

Wide Format Photo Printer

L I G H T J E T

EXCEPTIONAL DETAIL



FAST ROI

LOW MATERIALS COST



RAZOR SHARP TEXT



4,000 dpi APPARENT RESOLUTION

HIGH GEOMETRIC ACCURACY



TRUE PHOTO QUALITY

NO INKS OR TONERS



Redefining Photographic Quality

Cymbolic Sciences LightJet® printers set the standard for true photographic quality. Our internal drum system holds the media stationary while printing, achieving image quality superior to all wide format printers – photographic, inkjet and electrostatic. And with its superior system software and a 200 dpi option, LightJets are more productive than ever. Using a lasers to expose conventional photographic material, the LightJet images a 40x50"/102x127cm print in under four minutes (at 200 dpi). All LightJet models include an open interface, which allows you to choose the workflow solution that best fits your production environment. LightJet technology is successfully running in more than 400 sites around the world.



Award Winning Technology

1996	DPI Product of the Year
1997	PEI Cool² Award
1998	PEI Cool² Award
1998	Winner, DIMA Shoot Out



CREATIVE TYPE DALLAS, TEXAS << *We were looking for the ultimate true continuous-tone, photographic print. We finally found it with the LightJet 5000.* >> TROY MCGINNIS OPERATIONS MANAGER

1 Sharp Text, Exceptional Detail

The LightJet's image quality is superior to competitive photo printers because its imaging technology ensures a constant pixel size, shape and intensity over the entire image. Media is held stationary within a precision internal drum, while a spinning mirror directs light from 3 lasers to expose conventional photographic materials.

2 True Continuous-Tone Printing

Using red, green and blue lasers, the LightJet achieves true continuous-tone photographs without visible dots. Inkjet and electrostatic printers, which simulate photo quality with half-tone dot patterns, would need to image at 4,000 dpi to duplicate the same image crispness, highlights, and shadow detail. LightJet photo printers set the standard for backlit displays.

3 Ultimate Color Fidelity

The LightJet design incorporates advanced laser technology to optimize color range and color resolution. Its 36-bit color space, capable of producing 68 billion colors, ensures optimum control over the light source to reproduce color with perfect fidelity. In comparison, other photo printers are limited to 24 bits or 16.7 million colors.

4 Real-Time Hardware Interpolation

Using our patented adaptive 16-point bi-cubic algorithm, the LightJet 5000 enhances sharpness through on-the-fly pixel interpolation. Because the pixels are faithful to the original image, the system can output small files at high resolution with no loss of sharpness. Unlike software interpolators, which limit the flexibility of the interpolation process, our hardware uses complex algorithms to produce the best possible results. For example, the LightJet's adaptive interpolation gives users the ability to sharpen some areas of an image, while maintaining smoothness in other areas – no other printer has this capability.

5 Exceptional Productivity

With our new 200 dpi option, the LightJet 5000 will print a 50x50" image in 4.1 minutes (on A4 paper). Smaller images are produced even faster. Inkjet printers operating in "photographic mode" can take up to 10 times longer to produce a half-tone image.

6 Optional Software Optimizes Workflow

Cymbolic Sciences has created an open interface that allows for numerous workflow solutions. System Manager XL is optional software that incorporates features that can accelerate workflow when producing a mixture of print sizes from a variety of image data files.

- The software accepts PostScript (RGB/CMYK) and TIFF (RGB/CMYK) intermixed on the same page with no preprocessing required.
- The integrated PostScript RIP automatically calculates and RIPS a file to size with no operator intervention.
- Both PostScript and TIFF files, either in RGB and CMYK, can be previewed and color adjusted. Visual feedback is provided to the operator for color correction.
- CMYK files are converted to RGB as the files are imaged with no pre-processing required.
- Different color corrections can be applied to individual image files that are printed on the same page.

Distinct sizing, cropping and interpolation factors can be applied to each image, on-the-fly, while imaging.

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Affordable Investment

If you think a photographic printer is beyond your reach, you'll be surprised by the affordability of a LightJet 5000. Even running at half capacity, you can see a return on investment in as little as three months. LightJet's price and maintenance costs are much lower than competitive systems. And since the LightJet images on inexpensive photographic materials, you'll save on material expenses over inkjet and electrostatic technologies. With low paper costs and no inks or toners to worry about, your profit per print is high.

Multiple Applications

Whether you're producing posters for point of purchase displays, tradeshow graphics or portrait packages, Cymbolic Sciences has a LightJet wide format printer that is tailored to meet your needs. Choose from a variety of models and options that vary resolution, maximum print size and price points. Our range of LightJets also includes a remote sensing option for applications requiring high geometric accuracy such as aerial photography and satellite imaging.

Long-Lasting Media

Photographic materials are long lasting and resistant to fading so your customers will be happy with their LightJet prints for a long time. Some paper manufacturers specify archival quality photo paper that are color fast for several generations.

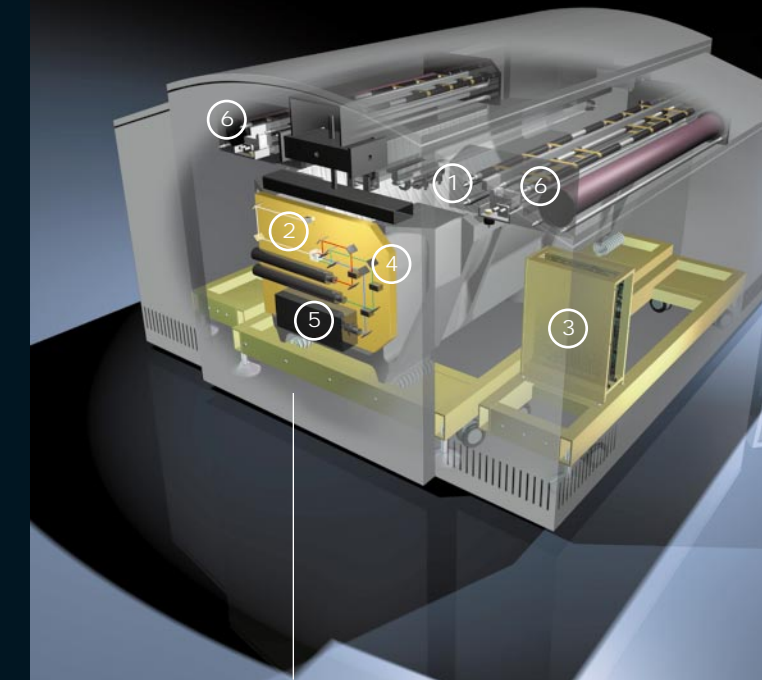
Open Interface

Cymbolic Sciences has created an open interface so you can choose the ideal digital workflow for your production environment. LightJet FE software accepts digital files from networks and third-party RIPs using a hot folder. With this interface, you have the freedom to use any program that produces RGB-TIFF files. Cymbolic also offers two other software options: System Manager LT is a stand-alone package that efficiently prepares, color corrects and prints TIFF (CMYK/RGB) and Scitex CT files. System Manager XL includes all LT features and an integrated PostScript level 2 RIP for on-the-fly RIPing and printing of most files.

Digital Diversity

Cymbolic Sciences, Inc. is a privately-held U.S. corporation that operates worldwide through two wholly-owned subsidiaries and numerous sales and service offices. The company develops, manufactures and markets digital imaging products, including: LightJet 5000 printers, LightJet 2000 and Fire 1000 film recorders, PlateJet and NewsJet Computer-to-Plate systems, and Fire 9000 photoplotters. Cymbolic Sciences serves its customers through its head office in Bellingham, Washington, a manufacturing and engineering base in Richmond, British Columbia, Canada, and additional offices in Amsterdam, the Netherlands and in Hong Kong.

For a first-hand look at the best-quality wide format prints available, contact the Cymbolic Sciences office nearest to you.



- 1 Internal drum platen
- 2 Simultaneous RGB imaging optics
- 3 Real-time pixel interpolator
- 4 Precision color acoustic optic modulators
- 5 Long-life lasers
- 6 Material transport modules

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EASTIME IMAGE TECHNOLOGY CHINA << The superior, accurate image quality of the LightJet 5000 cannot be achieved by traditional techniques. >> HARRY HO GENERAL MANAGER

PHOTOBITION LONDON, ENGLAND << We find the LightJet 5000 particularly good for producing crystal sharp Duratrans with logos and text that really stand out. That's critically important when dealing with museum graphics that often incorporate a lot of text and fine line drawings. >> CHIP MERCER, SALES OFFICE MANAGER



LIGHTJET PRODUCT SPECIFICATIONS

Print Times	
200 dpi (Res 7.9)	
<i>Image Size</i>	<i>Print Time</i>
30x50"	3.6 minutes
50x50"	4.1 minutes
49x97"	not applicable
305 dpi (Res 12)	
<i>Image Size</i>	<i>Print Time</i>
30x50"	5.8 minutes
50x50"	7.5 minutes
49x97"	22.5 minutes
406 dpi (Res 16)	
<i>Image Size</i>	<i>Print Time</i>
30x50"	8.1 minutes
50x50"	11.8 minutes
49x97"	not applicable

Print Time includes material advance and look-up-table download. Actual print time depends on computer configuration, file complexity and speed of data storage device.

Resolution

Spatial Resolution

Continuous-tone: 200, 305 and 406 dpi / Res 7.9, 12 and 16. Apparent half-tone resolution is 4,000 dpi.

The 200 dpi Option is available on each LightJet model. The maximum print size at 200 dpi is 50x50" / 127x127cm.

Color Resolution

36-bits: each 8-bit input channel is interpolated to 12-bits to produce a 36-bit output color space, resulting in smoother gradients, and increased highlight and shadow detail.

Operational

Maximum Print Sizes

LightJet 5300 32x50" / 81x127cm
LightJet 5500 50x50" / 127x127cm
LightJet 5900 50x50" / 127x127cm or 49x97" / 124x246cm
Print sizes apply for paper and trans materials. For clear-base films the maximum print size is 49x50" / 124x127cm. Images longer than 50" / 127cm are printed at 305 dpi. Prints longer than 50" require the use of 50" wide materials.

Roll Media Capacity

Length: up to 164 feet (50 meters)
Width: 30", 40" and 50" / 76cm, 102cm and 127cm

Photographic Media

Popular reflective and backlit display materials (RA4 and P3) from various vendors are qualified.

Three-Laser Light Source

Red: Helium-neon – 633 nm
Green: Helium-neon – 543 nm
Blue: Argon-ion – 458 nm

Remote Sensing Option

The Remote Sensing Option can be specified for each LightJet 5000 model. This option is ideal for applications requiring very high geometric accuracy, such as remote sensing, aerial photography and lenticular imaging. Its overall geometric accuracy is +/- 1mm over the entire 50x50" image area. When ordered with System Manager software, two additional data formats are supported: pixel interleaved (BIP) and line interleaved (BIL).

Image Interpolation and Sharpness Control

Hardware Interpolation

Adaptive 16-point bi-cubic spline applied on a per frame basis. Does not increase the size of files being transferred or reduce productivity.

System Manager Software Interpolation

Automatic bi-cubic interpolation applied on a per image basis (multiple images within a frame can be scaled independently). Exact sizing feature provides for automatic scaling and interpolation to specific dimensions.

Interpolation Scaling Range

Hardware: 100% to 1,000%
System Manager Software: 25% to 400%

Sharpness Filters

User selectable with defaults that allow different portions of an image to be sharpened or smoothed adaptively on a per frame basis.

Application Software

Versions

- LightJet FE Open Interface
- System Manager LT
- System Manager XL

Supported Operating System

Windows NT 4.0 Workstation;
Pentium II

LightJet FE Open Interface

LightJet FE Open Interface software accepts digital files from networks and third-party RIPs using a hot folder. It opens the LightJet to all programs that produce RGB-TIFF files.

System Manager LT and XL

LT and XL Features

- TIFF (RGB & CMYK), Scitex CT; PostScript Level 2 RIP (for XL version)
- On screen color correction with user interface control over highlight, 1/4-tone, mid-tone, 3/4-tone and shadow.
- Fast image preview prior to printing.
- Image cropping for printing selected areas only.
- Independent scaling of each image in a multi-image print.

XL Features

- PostScript Level 2 RIP
- 90, 180 and 270 degree rotation.
- Automatic CMYK to RGB conversion while printing.
- Simultaneous RIP and print on-the-fly. Actual RIP and print times depend on computer configuration, image size and PostScript file complexity.
- Seamless RIP to file and then print capability.

Physical

Electrical

200/208/220/230/240 VAC ±10%
single phase, 47 to 63 Hz, 3,200 VA
typical, 3,800 VA maximum

Size (WxHxD)

81" x 50" x 93" / 205cm x 127cm x 235cm

Weight

3,600 pounds / 1,650 kilograms

Lighting

Normal room light when printing; dark-room when loading or unloading media.