

# Xerox Wide Format IJP 2000 Technology

## Print head, Controller Chip, Software & Ink

### Game-changing print head.

The IJP 2000 print head is a radical shift in print head design. It uses “waterfall” technology where each print head fires millions of ink drops per second resulting in high-speed wide format printing with impressive image quality.

Unlike traditional inkjet technology, the IJP 2000 print heads print in one pass instead of scanning back and forth across the page. While dramatically improving performance, this fixed-head architecture makes the IJP 2000 faster, more mechanically sound, and more energy efficient than other available technology.

### Fast, flexible, affordable.

With its unparalleled nozzle quantity and density—70,400 nozzles per head, up to 17 times that of existing print heads in the market—the IJP 2000 print head can continuously fire 700 million drops per second. Print heads are designed as customer-replaceable components, allowing end-users to keep their printers running at peak performance year after year while protecting their investment. They also require less electricity than a toner-based laser printer. Put it all together and the IJP 2000 print heads represent a clear departure from existing inkjet, laser and LED architectures and offer a compelling choice for wide format printing and imaging customers.

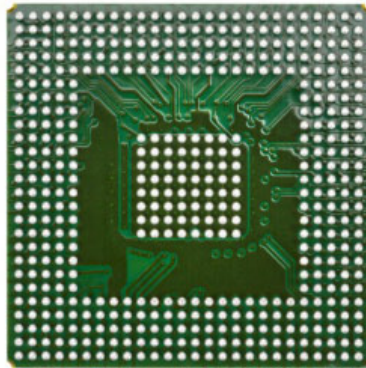
### Print head Overview

- Fires more than 700 million drops of ink per second
- 70,400 ink nozzles
- 17 times the nozzle density of traditional inkjet print heads
- 1600 x 1600 dpi-quality at 6 inches/ sec (300 mm/sec)
- 9 inches wide (222.8 mm)
- 5 color channels
- 11 Integrated Circuit (IC) Chips
- Self-cooling
- Minimal warm-up time



### Smart chip.

Controlling print heads as fast as the IJP 2000's requires chips that are just as fast. The IJP 2000 controller chips support high-speed printing of 6 inches per second, while driving all 70,400 nozzles on the print heads and processing and accounting for 774 million drops per second. High-performance print pipeline expands print capabilities to provide full dot level control, while supporting real-time print data streaming from the Caldera GrandRIP+ for advanced control of print quality and color management.



### Speed performance.

Mega-fast print heads and controller chips are only as good as the software that drives them. The IJP 2000 software has been developed from the ground up to maximize speed, stability and efficiency. Modular software components are designed to seamlessly interface with the IJP 2000 controller electronics and firmware.

### A formula for success.

Supporting a print head that's up to fifteen times faster than traditional inkjet print heads requires the world's fastest ink. Specially formulated for the IJP 2000 print heads, the inks uniquely meet the demands of high-speed drop ejection, single-pass printing and ensure reliable, high-quality printing for the life of the print head.



### Strictest quality.

IJP 2000 inks are manufactured to very tight tolerances with extremely low impurity levels to ensure consistent quality and to maximize print head life. Advanced dye colorants have been chosen to achieve the highest image quality and reliability at high speeds. And the print head's microscopic 1.3 picoliter ink droplets absorb into typical substrates in milliseconds, so prints of all types are completely dry the second they exit the print path, without the use of dryers.

### High-Performance Controller Overview

- Flexible FPGA chip platform
- 12.5 Gb/s peak transceiver speed
- 479,000 logic cells
- 34 MB RAM

### Software Overview

- 32 bit RISC controller
- 648 MHz CPU

### Ink Overview

- Created specially for the IJP 2000 print head
- Water-based
- Four color ink formulations (CMYK)
- Absorbs in to substrates in milliseconds
- Ink cartridges are chipped to ensure correct usage