

A new generation  
of digital output  
quality



# LightJet 5500RS

WIDE FORMAT PHOTOGRAPHIC PRINTER

Building on a reputation of quality and reliability, Cymbolic Sciences has a family of direct to paper imaging products designed to meet the exacting standards of the Geomatics community. The LightJet 5500RS printer images up to a 50 x 50" print from a digital file directly onto photographic materials in 7.5 minutes. By eliminating the intermediate film, film processing and enlargement stages, this new technology provides a number of advantages over conventional enlargements, including improved image quality, a reduction in time spent handling images, and a decrease in the cost of materials. The LightJet 5500RS incorporates a full 36-bit color space, which provides excellent control over the light source and produces faithful color reproductions. LightJet systems have industry-standard SCSI-II interfaces that provide direct connectivity with popular NT workstations.

## Revolutionary Imaging Technology

Installed at more than 400 sites around the world, LightJet products from Cymbolic Sciences share an internal drum architecture and proven optics technology that guarantee incredible accuracy and consistent performance. The LightJets' three lasers produce a precise electronically controlled light source, placing pixels with exacting specifications of geometry and accuracy on photographic media. The results speak for themselves —  $\pm 0.1\%$  over the 1.6 square meter printing area for precision mapping and other geomatic applications. With modulation Transfer Function (MTF) in excess of 90% at 406 dpi, LightJet systems are ideal for printing photogrametric engineered, aerial photo and satellite remote-sensing images.

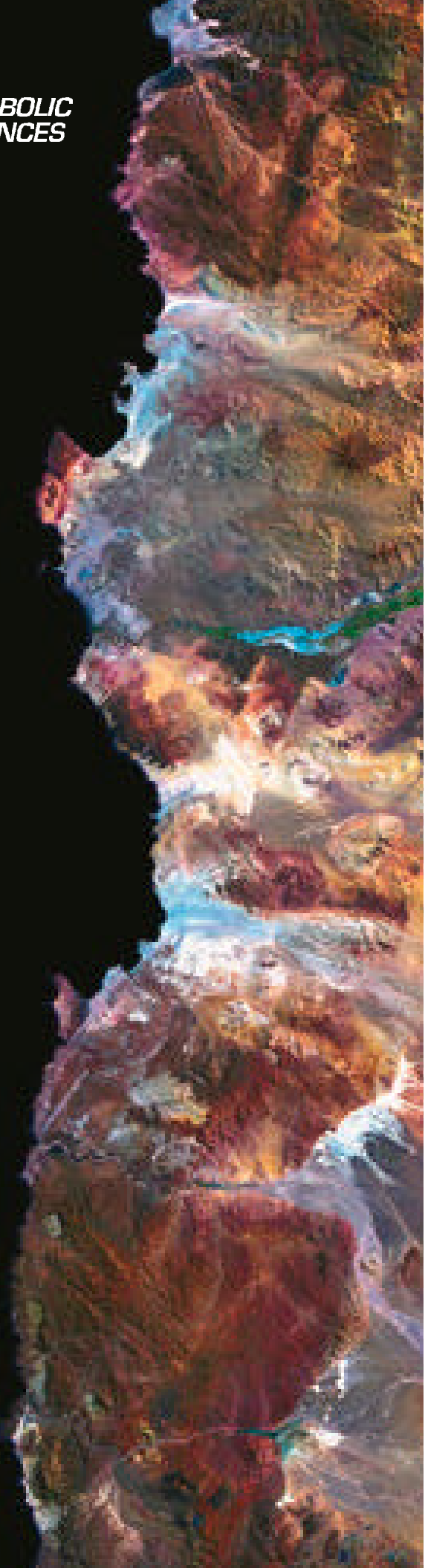
## Unattended Operation

The LightJetRS handles roll media up to 164 feet long and can operate unattended in a multi-tasking computer environment. While loading and unloading of media requires a darkroom environment, all LightJet systems operate in daylight conditions.

## A Proven Track Record

Cymbolic Sciences has installed more than 1600 digital imaging systems in 41 countries — many of these include Fire film recorders and LightJet wide format printers, which have been placed at 175 remote sensing agencies and leading image processing laboratories around the world. In addition to remote sensing products, the company manufactures imaging systems for the photographic and graphic arts industries. Formed in 1986, Cymbolic Sciences has sales and service operations in North America, Western Europe and the Far East. In May 1999, the company became a wholly-owned subsidiary of Gretag Imaging, a well-established supplier to the photo-finishing and imaging technology markets.

Contact us today to learn how the LightJet 5000 printer can improve image quality and increase efficiency at your facility.



PRODUCT SPECIFICATIONS

Print Times	
305 dpi / Res 12	
Image Size	Print Time
30x50"	5.8 minutes
50x50"	7.5 minutes
49x97"	22.5 minutes*
406 dpi / Res 16	
Image Size	Print Time
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: 305 and 406 dpi / Res 12 and 16

Color Resolution

8 bits from per channel from host into look-up table (LUT), 12-bit output from LUT to DAC for beam modulation.

Spot Spacing

83.3 microns at 305 dpi / Res 12  
62.5 microns at 406 dpi / Res 16

Maximum Image Size

LightJet 5500RS

50x50" / 127x127cm  
15,240 pixels x 15,240 pixels at Res 12  
20,320 pixels x 20,300 pixels at Res 16

LightJet 5900RS

50x50" / 127x127cm  
15,240 pixels x 15,240 pixels at Res 12  
20,320 pixels x 20,300 pixels at Res 16  
49x97" / 124x246cm  
14,935 pixels x 29,560 pixels at Res 12

Image sizes apply for paper and trans materials. For clear-base films the maximum image 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.

Operational

Roll Media Capacity

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

Supported Media

Popular reflective and backlit display materials are qualified.

Laser Light Source

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

Platen Architecture

During imaging materials are held stationary in a precision internal drum.

Radiometric

Density Uniformity

±0.03D maximum non-uniformity per color; referenced to average of all samples over the entire image area and exclusive of film and process effects.

Density Repeatability

±0.03D or better; per color; referenced to average of all samples between identical images processed one day apart and exclusive of film and process effects.

Modulation Transfer Function

90% minimum for 125 micron pixels imaged as 2x2 arrays of 62.5 micron spots.

Density Microbanding

Not visible viewing from 2 meters, at 1.0D for typical machine setups.

Color Registration

No visible errors with 1X magnification.

Output Intensity Levels

12-bits per RGB pixel (36-bit color)

Geometric Accuracy

Cross-scan: ±1.0mm  
Along-scan: ±1.0mm  
Matching left to right diagonal: <1.0mm  
Matching right to left diagonal: <1.0mm  
Line straightness: <0.5mm  
Eccentricity error: <0.3mm  
Geometric accuracy is specified over a 50x50" / 127x127cm image area using a polyester base material. Geometric accuracy is not specified for images that are more than 50" long.

Application Software

Versions

LightJet FE Open Interface  
System Manager LT  
System Manager XL

Operating System

Windows NT 4.0 Workstation,  
Pentium II

Computer Interface

SCSI-II interface

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 programs that produce RGB-TIFF and BIL files. Pixel replication factors of 1 to 16X are supported.

System Manager LT and XL

LT and XL Features

TIFF (RGB & CMYK), BIL, BIP, 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 areas. Fast image preview prior to printing. Image cropping for printing selected areas only.

Independent scaling of each image in a multi-page 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 workstation 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" / 205 x 127 x 235cm

Weight

3,600 pounds / 1,650 kilograms

Lighting

Normal room light when printing;  
darkroom when loading or unloading media.

Factory Acceptance Test Procedure

All specified functional parameters verified by a Factory Acceptance Test; customer witnessing is available.

Specifications and design are subject to change without notice.

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Printed in Canada at Broadway Printers using plates imaged on the Cymbolic Sciences PlateJet Computer-to-Plate system.

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