| SOFTWARE | LASER PHOTO PLOTTERS | DIRECT IMAGERS |

Hawk 7000

High-Resolution Large Format Plotter

- Resolutions up to 50,800 ppi
- Compatibility and choices
- Improved registration
- Utmost handling capabilities
- Unrivalled 24/7/52 reliability

Highest resolution

With up to 50,800 ppi resolution, the Hawk series deliver the line quality, positioning accuracy and line width control essential for the accurate production of complex and dense HDI boards, back panels, FPD's. Two unique imaging functions, syntectic modulation and sub-micron pixel-placement, eliminate the rounding errors found on conventional plots and hold line-width accuracy down to 1.5μm.

Compatibility and choices

The Hawk series accepts plot instructions directly in Ucam(X)'s DPF, ODB++, Gerber, OI5000 (Expert) or MDA formats, making it a "wheel-in" replacement for conventional plotters. With up to 16 plot resolutions it delivers the optimum setting for every image down to 6μm features.

Improved registration

The Hawk series use the patented technology of frequency variation for the "photographic" scaling of inner layers. This eliminates micro banding resulting from adding/dropping a pixel.

Utmost handling capabilities

The film loading/unloading system is fully automated and on-line connected to the film processor. The film handling mechanism is simple, reliable and very accurate providing stress-free film loading

Unrivalled 24/7/52 reliability

The Hawk series is engineered for round the clock, long-term reliability. The ultra-stable granite bed, maintenance-free linear motor, air-bearings and the direct-drive drum deliver unparalleled long-term uptime - your guarantee of on-time deliveries, low whole life costs and an optimum return on your investment.

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

Get more out of your photo plotter investment with FlashRip software

- FlashRip provides optimized ripping and plotting of line images in resolutions up to 50800 ppi.
- FlashRip features automatic counter-scaling of all designated features on the plotter without the need to go back to the CAM department.
- FlashRip automatically inserts plot stamps (e.g. plot date) into the plotted image.
- FlashRip supports Geometric Correction System (GCS).
  GCS allows the user to compensate on the photo tool for the linear and non-linear distortions generated on the PCB during various production steps.
  The result is a much improved layer registration, lower scrap and higher yields.
- FlashRip is scalable for multiple processors to convert several jobs simultaneously (optional).

Depending on plotter model and job complexity FlashRip increases throughput with up to 100% and more. For more info please contact your local Ucamco distributor or mail us at info@ucamco.com.

Hawk 7000

Technical Data

Resolutions	
Imperial	8,000 up to 50,000 ppi
Metric	3.18 μm up to 0.5 μm
Min. line width	0.24 mil / 6 μm

Productivity for an 46" x 62" plot (*)	
8,000 ppi (in films / hour)	5.4
10,000 ppi (in films / hour)	4.5
16,000 ppi (in films / hour)	3.1
25,000 ppi (in films / hour)	1.6
50,000 ppi (in films / hour)	0.5

Film Requirements	Imperial	Metrical
Film format along the drum (*)	30" – 47.2" in ½" steps	762 – 1200 mm
Film format around the drum	63.5"	1612 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 mm

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	< 1 mil	< 25.4 μm
Line-width accuracy down to	< 0.06 mil	< 1.5 μm
Scaling adjustments	In steps of 0.2 μm	
Scaling adjustment range	± 5%	

Machine Characteristics	Imperial	Metrical
Loading capacity	25 sheets of film	
Light source	Red HeNe laser, 632.8 nm, 5 mW	
Dimensions (W x D)	100.4" x 64.2"	2550 x 1630 mm
Height	72.0"	1830 mm
Weight	4200 lbs	1900 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, 3,000 VA	
Heat dissipation	1,800 W (1,550 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	106 ft^3/hour	3000 l/hour

(*) We support max film format and one smaller

High resolution linear scale

Linear motor

Air bearings

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:
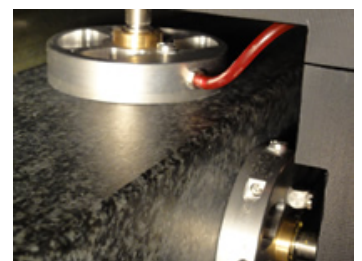By e-mail: info@ucamco.com
On the Web: www.ucamco.com