

SOFTWARE

LASER PHOTO PLOTTERS

DIRECT IMAGERS

Calibr8tor 2000 & 2500^{HD}

The global benchmark for plot speed and image accuracy



- Highest throughput of precision plots
- Resolutions up to 25,400 ppi
- Unequaled accuracy
- Load up to 3 film magazines
- 100% automatic operation
- “Wheel-in” integration
- Unrivalled uptime record

MARKETS

- Rigid PCB Mfr ✓
- Flex PCB Mfr ✓
- Flex-Rigid PCB Mfr ✓
- HDI PCB Mfr ✓
- PCB Masslam Mfr ✓
- PCB Equipment Mfr
- PCB Traders
- PCB Designers
- PCB Test Centers
- IC Packaging ✓
- Chemical Milling ✓
- High Resolution Graphic Arts ✓
- Flat Panel Display ✓

PRODUCT FAMILIES

- CAM
- PreCAM and Engineering
- Electrical Test
- Equipment Front Ends
- Format Converters & RIP's
- OEM Software
- Laser Photo Plotters ✓
- Direct Imagers

The global plotter benchmark

The latest Calibr8tor 2000-HD series sets a new global benchmark for plot speed and image accuracy on features down to 8 μm . New optics, high-speed electronics and the new SmartRip double the plot speeds of our SilverWriter series. The high-speed load system converts this to the highest throughput of precision films in the market – without compromising accuracy or reliability. Up to 3 magazines can hold 450 sheets of film of 3 different sizes to give maximum plotting flexibility and cost control.

Unequaled image quality

10 metric and imperial resolutions up to 25,400 ppi (1 μm) give optimum settings for every image. Two unique imaging technologies, syntectic modulation and 200,000 ppi pixel-placement, ensure ultra-precise feature definition at every resolution, eliminate the pixel-jump errors found on conventional plotters, and tolerance line widths to less than 1.5 μm .

Pin-sharp edge definition

Ucamco has worked with leading film manufacturers to achieve the highest image quality possible on film. The result: pin-sharp edge-definition on the finished photo tools.

Precise registration

Dynamic beam positioning accurate to 0.25 μm and the patented stress-free film loader ensure an unrivalled geometric accuracy for exact registration for HDI & SBU boards.

Reliable 24/7/52

The Calibr8tor 2000-HD series is engineered for fully automatic operation 24/7/52. The granite bed, contactless linear motor, maintenance-free air-bearings and direct-drive drum deliver unrivalled long-term uptime – your guarantee of continuous high productivity and low whole life costs.

Compatible and upgradeable

With its small footprint and ability to accept plot instructions directly in Gerber, DPF, ODB++, Image 5000 (Expert) or MDA formats, the Calibr8tor 2000-HD series is a wheel-in replacement for conventional plotters. Install a new machine or field-upgrade a SilverWriter 8000: either way the Calibr8tor 2000-HD series put you at the cutting edge of plotter technology.

Calibr8tor 2000 & 2500^{HD}

Technical Data

Resolutions		
Imperial	8,000 up to 25,000 ppi	
Metric	3.2 µm up to 1 µm	
Min. line width	0.3 mil	8 µm
Productivity for an 18" x 24" plot ^(*)		
	Model 2000-HD	Model 2500-HD
8,000 ppi (in films / hour)	20.3	20.3
16,000 ppi (in films / hour)	12.7	12.7
20,000 ppi (in films / hour)	9.7	10.7
25,000 ppi (in films / hour)	6.7	8.9
Film Requirements		
	Imperial	Metrical
Film format along the drum	18" – 32" in ½" steps	457 – 813 mm
Film format around the drum	24" – 29" in 1" steps	610 – 736 mm
Max. image format along the drum	0.2" (5 mm) less than film format	
Max. image format around the drum	0.9" (23 mm) less than film format	
Sheet tolerance	± 0.02"	± 0.5"
Accuracy		
	Imperial	Metrical
Geometric plotter accuracy	< 0.16 mil	< 4 µm
Geometric plotter repeatability	< 0.08 mil	< 2 µm
Global positioning accuracy	0.01 mil	0.25 µm
Geometric accuracy on film - 3σ, FTF radial	< 0.5 mil	< 12.5 µm
Geometric repeatability on film	< 0.5 mil	< 12.5 µm
Line-width accuracy	< 0.06 mil	< 1.5 µm
Scaling adjustments	In steps of 0.127 µm	
Scaling adjustment range	± 5%	
Machine Characteristics		
	Imperial	Metrical
Loading capacity	Up to 3 magazines. 150 sheets of film each	
Light source	Red HeNe laser, 632.8 nm, 5 mW	
Dimensions (W x D)	72.8" x 61"	1850 x 1550 mm
Height	54.3"	1380 mm
Weight	3300 lbs	1500 kg
Room temperature during operation	70° F ± 2°	21° C ± 1°
Relative humidity during operation	50% ± 2%, no condensation	
Relative humidity rate of change	Max 6% per hour	
Electrical Power Supply	2 x 230 VAC, 2,000 VA	
Heat dissipation	2,000 W (1,725 kcal/h)	
Compressed air supply	87 – 145 PSI	6 – 10 bar
Compressed air quality	Free of oil and water	0.01 mg/m ³
Compressed air volume	88 ft ³ /hour	2500 l/hour

^(*) Assuming nominal plotting using factory settings

SOFTWARE

AutoCAM
 FaultStation 4
 FixGenius
 FlashRip
 Format Converters
 Geometric Correction System
 Integr8tor
 Mult Job Panelizer
 OEM Software
 SmartAOI
 SmartPlate
 SmartTest
 Ucam CAD Review
 Ucam CAM++
 Ucam Chemical Milling
 Ucam ET+
 Ucam SmartView
 Ucam uFlex
 UcamX

For more information on any of our products or services please contact us:

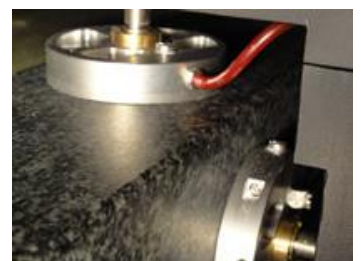
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Linear scale



Linear motor



Air bearings

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