to nearest standard size (ANSI, ARCH, or ISO) without document pre-scan</li> </ul>
<b>Document catch tray capacity (optional)</b>	100 sheets
<b>Dimensions (W x D x H)</b>	53 in. x 55 in. x 45 in., including document catch tray
<b>Weight</b>	145 lbs., including stand
<b>Power requirements</b>	US: 100–120 VAC, 60 Hz, 6 amps Int'l: 200–240 VAC, 50 Hz, 3 amps
<b>Power consumption</b>	Standby: 130 W, max. Running: 200 W, max.
<b>Environment (operating)</b>	50°–95° F 10%–80% RH, non-condensing

# At a Glance

## Specifications

### FreeFlow Accxes Print Server specifications

Feature	Description
Platform	Custom Dell PC; 2.66 GHz (min.) Celeron Processor; 1 GB RAM (std.); 80 GB HDD (min.)
Operating System	Linux
Ports	<ul style="list-style-type: none"> <li>▪ 10/100/1000 BaseT Ethernet (RJ45 connector)</li> <li>▪ RS-232C serial (diagnostics only)</li> <li>▪ IEEE1394 (scanner only)</li> </ul>
Network protocol	TCP/IP (including lpr/lpd, FTP, TFTP, HTTP, and telnet)
Input data formats (printing)	<ul style="list-style-type: none"> <li>▪ Standard:               <ul style="list-style-type: none"> <li>- HP-GL/2, HP-RTL</li> <li>- C4</li> <li>- FileNET</li> <li>- CalComp 906/907/951/PCI</li> <li>- TIFF 6.0</li> <li>- NIRS</li> <li>- VCGL</li> <li>- CALS 1 and 2</li> <li>- CCITT (G4, G3 1D, G3 2D, Packbits, RLE, Seed Row, and Adaptive)</li> <li>- CGM (Level 1 with ATA ext.)</li> <li>- Versatec Data Standards (VRF, ordered vector, blocked raster, compacted raster)</li> </ul> </li> <li>▪ Optional:               <ul style="list-style-type: none"> <li>- Adobe: Postscript 3, PDF v1.6</li> <li>- AutoCAD: DWF</li> </ul> </li> </ul>
Output data formats (scan-to-file)	TIFF, PDF, CALS, JPEG
User applications	<ul style="list-style-type: none"> <li>▪ Printer drivers:               <ul style="list-style-type: none"> <li>- Windows (GDI) (XP/Server 2003/Vista)</li> <li>- Adobe PostScript (PS), Level 3 (Windows XP/Vista)</li> <li>- AutoCAD (HDI) (AutoCAD 2002-2008)</li> </ul> </li> <li>▪ Accxes Client Tools (Windows XP/Vista, Solaris 2.6–2.10):               <ul style="list-style-type: none"> <li>- Document Submit (job assembly)</li> <li>- Document Retrieve (scan retrieval)</li> <li>- Device Manager (printer management)</li> <li>- Printer Queue (printer status)</li> </ul> </li> <li>▪ Account Management Tool (Windows XP/Vista, Solaris 2.6–2.10)</li> <li>▪ Web Printer Manager Tool (remote administration)</li> <li>▪ InstantAccxes (remote document printing)</li> </ul>
Power requirements	110–120VAC, 60 Hz, 3 amps

*Competitive solutions specifications*

<b>Feature</b>	<b>Xerox 6050A</b>	<b>Ricoh Aficio 480W</b>	<b>KIP 5000</b>	<b>Océ TDS 700</b>
<b>Printer</b>				
<b>Controller</b>	FreeFlow Accxes, attached	Embedded or standalone; Windows 2000 or newer	PowerPrint Embedded Controller (Windows-based)	Océ Power Logic controller with Windows XP; embedded
<b>Print width, max.</b>	36 in.	36 in.	36 in.	36 in.
<b>Plot length, max.</b>	49 ft.	49 ft.	75 ft.	49 ft.
<b>Resolution</b>	600 dpi	600 dpi	600 dpi	600 x 1200 dpi
<b>Speed</b>	7 or 9 Ds/min.	8 Ds/min.	8 Ds/min.	8.5 Ds/min.
<b>Warm-up time</b>	<3 min.	<2 min.	<8 min.	None
<b>Media</b>				
<b>Media width, max</b>	36 in.	36 in.	36 in.	36 in.
<b>Media rolls</b>	2 or 4 rolls, factory install	2 std., 4 opt.	2 std., 4 opt.	2 std., 4 or 6 opt.
<b>Cut sheet feeder</b>	Opt., automatic	Manual, std.; automatic, opt.	Std., manual	Manual and 1 auto cassette, std.; 2–3 auto cassettes, opt.
<b>Scanner</b>				
<b>Color</b>	Mono, std.; color, opt.	Mono	Color	Mono, std.; color, opt.
<b>Resolution</b>	100–600 dpi	150–1200 dpi	200–600 dpi	72–600 dpi
<b>Speed</b>	2 ips (std); 4 or 7.3 ips (opt)	3.93 ips	Mono: 3.2–9.6 ips Color: 1.4–3.4 ips	3.3 ips (B/W line art), 2.8 ips (gray & color)
<b>Scan width, max.</b>	36 in.	36 in.	36 in.	36 in.
<b>Scan length, max.</b>	49 ft.	49 ft.	75 ft.	20 ft.
<b>R/E</b>	25–400%	25%–400%	5–3600%	10%–1000%
<b>Original thickness, max.</b>	0.5 in.	0.039 in.	0.004 in.	0.12 in.
<b>Software</b>				
<b>Print drivers</b>	Windows: XP/2000/Server 2003/Vista AutoCAD: 2002, 2004, 2005, 2006, 2007, 2008 Adobe PostScript 3: Windows XP/2000/2003/Vista	Windows: NT/2000/XP	Windows: 2000/2003/XP 64-bit AutoCAD: 2002, 2004, 2005, 2006, 2007, 2008	Windows: 2000/XP/Server 2003/ Terminal Server/Citrix/Metaframe AutoCAD: 2002, 2004, 2005, 2006, 2007, 2008
<b>Print file formats</b>	<i>Standard:</i> HP-GL/2, HP-RTL, TIFF 6.1 (incl. LZW), CALS 1&2, CalComp 906/907/951/PCI, FileNET, NIRS, CGM, VCGL, VRF, Versatec Data Standards, Xerox Emulation 150, C4, JPEG <i>Optional:</i> Adobe PostScript 3, PDF (1.6), DWF, BMP, JPEG 2000, PNG, PICT, DGN	<i>Standard:</i> HP-GL/2, HP-RTL, TIFF, Calcomp 906/907, WMF, BMP, CALS, T6X, CIT, PCX <i>Optional:</i> Adobe PostScript 3, PDF, CGM, DWG, DXF, DWF	DWF, PDF, TIFF	<i>Standard:</i> HP-GL/2, HP-RTL, Calcomp, TIFF 6.0, CALS-I, NIRS, C4, ASCII, JPEG <i>Optional:</i> Adobe PostScript 3 PDF

# At a Glance

## Specifications

# Xerox 6050A

## Wide Format Solution

### Competitive solutions specifications, cont'd

Feature	KM P4850w	KIP 6000	Océ TDS 600	
<b>Printer</b>				
<b>Controller</b>	CADMaster, embedded	KIP software with Windows XP; embedded	Océ Power Logic controller with Windows XP; embedded	
<b>Print width, max.</b>	36 in.	36 in.	36 in.	
<b>Plot length, max.</b>	20 ft.	100 ft.	49 ft.	
<b>Resolution</b>	600 dpi	600 dpi	400 dpi	
<b>Speed</b>	6 Ds/min.	8 Ds/min.	8 Ds/min.	
<b>Warm-up time</b>	<10 min.	<8 min.	None	
<b>Media</b>				
<b>Media width, max</b>	36 in.	36 in.	36 in.	
<b>Media rolls</b>	2 std., 3 opt.	2 std., 4 opt.	2 std., 4 opt.	
<b>Cut sheet feeder</b>	Std., single sheet	Std., multi-sheet	Std.	
<b>Scanner</b>				
<b>Color</b>	Mono	Mno/Color (depending on scanner)	Mono	
<b>Resolution</b>	600 dpi	600 dpi	200–400 dpi	
<b>Speed</b>	3.15 ips	2.0–4.8 ips	3.28 ips	
<b>Scan width, max.</b>	36 in.	36 in.	36 in.	
<b>Scan length, max.</b>	20 ft.	20 ft.	49 ft.	
<b>R/E</b>	20–400%	25–400%	25–400%	
<b>Original thickness, max.</b>	0.073 in.	0.004 in.	0.04 in.	
<b>Software</b>				
<b>Print drivers</b>	Windows: Me/NT/2000 AutoCAD: 2000, 2004; 13,/14	KIP Request Windows AutoCAD: 2002, 2004, 2005, 2006	Windows: 2000/XP AutoCAD: 2002, 2004, 2005, 2006; 12/13,/14 Adobe PostScript 3: Windows XP/2000	
<b>Print file formats</b>	<i>Standard:</i> HP-GL2, HP-RTL, TIFF, Calcomp 906/907, PCX, RLC, BMP, CALS, T6X, DWG/DXF <i>Optional:</i> PostScript 3, PDF, TIFF 8-bit grey, TIFFColour, CIT-TG4 (Intergraph)	<i>Standard:</i> HP-GL/2, HP-RTL, Calcomp 906/907, CALS Group 4, TIFF Group 4, PCX, Intergraph CIT/TG4, Versatec Color Graphics (VCGL), Uncompressed Grayscale TIFF, TIFF Packbits, IBM IOCA, EDMICS (C4), TLC (KIP), PNG, JPEG <i>Optional:</i> ATA Complaint CGM, Adobe PostScript 3 for EPS, PS, and PDF	<i>Standard:</i> HP-GL/2, HP-RTL, TIFF 6.0, CALS type 1, NIRS, EDMICS (C4), Calcomp 906/907/951 <i>Optional:</i> Adobe PostScript 3/PDF	

*Overview*



The Xerox 6050A Wide Format Solution is a high-quality printing, copying, and scanning solution for the mid-volume wide format market. The combination of the 600 dpi Xerox 6050A Printer, high-performance FreeFlow Accxes Printer Server, client applications, and the Wide Format Scan System provides configurations to meet any of these customer needs:

- Standalone printer
- Walk-up copier
- Printer, copier, and scan-to-file (multifunction)

The Xerox 6050A printer runs at 4.1 ips and produces throughput at 7 **Ds** per minute, with an option for 9 **Ds** per minute. It can print on bond, vellum, and film — roll or cut sheet media up to **36 inches** wide. The standard one-drawer model holds two **500 foot** media rolls; an optional second, lower drawer holds two additional media rolls — for a grand total of **2000 feet** of online media. Customers may choose to add an optional cut sheet bypass tray for printing on specialty stock.

The primary difference between the Xerox 6050A printer and the earlier 6030/6050 printers is that the 6050A does not contain an embedded controller. The Xerox 6050A uses only the FreeFlow Accxes Print Server.

### Hardware configurations



6050A Printer  
1 drawer (2 roll)



6050A Printer  
2 drawer (4 rolls)



6050A Copier  
1 drawer (2 roll)



6050A Copier  
2 drawer (4 roll)

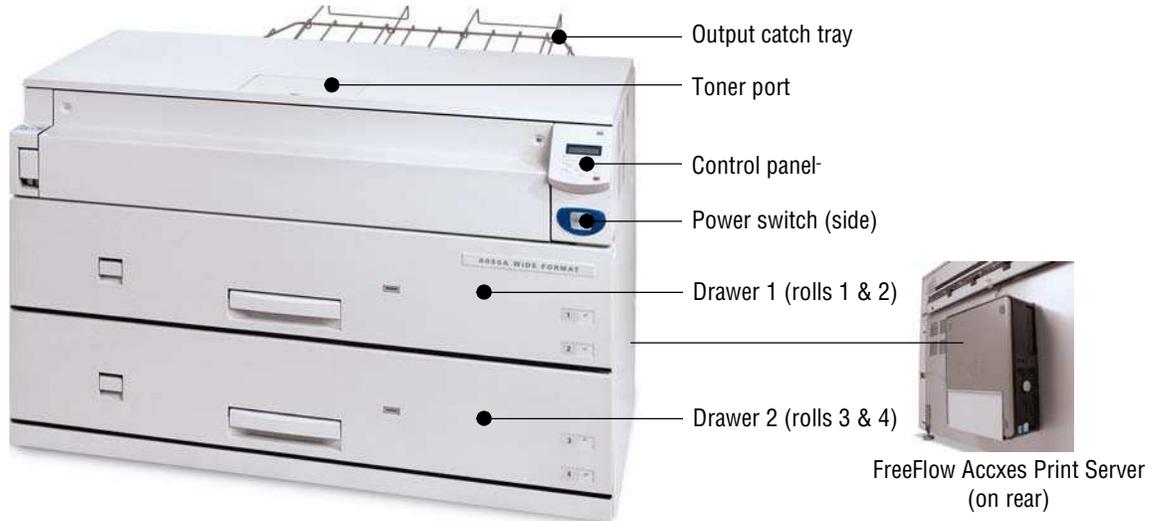
### Options

- 1 to 2 drawers (2 to 4 rolls), factory install
- 7 to 9 D's per minute
- Scan-to-Net<sup>1</sup>
- Scan-to-Print<sup>1</sup>
- Color Scan-to-Net<sup>1</sup>
- 2 to 4 ips copying; 2 to 4 to 8 ips scanning<sup>1</sup>
- Job Accounting
- Image Overwrite
- Removable hard drive
- Additional file format support:
  - Adobe PostScript (PostScript 3/PDF v1.6 interpreter)
  - Autodesk DWF
  - Raster formats: BMP, GIF, JPEG, PNG
  - Other CAD: MicroStation DGN

<sup>1</sup> Requires Wide Format Scan System.

**Xerox 6050A Printer**

Major printer components



**Figure 4.** Major components of the Xerox 6050A Printer

The major components of the Xerox 6050A Printer are:

- **Output catch tray** — holds up to 100 D-size sheets
- **Printer control panel** — to change paper size and type and to set up printer defaults
- **Multi-sheet inserter/manual feed tray (MSI)** — to print with cut sheet media (optional; not shown in photo above)
- **Drawer 1** — holds media rolls 1 and 2
- **Drawer 2** — holds media rolls 3 and 4 (factory install only — not field-upgradeable)
- **Toner supply port** — for replenishing toner
- **FreeFlow Accxes Print Server** — mounts in a saddle on the rear side of the printer

Note: Customers can NOT upgrade from a one drawer (2 roll) 6050A printer to a two drawer (4 roll) printer in the field. Drawers are factory installed only.

## Printer control panel



Figure 5. Xerox 6050A Printer control panel

The printer control panel is at the right front side of the printer; it contains an LCD message display, pushbuttons, and lamps. The pushbutton functions are self-evident. One, however, deserves a closer look:

- **Power Saver** — switches the printer into and out of power saver mode. There are two sequential power saver stages: “Low Power” and “Sleep.” Each reduces power consumption to a level lower than the preceding stage. Pressing the Power Saver button places the printer in the first (“Low Power”) mode or “wakes the printer up”.
  - *Low Power mode* — the elapsed idle time before this mode activates can be set between 5 and 60 minutes; default is 30 minutes.
  - *Sleep mode* — the elapsed idle time before this mode activates can be set between 5 and 180 minutes; default is 30 minutes.

There are four menus for making system settings:

- **Localization** — to set display language and date format.
- **System settings** — to set TCP/IP address, date/time, and timers for power saver modes.
- **Utilities** — to generate test prints, read billing meters (both linear and area), and shutdown or restart the FreeFlow Accxes controller.
- **Print Setup** — to set the installed media types and series.

Printer media

The Xerox 6050A Printer supports these roll media:

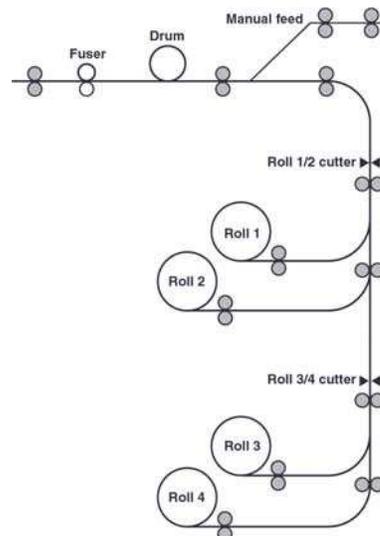
- **Bond** — up to 500-foot roll
- **Vellum** — up to 500-foot roll
- **Polyester film** — 150-foot roll

Rolls can be from 11 to 36 inches wide, including these series: ANSI A–E, Arch A–E, ISO A4–A0, and the 36 inch architectural series. When loading roll media, the user only needs to specify the media series (ANSI, Arch, or ISO) and type (bond, vellum, or film) because the printer automatically detects the installed width. Media series and type may be entered at either the printer control panel or on the scanner control panel. Users may mix media series (ANSI, etc.) within a drawer or between drawers. For example, the user can install Arch-series media at roll 1, ANSI-series at roll 2, ISO-series, at roll 3, etc. — all at the same time.

Printing or copying on cut sheet media requires the optional multi-sheet inserter/manual feed tray. Users may insert up to 70 sheets of A- and B-sized media or single sheets of C- through E-sized media. The printer also supports the standard cut sheet media sizes: ANSI, Arch, and ISO series. However, the multi-sheet inserter/manual feed tray only accepts bond paper.

The Xerox 6050A Printer will automatically switch to another media drawer containing the same size media when the roll being used runs out of media. The print job will then continue with no interruption or operator intervention.

On the Xerox 6050A the operator can replace media in drawer 2 (rolls 3 and 4) while jobs print from drawer 1. A simple paper path (see below) for both roll feed and manual feed paper reduces jams.



**Figure 6.** Xerox 6050A Printer paper paths

The standard output catch tray holds up to 100 D-size sheets of media.

## Printer specs summary

Feature	Description
Resolution	600 dpi
Print speed	4.1 ips
Grayscale	256 levels
Throughput	7 Ds/min., std. (9 Ds/min., opt.)
Media supply	1 drawer / 2 roll — std. 2 drawer / 4 rolls — opt. Cut sheet tray — opt.
Media support	Rolls: <ul style="list-style-type: none"> <li>▪ Bond, vellum (500 ft. rolls)</li> <li>▪ Film (150 ft. rolls)</li> </ul> Cut sheet: <ul style="list-style-type: none"> <li>▪ Bond only</li> <li>▪ Up to 70 sheets sized A–B; single sheets sized C–E</li> </ul>
Toner yield	23,500 sq. ft. per bottle @ 5% coverage
First print out time (FPOT)	19 sec.
First copy out time (FCOT) with Wide Format Scan System	32 sec.
Warm-up time (from power on)	< 3 min.
Max. print length / copy length	49.2 ft. Note: the 6050A will print up to 150 ft. — but quality and accuracy are only guaranteed up to 49.2 ft.
Auto roll-switching	Automatically switches to second roll of same-size media; requires “taped-to-core” media rolls

### **Wide Format Scan System**



The 400 dpi Wide Format Scan System produces images of exceptional quality and is fully color capable. Customers can upgrade from standard monochrome to full-color scanning via a software Feature Key, with no need to physically replace the scanner.

The Wide Format Scan System can be field upgraded for rated speed from 2 ips standard to 4 ips copy and up to 4 ips scan or 4 ips copy and up to 8 ips scan (Feature Key options). It automatically adjusts its actual speed based on document size, type, and resolution. The scanner processes smaller, lower resolution, monochrome documents at nearly twice the rated speed (2 ips rated speed, effectively up to 4 ips; 4 ips rated speed, effectively up to 8 ips) and automatically slows to ensure high quality results for photographs or color images. Depending on the customer application, the automatic speed changes can substantially increase scanner productivity.

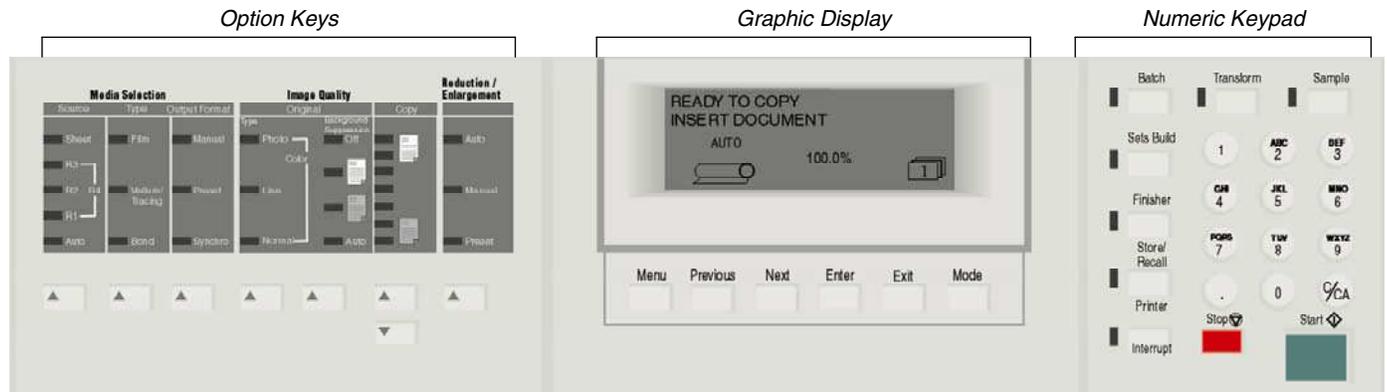
Users can set the Wide Format Scan System the following document width detection modes:

- **Manual** — the user enters the document width at the control panel and feeds documents into the center of the scanner.
- **Autowidth** — scanner pre-scans documents to determine the width; users must feed documents into the center of the scanner.
- **Autowidth/Autocenter** — scanner pre-scans the document to determine the width of the document; users may feed documents anywhere (left, right, center) on the feed table and the scanner centers the image. This mode is most useful when users scan non-standard document widths.
- **Productivity** — scanner uses width sensors to determine width and users must align documents within the media guidelines on the feed table. The width sensors eliminate the need for a pre-scan, thereby increasing higher productivity. When using this feature, users must first select the media series (ANSI, ARCH, ISO, etc.).

While scanning, the scanner continually adjusts image quality using its unique dynamic background suppression algorithms. Finally, users can set the scanner so documents exit the rear to the standard catch tray (100 documents, max.) or so they rewind to the front.

When using the *auto* modes, users can also enter *Batch* mode to eliminate the requirement for the pre-scan after the first scan — if all other documents in the batch are of the same size and type.

### Wide Format Scan System Control Panel



**Figure 7.** Wide Format Scan System control panel

The control panel on the Wide Format Scan System contains three major sections:

- Option keys
  - *Media Selection* — Source, Type, and Output Format
  - *Image Quality* — Original Type, Background Suppression, Copy Density
  - *Reduction / Enlargement* — Auto, Manual, Preset
- Graphical display and navigation buttons
  - *LCD* — for displaying menus and information
  - *Navigation buttons* — for moving within menus and making selections from the LCD
- Numeric keypad and special features keys — for entering numeric data and selecting features such as collation, job templates, etc.

The following sections on making copies and Scan-to-Net describe these in detail.

The Wide Format Scan System can be set to start scanning as soon as the user inserts a document, without the need to press the Start button.

### Making Copies with the Wide Format Scan System

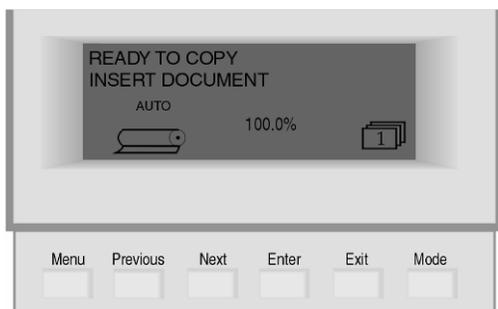
Users set all copy options with the pushbuttons on the control panel and the menus on the graphic display.

#### *Option keys*

The Option selection keys are divided into three sections:

- **Media Selection**
  - Source
    - *Auto* — printer selects the roll, based on user settings for reduction/enlargement and media (cannot be used in conjunction with Auto Reduction/Enlargement).
    - *R1-R2-R3-R4* — selects roll 1, 2, 3, or 4.
    - *Sheet* — for manual insertion of cut sheet media.
    - *Type* — Film, Vellum, or Bond (note: when user selects Auto or Rolls 1–4, these LEDs indicate the media installed in those locations; when using sheet media, user sets media type using these buttons).
  - Output Format
    - *Manual* — to set copy width and length
    - *Preset* — to set a standard size (ANSI, ISO, ARCH)
    - *Synchro* — to set copies to same length as the original
- **Image Quality Type**
  - *Normal* — to make copies with the best image quality, including halftones, shadings, and fine lines. This mode delivers the most “WYSIWYG” output. For instance, if your original has both pencil and pen on it, the pencil and pen will be different shades of gray on the resulting copy.
  - *Line* — to make copies with high contrast; particularly effective with line art. (Note: Line mode should not be used with documents containing halftoned images, as this may cause them to become too dark.) This mode is also called bi-tonal or “Snap-to-Black” because copy will have all black output. For instance, pencil and pen marks on the original will reproduce with a similar tone black line on the copy.
  - *Photo* — to copy documents containing a grayscale or color image.
  - *Color* — for scanning full color documents; NOT available in Copy mode.
  - *Background Suppression* — to make adjustments for documents that contain poor contrast between the foreground image and the background.
  - *Copy* — to darken or lighten the contrast of the copy with respect to the original.
- **Reduction & Enlargement**
  - *Auto* — to set the copy size based on the size of the input document and the selected output media size.
  - *Manual* — to set the copy R/E ratio over a range of 25–400% in 0.1% increments. The ratio is set using the numeric keypad; the current setting appears on the LCD.
  - *Preset* — to choose from standard (ANSI, ARCH, ISO) and customer-defined sizes.

Requires Scan-to-Net and Color Feature Keys.

*Graphical display and navigation keys*

**Figure 8.** Graphical display and navigation keys

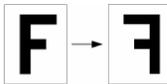
The scanner's graphic display is a 256 x 64 pixel LCD for viewing selection, instructions, and menus. The navigation keys include six pushbuttons:

- **Menu** — provides system administration and configuration functions, including:
  - *System Administration* — control passwords and job accounting functions
  - *Diagnostics* — run scanner diagnostics (for service technicians)
  - *System Information* — display system configuration information
  - *Configuration* — set default language, timers, media series, copy and scan options
- **Previous** — navigate to previous menu option
- **Next** — navigate to next menu option
- **Enter** — select option
- **Exit** — exit submenu and go to the next menu
- **Mode** — select Copy or Scan modes

*Numeric keypad and special features keys*

These include:

- **Stop** — halts scanning immediately
- **Start** — starts the scanner manually (note: the scanner can be set to automatically scan documents as they are inserted)
- **0–9, decimal keys** — to enter alphanumeric data for menus, job accounting, scan-to-file directory, and copy quantity
- **Clear/Clear All** — according to mode:
  - *Ready mode* — pressing once clears the current copy count to one; pressing twice resets all copy parameters to their defaults
  - *Menu mode* — as a backspace key for numeric entry fields in menus on the LCD

- **Batch** — On/Off. When On, the scanner pre-scans just the first inserted document, it does not pre-scan subsequent documents. It then scans subsequent documents using this information. Eliminating the “pre-scan” increases overall copy speed and is useful when scanning collections of similar documents (size and type). Typically, only used in auto mode, not needed in productivity mode. Note: Batch mode is not needed if scanner is set for Productivity mode.
- **Transform**
  - *Margins* — to set lead, trail, left, and right margins ( $\pm 8$  in.)
  - *Justification* — to position the image on the copy: “x” direction — left, center, right; “y” direction — top, center, bottom
  - *Transforms*
    - **Mirror** — 
    - **Invert** — 
- **Sample** — prints a sample taken from a point equidistant from the leading and trailing edge of the original; print is the width of the page by 8.25 in. long.
- **Sets Build** — creates up to 999 electronically collated sets from a series of documents; users can choose Forward or Reverse collation, and can elect to generate a checkprint for each scan.
  - *Forward* — scans documents 1, 2, 3 ... then prints 1, 2, 3 ... 1, 2, 3 ... 1, 2, 3
  - *Reverse* — scans documents 1, 2, 3 ... then prints 3, 2, 1 ... 3, 2, 1 ... 3, 2, 1
- **Finisher** — sets finisher options such as folding (when equipped)
- **Store/Recall**
  - *Last Job* — recalls and reuses the settings from the last copy job
  - *Job Templates* — saves the settings from previous jobs in memory as templates (up to 9 templates can be saved)
  - *Save Default Template* — saves settings from the current job as the default template
  - *Recall Factory Defaults* — recalls the factory default settings as the active default
- **Printer Interrupt** — pauses print jobs so users can run copy jobs immediately. Usually a maximum of two more pages will print after the user presses the key. The interrupt continues for 1–99 minutes (set by system administrator) unless the user presses the Printer Interrupt key again to exit.

### Scan-to-Net with the Wide Format Scan System

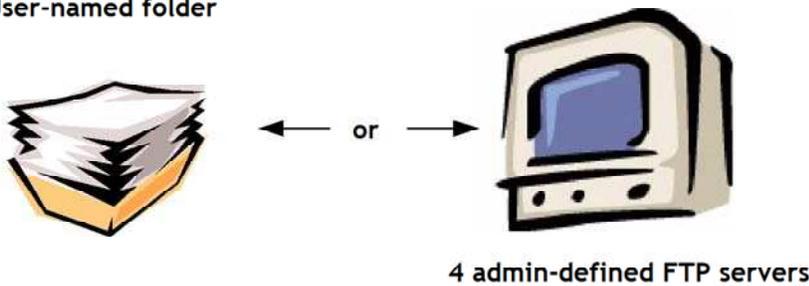
Scan-to-Net is an option for creating digital images from hard copy documents, activated by uploading a Feature Key to the FreeFlow Accxes controller. Using the Wide Format Scan System, customers can create image files at 75, 100, 200, 300, 400 dpi, or 600 dpi, in these formats:

- TIFF, v6.0 (single page)
- PDF, v1.4 (single page)
- CALS, Type 1
- JPEG (requires Color Scan-to-Net)

#### New in Accxes v12.5

- Scan-to-Net in PDF v1.4 format. This complies with the PDF/A format requirements of ISO 19005 for long-term document archiving.
- PDF file format for Color Scan-to-Net.
- Scan-to-Net at 600 dpi.

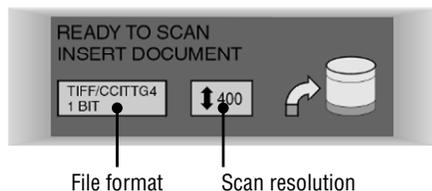
#### User-named folder



**Figure 9.** Scan-to-Net destinations with Wide Format Scan System

Before scanning, users choose the scan destination and set scan options. When configured with the Wide Format Scan System, they can create a folder on the controller's hard drive as a temporary location for the image files or they can choose to have the image files sent to any one of up to four FTP servers. A system administrator sets the IP addresses of the four FTP destinations using Web Printer Manager Tool — users cannot change these addresses.

Note: Users must retrieve images from the folder on the controller's hard drive within 1 to 24 hours (period determined by a timer, set by the system administrator).



**Figure 10.** Wide Format Scan System display in Scan mode

After choosing a scan destination, the user sets scan options, such as original type, resolution, and file format at the Wide Format Scan System control panel. The user may set the following:

- **Resolution** — 75, 100, 200, 300, 400, or 600 dpi, using the Previous/Next navigation keys under the graphic display.
- **Original Type**
  - *Normal* — best for scanning documents with text, line art, or a mixture of these; preserves shaded areas well.
  - *Line* — best for originals with high contrast; particularly effective with line drawings and fine lines: even light pencil is reproduced as a black line. (Note: Line should not be used with documents containing halftoned images, as this may cause them to become too dark.)
  - *Photo* — best for documents with a grayscale or color image, such as a photograph.
  - *Color* — best for full color documents.
- **File format** — available types and compression levels depend on settings under Original Type (above).

When users set the Original Type, they can choose to generate preview images as they scan. If Preview is chosen, the controller generates a JPEG thumbnail (low resolution, small file size) in addition to the full-size scan file. This thumbnail is useful when using the Document Retrieve Tool to preview scans before retrieving them (see Accxes Client Tools later in this chapter). The preview uses the new scaler and is better in 12.5 than in older versions.

		File format choices			
		TIFF	CALS	PDF	JPEG
Original Type	Normal	1 bit/pixel	1 bit/pixel	1 bit/pixel	
	Line	1 bit/pixel	1 bit/pixel	1 bit/pixel	
	Photo	8 bits/pixel			
	Color	24 bits/pixel Compression: ▪ Packbits ▪ Index ▪ Index ED		24 bits/pixel Compression: ▪ Normal ▪ Best IQ ▪ Best Compression	24 bits/pixel Compression: ▪ Normal ▪ Best IQ ▪ Best Compression

- **Background Suppression** — NOT available when Photo or Color are chosen as the Original Type.

Wide Format Scan System Specs Summary

Feature	Description
Resolution	400 dpi, native; up 400 x 600 dpi, interpolated
Scan speed	Mono: 2 ips std; opt.: 4 ips copy & up to 4 ips scan or 4 ips copy & up to 7.3 ips scan (100% R/E) Color: 0.5 ips standard
Input document size (WxL)	Minimum: 4.5 x 5.5 in. Maximum: 42 in. x 100 ft.
Original thickness	0.5 in. (max.)

### FreeFlow Accxes Print Server

#### Overview

FreeFlow Accxes is the wide format industry's premier controller — the fastest, the most robust, the most secure, the most flexible. It works with all the monochrome Xerox Wide Format printers — 510, 721, 6030/6050, 6204, and 6050A — as well as with the Wide Format Scan System and the 6204 Scanner.

The FreeFlow Accxes platform is a Dell PC, modified for Xerox — it isn't an "off-the-shelf" PC and it doesn't run Windows. Its Linux-based operating system is hidden from all users, and its keyboard, monitor, and mouse ports are all disabled — all server operations are conducted through Web Printer Manager Tool, Accxes Client Tools, printer drivers, or a printer's or scanner's control panel. Its 1 GB RAM delivers high performance when RIPping even the largest files, and the Accxes system architecture ensures full concurrency for all operations — the ability to RIP files, manage copy and print queues, accept scanner input, and run all other system operations simultaneously, without any loss of system performance.

The FreeFlow Accxes hardware slides into a saddle on the rear of the 6050A and connects to a TCP/IP network via a 10/100/1000 Mbps link, suitable for the fastest communications, with a single IP address. It connects to the 6050A Printer via P193 digital video link — again, high-speed communication for the utmost productivity. When used with the Wide Format Scan System, the IEEE-1394 (FireWire) connection delivers high-speed, real-time data capture, even when scanning full-color documents.

Most competitors define concurrency as scanning and printing at the same time, some systems can't even do that. FreeFlow Accxes supports RIPping, printing, job spooling, scanning (copying or scan-to-file), scan retrieval, and remote web management — all concurrently.

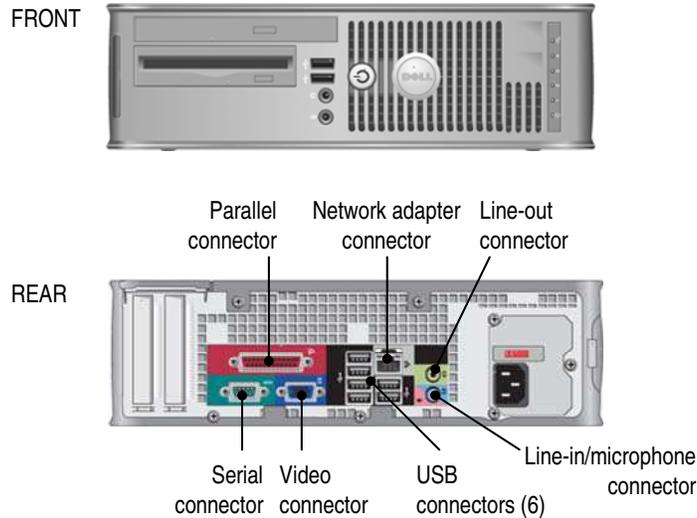


Figure 11. FreeFlow Accxes Print Server — front and rear views

**File Format Support**

Release v12.5 of the FreeFlow Accxes Print Server introduces support for the Bentley MicroStation DGN file format. The table below lists all file formats supported by FreeFlow Accxes v12.5.

**Table 7.** File formats supported by FreeFlow Accxes, v12.5

**New in Accxes v12.5**

- Support for Microstation DGN file format for printing.

Standard file formats	Optional file formats (feature key req'd)
<ul style="list-style-type: none"> <li>HP-GL, HP-GL2, HP-RTL</li> <li>C4</li> <li>FileNET</li> <li>CalComp 906/907/951/PCI</li> <li>TIFF 6.0</li> <li>NIRS</li> <li>VCGL</li> <li>CALS 1 and 2</li> <li>CCITT (G4, G3 1D, G3 2D, Packbits, RLE, Seed Row, and Adaptive)</li> <li>CGM (Level 1 with ATA ext.)</li> <li>Versatec Data Standards (VRF, Ordered vector, blocked raster, compacted raster)</li> </ul>	<ul style="list-style-type: none"> <li>Adobe: PostScript 3, PDF v1.6</li> <li>AutoCAD: DWF</li> <li>Raster: BMP, GIF, PNG, JPEG2000</li> <li>Other CAD: MicroStation DGN</li> </ul>

**Security**

Unlike most competitive controllers that use a Windows-based PC as a platform, FreeFlow Accxes runs on Linux, so there's no concern about the viruses, worms, and trojans that plague Windows-based systems. A built-in firewall blocks intruders from invading the system, and all except about a half-dozen of the more than 65,000 network ports have been deliberately blocked — again to keep intruders out. Also, the keyboard, mouse, and monitor ports are disabled, so no one can use them to maliciously gain access to the controller. There is no more secure controller offered in the wide format market.

In addition to the built-in security measures described above, FreeFlow Accxes offers Image Overwrite, enabled by Feature Key, to overwrite data written to the controller's hard drive immediately upon completion of a print, copy or scan job. The Image Overwrite feature was designed to a DOD specification and is such that the system, at any point in its operation, can be considered secure and all data will be removed no matter what operation the customer is performing — making it inaccessible to anyone after it has been overwritten.

Lastly, for customers with extreme security needs, FreeFlow Accxes can be outfitted with removable hard drives. Customers can purchase multiple hard drives for multiple projects or when they destroy an old one or lock them away for terminated projects. The removable hard drive kit includes a lock and key — so they're locked when installed.

## FreeFlow Accxes Specs Summary

Table 8. FreeFlow Accxes Print Server specifications

Feature	Description
Platform	Custom Dell PC; 2.66 GHz (min.) Celeron Processor; 1 GB RAM (std.); 80 GB HDD (min.)
Operating System	Linux
Protocols	TCP/IP, SNMP, lpr
Network	10/100/1000 BaseT
Printer drivers	Windows: XP/2003 Server/Vista (Microsoft certified) AutoCAD: 2002/2004/2005/2006/2007/2008 PostScript: XP/Vista (Adobe certified)
Client Software	Accxes Client Tools and Account Management Tools for Windows XP/2000 and Solaris 2.6–2.10

## User Applications

FreeFlow Accxes user applications and software include:

- **InstantAccxes** — gives users up to 10 monitored (“hot”) folders, each with its own print defaults; users drag and drop files into a folder for instant printing
- **Printer drivers** — for printing from AutoCAD and other Windows applications
- **Accxes Client Tools:**
  - *Document Submit* — for print job creation and printing
  - *Document Retrieve* — for retrieving scanned documents
  - *Printer Queue* — for checking printer and queue status
  - *Device Manager* — for connecting to Accxes-managed printers and scanners
- **Account Management Tool** — for managing printing, copying, and scanning data for FreeFlow Accxes-printers, copiers, and scanners
- **Web Printer Manager Tool** — for administering a FreeFlow Accxes controller over a network

The following sections provide brief descriptions of these applications.

**New in Accxes v12.5**

- InstantAccxes — drag and drop files to “hot folders” on user’s desktops for quick printing, including collated sets.

### InstantAccxes

When using InstantAccxes, collated sets print in alphanumerical order according to the file names.

InstantAccxes (new in v12.5 of FreeFlow Accxes) lets an administrator define up to 10 monitored (“hot”) folders on the controller’s hard drive, each with its own set of print defaults. The hot folders appear as shared drives on the user’s network that they can copy to their desktop. Users can then drag and drop files into these folders and the printer will process them according to the folder’s defaults. Folder defaults can include any or all of the following:

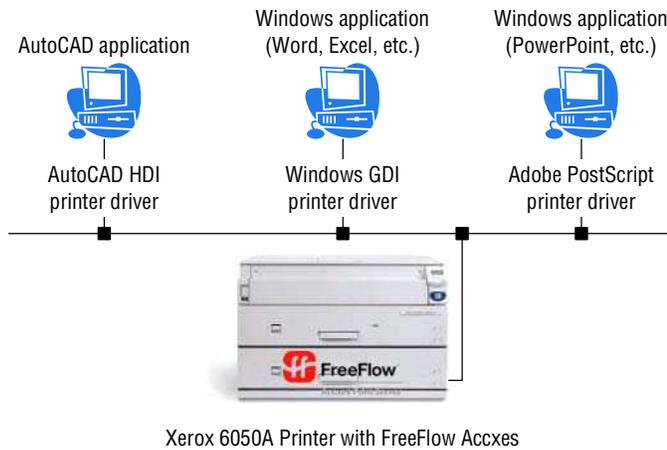
- Number of copies
- Collation
- Media size, type, and source
- Finishing (if connected)
- Rendering: type, halftones, line widths, grayscale, threshold, contrast, lightness
- Transforms: scaling, rotation, mirroring
- Justification: X-Y position

InstantAccxes is administered using the Web Printer Manager Tool (see later section). An InstantAccxes setup screen appears below.

The screenshot shows the 'InstantAccxes Server Setup' web interface. At the top, there's a navigation bar with tabs: Printer Queue, Configuration, Emulation, System Defaults, Utilities, Applications, Session Setup, and Help. The 'Applications' tab is active. Below the navigation bar, the main content area is titled 'InstantAccxes' and contains a sub-section 'InstantAccxes Server Setup'. This section has a checkbox for 'Enable InstantAccxes' and a dropdown for 'Active InstantAccxes Folders' set to '5'. To the right are input fields for 'Server Name (NetBIOS)', 'Server Description', and 'Server Workgroup'. Below this is a 'Print Options' section for 'Instant Folder 1'. It is divided into several sub-sections: 'Job Information' (Copies: 1, Collate: None), 'Media' (Media Size: Any, Media Type: Any, Media Source: Automatic Selection), 'Rendering' (Document Type: Graphics, Vector Halftone: Area Fill, Raster Halftone: Halftone Screen, Minimum Line Width (pixels): 1, Fineline Grayscale Rendering: Contone, Fineline Pixel Threshold: 7, Contrast: 0, Lightness: 0), 'Transformation' (Scaling: Disabled, 100, Rotation: 0, Auto Rotate checked, Mirror: Mirror X, Mirror Y, Line Width: Line Scale Mode), and 'Justification' (X Position: Center, 0.0, Y Position: Center, 0.0, Units: Inches). A 'Submit' button is at the bottom.

Figure 12. InstantAccxes screen

## Printer Drivers



Xerox 6050A Printer with FreeFlow Accxes

**Figure 13.** Applications, printer drivers, and the FreeFlow Accxes controller

Printer drivers convert the data displayed in an end-user application (Word, AutoCAD, etc.) into a format the FreeFlow Accxes controller understands. For example, when you print from Microsoft Word, the printer driver converts the Word (.doc file) document data shown on the screen into HP-GL2 — a data format that FreeFlow Accxes can interpret to ensure the printer renders output exactly as the application displays it. Likewise, when printing from AutoCAD, the HDI driver converts the displayed AutoCAD data (.dwg file) to HP-GL2 before sending it over the network to the controller.

The FreeFlow Accxes printer drivers also embed PDL (Program Job Language) code into the print data stream to tell the controller how to process the print job — e.g., how many copies to print, how to collate, etc. PDL is an industry standard so skilled customer personnel or Xerox can build custom interfaces easily.

Customers may download the current FreeFlow Accxes printer drivers for the 6050A at [www.xerox.com](http://www.xerox.com). They include:

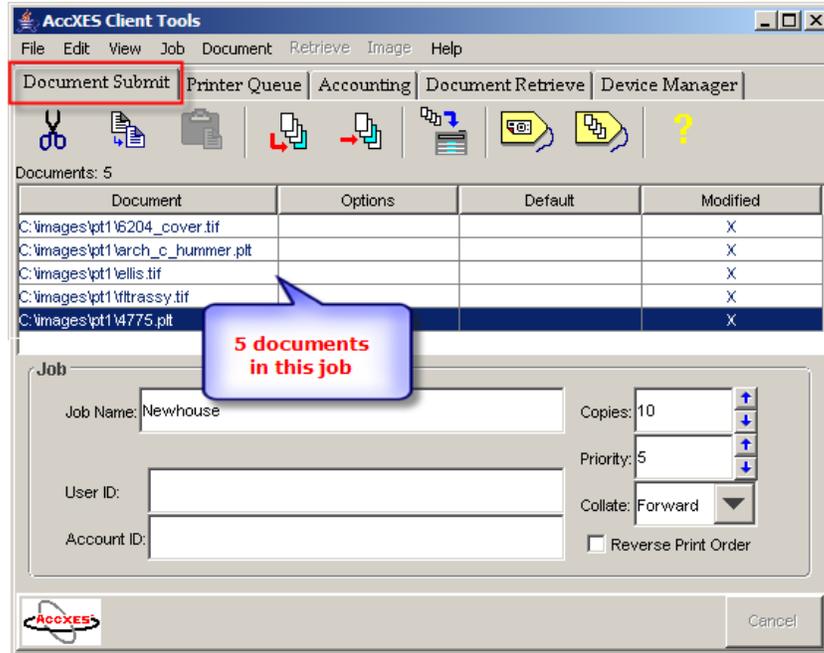
- **GDI** (Windows Graphic Display Interface) — for printing from Windows applications. GDI is Windows certified. Although there are HDI drivers for AutoCAD (see below), users can always use the GDI drivers for AutoCAD printing.
- **HDI** (Autodesk Heidi drivers) — for printing from AutoCAD 2002, 2004, 2005, 2006, 2007, and 2008. HDI is an Autodesk standard.<sup>1</sup>
- **PostScript Level 3** (Adobe certified) — for printing from Windows applications. While the driver is freely available, PostScript processing is an Accxes controller option. Although there are HDI drivers for AutoCAD (see above), users can also choose the PostScript drivers for AutoCAD printing.

Note: Earlier AutoCAD releases (r13/14, 2000, etc.) are only supported with the GDI driver or with older HDI drivers that may not have all features.

<sup>1</sup> FreeFlow Accxes HDI drivers will not be updated with the 6050A model number. Existing FreeFlow Accxes HDI drivers for the 6030/6050 can, however, be used with the 6050A. Download the FreeFlow Accxes HDI drivers from [www.xerox.com](http://www.xerox.com) and use the 6030 or 6050 model number.

Accxes Client Tools

*Document Submit*



**Figure 14.** Document Submit screen

Users often need to assemble and print collated jobs from multiple digital documents. Document Submit provides this capability. It lets users:

- Add, remove, or re-order documents in a job
- Set print options (e.g., media, scaling, stamps, labels, etc.) — for an entire job and for each document in a job
- Send jobs to a specific FreeFlow Accxes-controlled printer
- Save, recall, edit, and reprint any job
- View documents in a job with a customer-supplied third-party viewer

### Document Retrieve

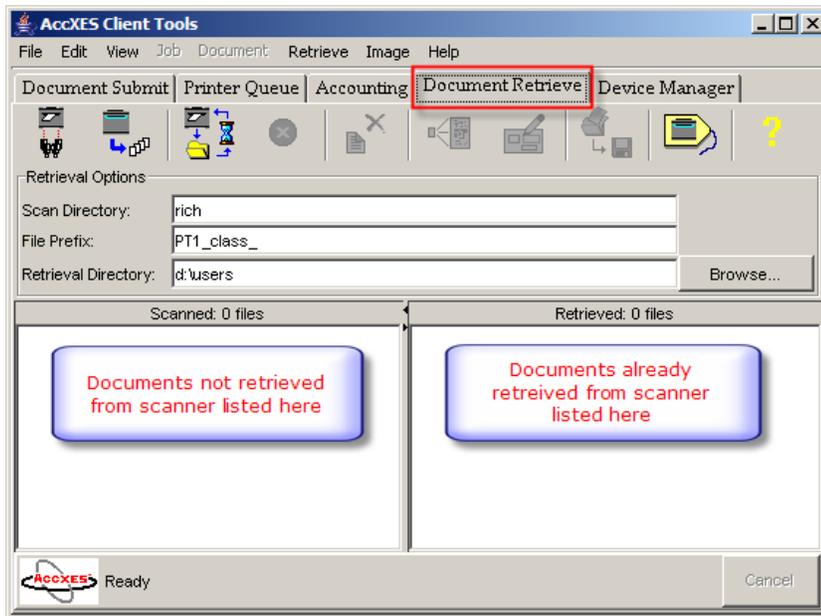


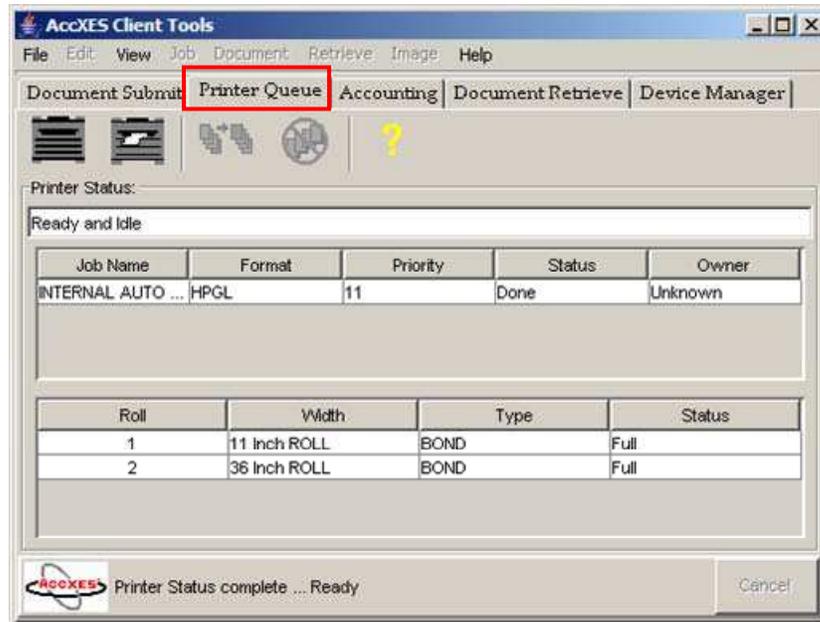
Figure 15. Document Retrieve screen

As users scan documents with the Wide Format Scan System, digital image files accumulate in mailboxes or folders on the FreeFlow Accxes controller. Document Retrieve provides a tool to retrieve the image files from the controller and store them in a network or local directory. The user can choose to retrieve files manually or automatically.

Users can also:

- Preview and delete images before or after retrieving them from the controller
- Automatically name retrieved images
- Launch a third-party raster editor (for despeckle/deskew) for retrieved images
- Add retrieved images to a current print job list in Document Submit Tool

*Printer Queue*



**Figure 16.** *Printer Queue screen*

Before sending print jobs from their workstation to a printer, users may want to check what media is installed in that printer or whether the printer is online and ready. They may also want to find out the status of their print jobs. Printer Queue lets users:

- View overall printer status — idle, busy, etc.
- View the status of active and complete jobs
- Cancel or change the priority of jobs
- View the printer's roll media status — including widths, type, and whether rolls are empty, low, full, or not loaded

### Device Manager

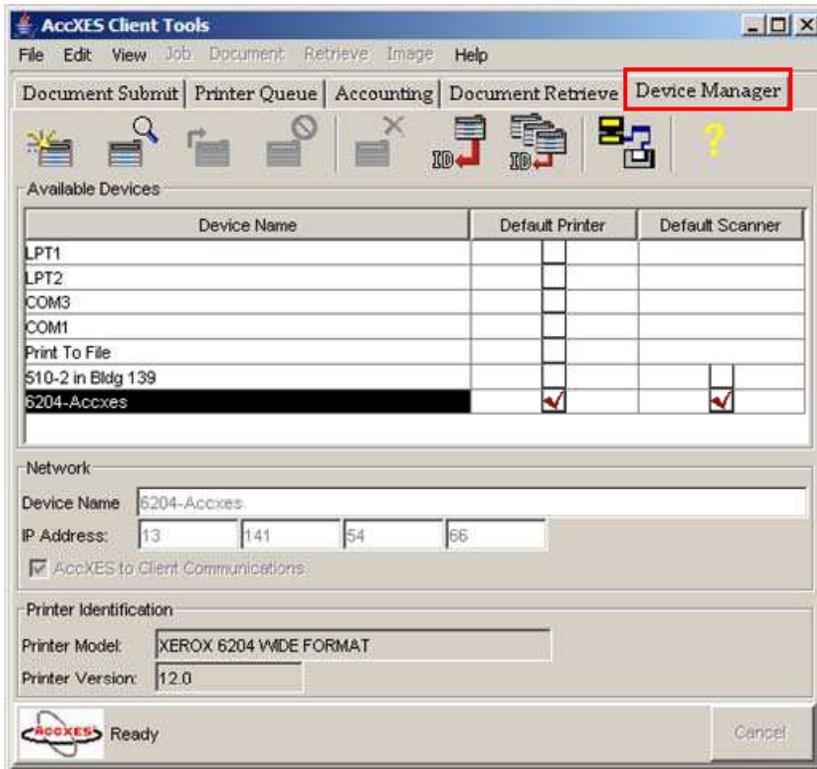


Figure 17. Device Manager screen

Before using the Document Submit, Document Retrieve, or Printer Queue tools to work with a FreeFlow Accxes-controlled printer or scanner, users must connect to the controller with Device Manager. Capabilities include:

- Specify a default device for DST, DRT and Printer Queue operations
- View current controller connections for available scanners and printers
- Add or edit the properties of a printer or scanner association
- Delete a connection to a printer or scanner

**Web Printer Manager Tool (Web PMT)**

FreeFlow Accxes v12.5 firmware gave the Web Printer Manager Tool a complete makeover. The features and functions from previous versions are still available — the look and feel, however, are completely different. Below are two typical screens from v12.5.

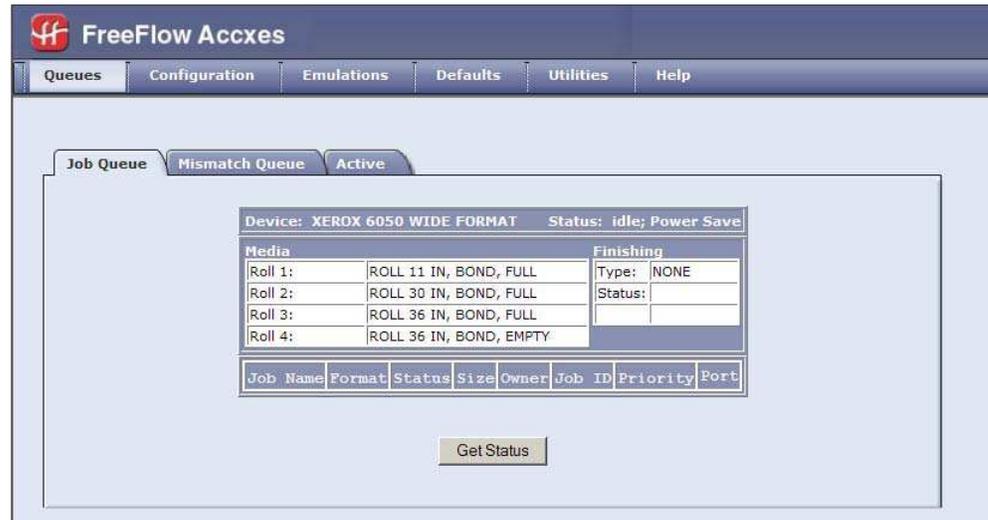


Figure 18. FreeFlow Accxes Web Printer Manager Tool — Job Queue



Figure 19. FreeFlow Accxes Web Printer Manager Tool — Configuration

The built-in web server in the FreeFlow Accxes controller makes this tool universally accessible to everyday users and system administrators via their web browsers.

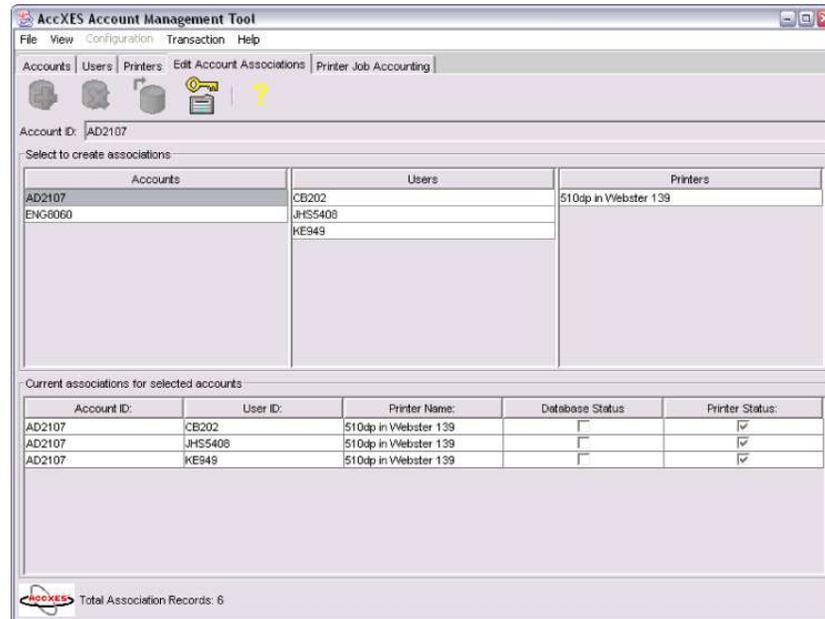
**All users** (without password) may:

- View printer status (including media inventory) and the printer queue
- View the printer defaults
- Delete their own print jobs
- Generate test prints showing printer configuration data

**System administrators** (with password) may:

- Change the priority of or delete any job in the printer queue
- Set up printer defaults
- Save and load pen palettes
- Load stamps
- Upload controller, scanner, and printer firmware updates

*Account Management Tool (AMT)*



**Figure 20.** Account Management Tool showing accounts and users associated with a printer

When enabled with the Job Accounting option, every FreeFlow Accxes controller continually maintains a log of all activity, including:

- Type and size of media used
- Exact size of image scanned, copied, or printed
- User who performed the job
- Account and directory where the job was saved
- Date and time of each job

Using the Xerox Account Management Tool (AMT), administrators can collect and manage this job accounting data for multiple FreeFlow Accxes controllers. Key features of the AMT include:

- Stores up to 9,999 accounts, up to 9,999 users, and up to 999 printers in any combination of fewer than 10,000 associations (nn users x nn accounts x nn printers = <10,000 associations). For best system performance, we recommend limiting the number of accounts and the number of users to 1,000 each and the number of printers to 100.
- Imports ASCII-formatted legacy data, using parameters specific to the type of legacy data being imported.
- Exports job accounting data to an Excel spreadsheet.

## File Formats: Technical Issues

### *DWF files*

First released with v12.0 of FreeFlow Accxes firmware, DWG (Design Web Format) files are supported through the optional “AutoCAD” feature key. Autodesk, Inc. created the DWF file format to make the sharing, viewing, and printing of design documents easier for users. It removes the need to share DWG (AutoCAD) source files — an editable file format — much as Adobe PDF provides users the ability to share documents using the Acrobat Reader without owning the source applications.

A DWF file is an as-plotted view of a DWG file — making it useful for printing. Unlike a DWG file, however, it does not require any supporting files such as special fonts and x ref files: “what you see is what prints.”

### *DWF Creation Considerations*

Users can create DWF files directly from AutoCAD and can combine multiple sheets and multiple DWG files into a single multi-sheet DWF file. Autodesk provides free tools for creating DWF files from Microsoft Office applications such as Word and also provides free DWF plug-ins for the following common competitive CAD applications:

- Pro/ENGINEER
- SolidWorks
- CATIA

In addition, there are many third-party utilities for creating and managing DWF files. DWF is increasing in popularity and there is much discussion in the wide format user community about the relative merits of DWF vs. PDF, with strong advocates on both sides of the issue.

### *DGN files*

New with v12.5, FreeFlow Accxes firmware supports MicroStation DGN files through the optional “Other CAD” feature key. Although DGN is not as widely-used as Autodesk’s DWG, it is nevertheless very common in many large projects, including buildings, DOT projects (highways and bridges), process plants, and shipbuilding.

### *Other Raster files*

Also first released in v12.1, FreeFlow Accxes firmware supports the following common raster file formats through the “Raster” feature key.

- **BMP** — Windows bitmaps; common in office documents
- **GIF** — Graphic Interchange Format; common in office documents and on web pages
- **JPEG2000** — Joint Photographic Experts Group; common digital camera format and also found on web pages
- **PNG** — Portable Network Graphics; common in office documents and on web pages

Note that to ensure font availability, we recommend that customers embed the fonts into DWF file at creation. Users can also upload TrueType fonts to the FreeFlow Accxes controller using the Web Printer Manager Tool.

Users should check the AutoCAD website for current versions of these free (and useful) DWF tools:

- DWF Viewer
- DWF Design Review
- DWG TrueView

Note: DGN files may have external references. External files are not supported; DGN files containing external references will generate an error or warning page.