



## **New Color Printing Technology is the First to Deliver High-Speed, Quality Color at a Breakthrough Price/Performance**

**Page-wide technology, backed by 1,400 U.S. patents, is available for OEMs targeting home, office, photo-kiosk and label markets**

The new Memjet™ color printing technology, the first to combine high speed and quality color at a leading price/performance, was unveiled today in Kia Silverbrook's keynote address at the Global Ink Jet Printing Conference in Prague.

The new technology prints full-color images at 60 pages per minute (ppm), many times the inkjet industry standard. The technology, which will be a fraction of the price of high-speed color laser devices, will soon be available for OEMs targeting the home/office, photo-kiosk and label markets.

The Memjet technology, which has been in development for more than 10 years, is backed by more than 1,400 U.S. patents; about 2,000 more are pending. Silverbrook Research, the developer of the Memjet technology, received 452 Memjet-related patents from the U.S. Patent Office last year alone. Patents have also been awarded and are pending in many other countries.

“Memjet's technology delivers on the promise of inkjet for the broader market, with very fast speeds, high-quality color, and significantly lower purchase and operating costs,” said Robert Palmer, director of printer research for InfoTrends, Inc., a market analyst firm headquartered in Weymouth, MA. “With its strong patent portfolio, Memjet is in a favorable position to expand the market opportunities for inkjet technology. Clearly, this is a technology to watch.”

“Conventional wisdom is that you cannot have high speed, quality color and low cost all at once,” said Bill McGlynn, CEO of Memjet's home and office business. “This technology turns that notion on its head, making page-wide color printing practical and cost-effective. We believe this breakthrough technology will change the printing industry by eliminating the cost and performance barriers of color, and by allowing both incumbents and non-incumbents to compete on a new playing field.”

## **Speed, Color and Price/Performance**

The page-wide, ultra-compact technology combines the low cost and ease of use of inkjet technology with the speed and quality of laser, all at a competitive price.

**Speed:** The technology can print full-color, photo-quality images (4x6" or A6) at 30 ppm, full-color and black-and-white business communication (8.5x11" or A4) at 60 ppm, and draft mode at 90 ppm. In the label, tag and ticket market, this translates into 6 inches per second for full 1600x1600 color printing and 12 inches per second for 1600x800 color printing. This compares to industry standards of about 1 to 2 ppm for 4x6" photos, 10 to 15 ppm for cost-effective "business" color, and 30 ppm for draft mode. The technology also replaces similar-speed, 200 dpi label-printing technologies with a high-resolution color alternative.

A customized driver chip controls each printhead and can calculate 900 million dots per second. Because the Memjet technology prints the whole page at a time, without any warm-up time, the optimized system virtually eliminates waiting for a print job.

**Color:** The technology prints at native 1600x1600 dpi full resolution with the industry's smallest drop size (just over one picoliter or one trillioneth of a liter). This design enables high-quality color photos, labels and business documents with virtually instantaneous drying times and low operating costs.

**Price/Performance:** The Memjet technology boasts the industry's leading price/performance ratio. A business-class, 60 ppm Memjet-based printer is expected to retail for under \$300. The ink pricing is expected to lead the market and help eliminate the price penalty for printing color.

The technology is scalable from 20mm to more than 2 meters (6 feet), making it appropriate for everything from small-format phone and camera printing to large-format commercial printing applications. The technology is available now for OEMs interested in home and retail photo applications (4x6" or A6), general business devices (8.5x11" or A4) and on-demand label, tag and ticket-printing devices.

## **Technology Implications**

The technology has major implications for the printing industry. It will allow new brands to quickly enter the market without large development costs, and enable existing brands to extend their portfolios and improve their competitive positions.

By setting a new performance standard and significantly lowering acquisition and operating costs, the technology will likely accelerate the shift from monochrome laser printing to color printing in businesses. It will also encourage businesses to decentralize color printing, making it more practical for the workgroup.

Whether printing at home or in retail, the Memjet technology offers a fast, convenient option for printing photos. The technology will also expand the retail options for photo printing by enabling smaller-format, lower-cost, photo-kiosk printers.

And, by adding color and increasing the quality and reliability of label, tag and ticket printing, the technology can potentially disrupt existing thermal label-printing applications.

### **Patent-backed Technology**

The Memjet technology is comprised of three highly integrated components: page-wide printheads, driver chips and ink.

The printhead consists of a continuous row of 1mm x 20mm silicon print chips connected end-to-end. Each chip contains 6,400 nozzles, equaling 32,000 nozzles in total for a 100mm (4") printhead and 70,400 nozzles for a typical lettersize/A4 printhead. The nozzle density is 17 times higher than the nozzle density the market leaders offer in their leading printhead designs, which contributes to the cost effectiveness of the new technology.

The ultra-compact, continuous color printhead stretches from one edge of the page to the other. Unlike traditional scanning inkjet printheads, the Memjet printhead does not move, reducing vibration, noise and mechanical complexity, while dramatically increasing performance.

### **About the Memjet Companies**

The Memjet companies specialize in fast, high-quality, color-printing technology at the industry's most favorable price/performance ratio. The companies supply Memjet print engine components and consumables, including printheads, driver chips, software and ink. Memjet Home & Office, Memjet Labels and Memjet Photo Retail were established to be the sole licensees of the Memjet technology from Silverbrook Research Pty. For more information on the technology or the Memjet companies, email [info@memjet.com](mailto:info@memjet.com) or visit [www.memjet.com](http://www.memjet.com).

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