

SOFTWARE

LASER PHOTO PLOTTERS

DIRECT IMAGERS

## SilverWriter Phoenix xP



- Glass Master accuracy
- Resolutions up to 40,640 ppi
- Improved registration
- Unrivalled 24/7/52 reliability
- Compatibility & Upgradeability

### Improved registration

Dynamic beam positioning and the patented stress-free film loading system ensure unrivalled **geometric accuracy** for precise side-to-side registration.

### Unrivalled 24/7/52 reliability

Today's production climate demands films fast **24/7/52**. The SilverWriter Phoenix-P uses Ucamco's latest film-handling and operational sequencing to deliver market-beating **film throughput** at all plot resolutions, even for the most complex PCBs. **3 magazines** can hold a total of **450 sheets** of film of 3 different sizes to give maximum plotting flexibility and cost control. The redesigned drive system delivers unparalleled levels of uptime and **long-term reliability** as well as allowing a 30% more **compact footprint**

### Compatibility & Upgradeability

The Phoenix-P reads plot instructions in DPF, ODB++, OI5000 (Expert) or MDA formats fully automatically so that you can wheel it into your CAM environment without the need for time-wasting integration. The Phoenix-P is available as an **upgrade** to any SilverWriter 8000 plotter.

### "Glass-master" accuracy

The global PCB industry remains committed to phototooling as its key imaging technology but the most advanced products require films with **"glass-master"** sharpness and accuracy. The SilverWriter Phoenix-P has been developed to meet this challenge using sub-micron imaging technology. Based on the market-leader SilverWriter series the Phoenix offers a choice of plot resolutions up to **40,640 ppi (0.6µm)**.

### Unique Optical System

The SilverWriter Phoenix uses an optical system specially designed for imaging fine lines and spaces with ultra-sharp edges and very precise width control. Ucamco's unique **sub-micron** pixel-placement algorithm eliminates the pixel-jump errors found on conventional plots: fine lines and tight spaces are positioned consistently to exact tolerances. **Syntectic modulation** ensures an ultra-sharp line-edge and precise line-widths down to **7µm** on new generation high-resolution films.

### Get more out of your photo plotter investment with GCS software

Ucamco's **Geometric Correction System (GCS)** automatically modifies phototools to compensate for the non-linear and linear distortions introduced into a panel during the manufacturing process. By improving layer registration, GCS delivers increased factory yields and extends the plant capabilities with confidence into higher levels of PCB technology.

For more info please contact your local Ucamco distributor or mail us at [info@ucamco.com](mailto:info@ucamco.com).

#### 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

# SilverWriter Phoenix xP

## Technical Data

Resolutions	Imperial	Metrical	
Imperial	8,000 up to 40,000 ppi + 4000 ppi draft quality		
Metric	3.2 down to 0.6 µm + 6.4 µm draft quality		
Min. line width	0.28 mil	7 µm	
Productivity for an 18" x 24" plot	SP	MP	HP
4,000 ppi (in films / hour)	7.1	12.4	19.8
8,000 ppi (in films / hour)	3.9	7.1	12.4
16,000 ppi (in films / hour)	2.0	3.9	7.1
32,000 ppi (in films / hour)	0.6	1.2	2.3
40,000 ppi (in films / hour)	0.4	0.7	1.4*
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 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	< 0.4 mil	< 10 µm	
Geometric repeatability on film	< 0.4 mil	< 10 µm	
Line-width accuracy	< 0.08 mil	< 2 µm	
Scaling adjustments	In steps of 0.2 µm		
Scaling adjustment range	± 5%		
Machine Characteristics	Imperial	Metrical	
Loading capacity	Up to 3 magazines. 150 sheets of film in 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"	1830 mm	
Weight	4200 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 <sup>3</sup>	
Compressed air volume	88 ft <sup>3</sup> /hour	2500 l/hour	

(\* Assuming nominal plotting using factory settings

\* size larger than 24" around the drum, plot time increases with 33%

### 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:

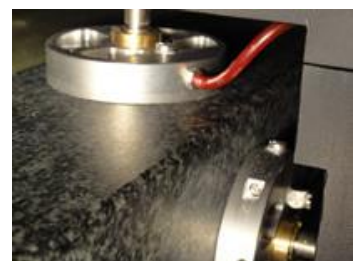
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Linear scale



Linear motor



Air bearings

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