White Paper

Production Printing & Media

March 2015

Automation and the Sharp Pro Series

New Features in the Production Digital Color Market

Service Areas

On Demand Printing & Publishing

On Demand Printing & Publishing Europe

Comments or Questions?

InfoTrends
A Questex Company

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Executive Summary

Sharp's Pro Color Series Color Document Systems, introduced in September of 2013, is made up of two models: the 75 ppm MX-7500N and the 65 ppm MX-6500N. Intended for graphic arts in-plants, central reprographic departments, and on-demand environments, the Pro Series has several features that differentiate it from competitive models. These include the ability to produce a full-bleed color booklet with a single knife trim, a user-friendly front-end system, a reliable paper-feed system, and a very compact footprint.

Key Findings

- **Full-bleed booklet design possibilities**: Sharp's Pro Series products can print to the edge of the sheet (top and bottom), which opens up automated design opportunities—including full-bleed booklet production when used in combination with a light duty, single-knife booklet maker, or production booklet maker.

- **Operator-centric interface**: The Pro Series products have an easily accessible keyboard and monitor on the device itself, allowing direct access and user-friendly operation, including direct use of the EFI Fiery Command WorkStation for color critical environments that need precise job management.

- **Reliable air-feed**: Sharp engineers have designed an optional large capacity tray with a triple air-feed system that allows a wide range of media to be run and also reduces the chance of multiple sheet feeds, which typically cause paper jams.

- **Small footprint**: Combining these features in a compact design allows the Pro Series' capabilities to be leveraged even in size-constrained environments.

Recommendations for Those Acquiring a Production Digital Color System

- In looking for a digital color print solution, consider the value of automation in limiting the number of steps and providing operators with powerful production tools. Production color digital systems that innovate through features such as full-bleed booklets help users produce work quickly and efficiently.

- Short runs and quick turnaround work are the bread and butter of many quick print, small commercial print, and in-plant environments. Nevertheless, do not overlook other important values of digital print, including the ability to personalize documents and print them as needed from a document archive. The user-friendly operator interface of the Pro Series and software provided by the Fiery front-end are essential tools that help operators leverage the advantages of production digital color print.

- InfoTrends' research shows that providing finishing services is a key success factor for print service providers. Consider how automated in-line stapling and booklet making features, such as those provided in Sharp's Pro Series, can provide value to the people you serve.

Introduction

In today's changing market environment, print service providers of all types are looking to turn around jobs quicker in the most automated fashion with the fewest errors. At the same time, they are also looking to provide value to their customers in the form of more timely, focused, and accessible content. Providing operators with powerful production tools is a key part of this equation. Over the past year, product introductions in the production color digital print market have been pushing the envelope, providing higher speeds and new capabilities at very attractive price points. The Sharp Pro Series products are a great example of this trend. In this Sharp-sponsored white paper, InfoTrends examines these products and explores the implications for buyers of production color digital print systems.

Figure 1: The Sharp MX-7500N with Saddle Stitch Finisher, Inserter, High Capacity Stacker, Multi-Folding Unit, and Large Capacity Paper Tray

Source: Sharp

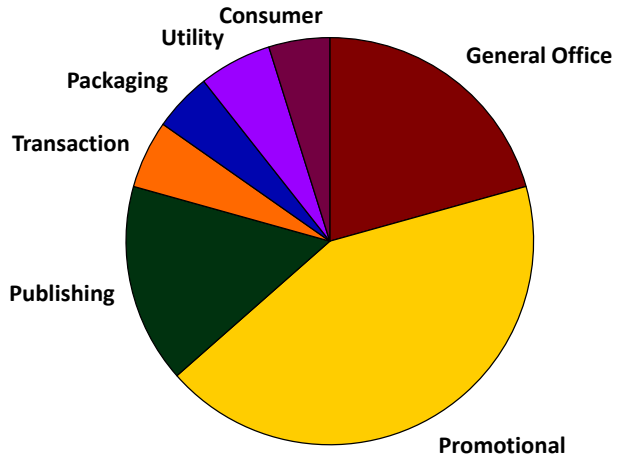
Market Overview

A few market realities are inescapable for print service providers. Traditional print reproduction methods, which are best suited to manufacturing many copies of the same content, are under increasing pressure to meet tight deadlines and to provide economic short runs of the most up-to-date and targeted information. Addressing this, digital print methods are well-established today for short-run, quick turnaround, targeted, and personalized work. At the same time, high-speed Internet connectivity and mobile phone technologies have enabled information delivery in ways that are impossible for print to achieve. Yet the market desire for print remains in many applications where a physical, non-ephemeral document is desired, or where print can be used in combination with electronic media to leverage the best of both worlds. The transition from long- to short-run print and the impact of electronic delivery are happening at a time when users want more relevant and colorful documents in the appropriate quantities and delivered on demand. Sharp's Pro Series provides a strong example of how users can take advantage of today's latest production color digital print technologies to meet their clients' needs.

A Focus on Color Digital Print Applications

In 2014, cut-sheet production color digital print volume in the U.S. was around 100 billion pages and growing at about a 4% annual rate. Print applications in production digital color environments tend to fall into a few top categories. The bulk of these are general office, promotional, and publishing pages. Within those categories, the largest application segments are brochures, direct mail, office documents (like presentation and letterhead), books, and booklets. Consumer applications driven by digital photography have also grown tremendously over the past few years. Virtually all of these documents require some type of finishing, whether it is trimming, folding, binding, or inserting.

Figure 2: U.S. Production Color Cut-sheet Digital Print Pages (2014)



Source: InfoTrends' U.S. Digital Production Printing Application Forecast: 2013-2018

The Changing Needs of Print Service Providers

InfoTrends regularly surveys print service providers about their views of the market. Our most recent study *Production Print Services in North America: Understanding Industry Transformation* (InfoTrends, 2014) surveyed more than 650 print service providers (including commercial and in-plant), and provides some important perspective on what successful print service providers are doing to keep ahead of the market.

Three conclusions from the study stand out and are particularly relevant in light of the capabilities of the Sharp Pro Series:

- **Print service providers value speed in their digital print purchase plans**: The most common driver for acquiring new equipment is that the speed of current equipment is too slow. For successful print service providers, the growth in print volume is the second most important reason for acquiring new equipment. The 75 ppm and 65 ppm capabilities of the Sharp Pro Series make them attractive to many print service providers who value the turnaround time and print volume implications of higher speed.

- **Growing print service providers generally offer more finishing services**: The print service providers with the highest growth rates tend to put a higher emphasis on finishing capabilities, including in-line methods. This trend toward automation is a common theme that includes not only finishing, but workflow integration to web-to-print software and management information systems (MIS). Being able to integrate finishing in-line for full-bleed booklets helps end users keep jobs in-house and provide quicker response times for their clients.

- **The highest growth print service providers produce more variable data**: Print services providers that use their digital print systems more extensively for variable data printing tend to be more successful. These sites use their monochrome and color digital printing systems in personalized variable print applications for about a third of their print volume. Leading-edge print service providers know that personalization is an important digital print value. Systems like Sharp's Pro Series help simplify the personalization process with an operator-centric user interface as well as tools from EFI.

Digital color systems with speeds of 60 pages per minute and higher are well suited to meet the needs of the types of service providers that InfoTrends surveyed. Adding on top of that the ability to automate finishing in-line and produce customized documents using variable data, and it is clear to see how production digital print is well-suited to today's needs. Another advantage of production digital print is that it can integrate well with value-added non-print services, for example, cross-media campaigns.

Figure 3: The Sharp MX-7500N with Saddle Stitch Finisher (full-bleed booklets can be produced with this configuration)

Source: Sharp

The Sharp Pro Series Color Document Systems

The Sharp Pro Series Color Document Systems products are the 75 ppm MX-7500N and the 65 ppm MX-6500N. They are designed for in-plant, quick, and commercial print environments where on-demand workflows are required. Both devices offer scanning and network printing capability, but what differentiates them from other products in their class are three key features:

- **Top and bottom edge-to-edge printing**: The MX-7500N and MX-6500N are able to print to the edge of the page on two sides[1] of the sheet. This has a couple of implications from a design perspective. First, it means that a full-bleed booklet can be produced in one step by the MX-7500N or the MX-6500N in combination with a single knife trim booklet maker. (Producing such a booklet with most other devices would require a three-knife trim booklet maker.) In addition, designers can produce brochures and flyers that bleed to the top and bottom of the sheet without having to make any trims after printing. Out of necessity, many digital print designs have a white unprinted border around them because users cannot be bothered (or may not have the equipment) to accurately trim the page down. Sharp's MX-7500N and MX-6500N provide an important step forward by allowing edge-to-edge printing on two sides of the sheet.

Figure 4: Edge-to-Edge Printing on the Sharp Pro Series for Different-sized Sheets

Figure 5: Examples of Page Designs Using Edge-to-Edge Printing - Saddle-stitched & Square-back Full Bleed Booklets (left); Two-edge Bleed Promotional Piece (right)

(on 11" x 17" paper) (on 8.5" x 11" paper)

Source: Sharp

[1] Imagine an 11" x 17" sheet passing through the Sharp MX-7500N short edge first. The Pro Series can print full bleed across the sheet with a small white margin on the short sides. For an 8.5" x 11" sheet traveling through the printer, the long edge would be first and the bleed would be on the short edge side.

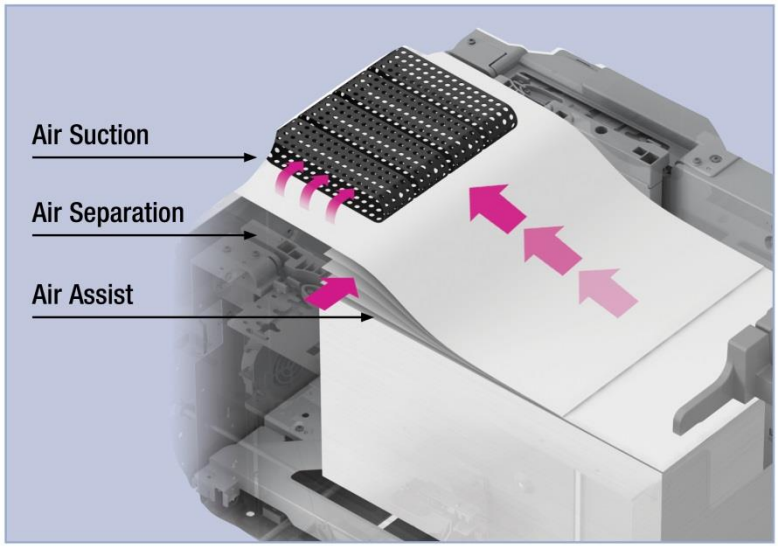
- **EFI Fiery Command WorkStation integration**: The keyboard and touchscreen on the MX-7500N and MX-6500N are valuable automation tools that put the operator right where they are needed. Leveraging that feature, Sharp and EFI have integrated the Fiery Command WorkStation so that the operator can access it through the keyboard and touchscreen. Fiery users in production environments often want to use the features of Fiery Command WorkStation. Having these features at their fingertips while standing at the device is an important value of the MX-7500N and MX-6500N.

Figure 6: Keyboard and Operator Interface on the Sharp MX-7500N

Source: Sharp

- **Triple air-feed technology**: Assuring that the paper feeds well and does not double feed or jam is an essential part of any production digital printing system. The triple air-feed system on the Sharp MX-7500N and MX-6500N helps reduce the chance of multiple sheet feeds, which typically cause paper jams. This feeding technology helps improve productivity and has the benefit of being able to handle a wide variety of substrates, including coated, linen, and textured stocks.

Figure 7: Triple Air-feed Technology in the Sharp Pro Series



Source: Sharp

The September 2013 introduction of the MX-7500N and MX-6500N models brought Sharp greater visibility in production printing environments, but it has not only been

automated digital color that has raised Sharp's stature in the market. The company has also been active in black & white digital printing—most notably with the MX-M904, MX-M1054, and MX-M1204 High-Speed and Light Production Monochrome Series. The top-of-the-line MX-M1204 model has a top speed of 120 ppm.

Table 1: Specifications of the Sharp Pro Series

Specification	MX-7500N	MX-6500N
Maximum color speed (A4/letter images[2] per minute)	75 ipm	65 ipm
Spatial resolution (dots per inch)	1,200 by 1,200	
Maximum printable area	13" x 19.2"	
Supported paper sizes	13" x 19.2" (max.) 3.625" x 5.5" (min.)	
Supported paper weights (varies by tray)	As low as 15 lb. bond (55 gsm) Up to 110 lb. cover (300 gsm)	
Paper capacity (sheets)	13,500 (max.) 3,000 (standard)	
Duty cycle (in A4/letter images per month)	350,000	325,000
Footprint	33.25 (w) x 33.25 (d) x 48 (h) – Base config.[3]	
Selected Options	External Fiery Color Print Server Large-capacity feeding Two-tray inserter Large-capacity stacker with card 100-sheet stapler/finisher 100-sheet stapler/saddle stitch finishing Bypass trays Long paper feeding tray Two-tray inserter Multi-folding unit Plockmatic booklet maker GBC SmartPunch Pro	
List price (base configuration)	$50,760	$42,000
Base configurations include:	Print engine with 3,000 sheet paper capacity and network printing & scanning capability via the embedded controller	

[2] InfoTrends uses the terminology "images per minute" to accurately reflect productivity. For example, an A4/letter-sized document that is printed on both sides has two page-sized images, though there is only one sheet (or page).
[3] The longest configuration leveraging the optional feeding and finishing capabilities (including the Plockmatic production booklet finisher) is 26.5 feet.

Figure 8: The Sharp MX-7500N with 100-Sheet Staple Finisher, Inserter, and Large Capacity Paper Tray

Source: Sharp

InfoTrends' Opinion

The combination of innovative features, compact footprint, and affordable acquisition price make Sharp's Pro Series attractive to a range of production print environments. With the industry tending toward short-runs, quick turnarounds, and more personalized communications, there is ample room for products like the Pro Series to facilitate automation and simplify production for operators.

If you would like to see a video perspective on the Sharp Pro Series, either click on this link or search YouTube for "Jim Hamilton" and "Sharp MX Pro."

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Jim Hamilton is the Group Director responsible for InfoTrends' Production Hardware consulting services in the areas of production copying and digital printing, wide format, and labels & packaging. Mr. Hamilton is responsible for market research, providing forecast analysis, supporting the consulting service, and creating analysis reports.

Comments or Questions?