X!Mask Software

High-Frequency Surface Texturing & Micro-Cell Patterning

Purpose

Engineered Surface Control. Smooth Ink Coverage. Maximum Density.

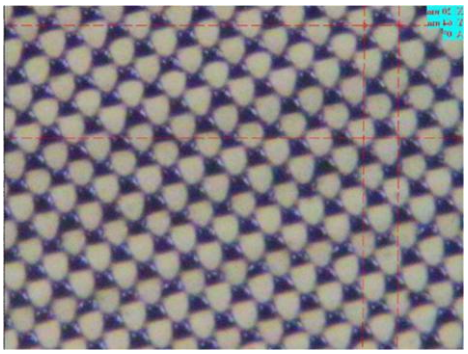
Main functions

X!Mask is a high-definition module that engineers the plate surface for precise ink control. Utilizing high-frequency micro-cells driven by advanced bitmap algorithms, it applies optimized surface texturing to overcome traditional flexo limitations. The result is smooth ink coverage that consistently delivers exceptional, predictable color density and stable highlights across any substrate.

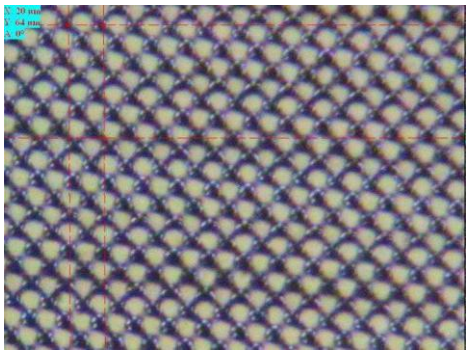
Technical Superiority: The Power of High-Resolution Ablation

High-Frequency Micro-Cell Patterning (up to 1'796 lpi)

Modern flexo demands intelligently optimized surface textures. X!Mask provides a versatile patterning up to 1'796 lpi, allowing you to tailor surface texture for specific ink, substrate, and job requirements. These high-frequency micro-cells are engraved into solid areas to ensure uniform ink laydown while eliminating pinholing and mottling.



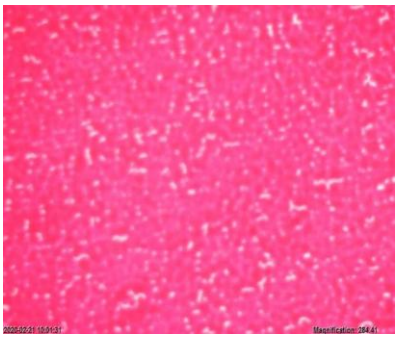
X!Mask – Picture of LAMS (1'436 lpi)



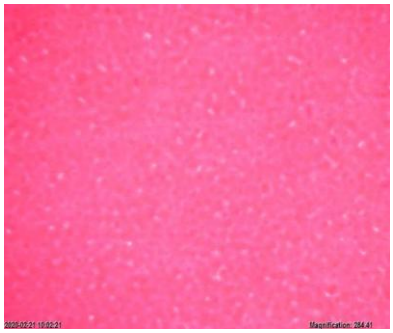
X!Mask – Picture of LAMS (1'796 lpi)

Ultra-HD Imaging Resolution (4’000 – 10’160 dpi)

Precision is the foundation of performance. Driven by The fleXtreme! optic, X!Mask supports high-fidelity imaging resolutions from 4’000 up to 10’160 dpi. This extreme granularity—nearly four times the current industry standard—ensures every micro-cell and fine detail is rendered with sharp fidelity, enabling clean ink transfer and uniform coverage.



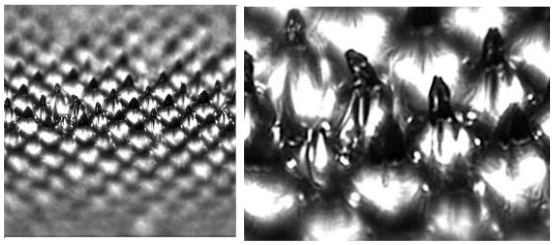
Standard print (Density of 1.30)



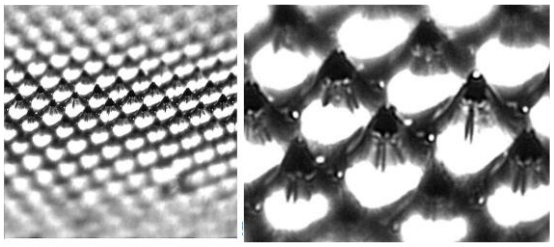
X!Mask print (Density of 1.79)

Intelligent Highlight & Fine Element Protection

X!Mask provides more than just solid texturing. Its advanced algorithm actively identifies and supports isolated highlights, fine lines, text, and delicate details at risk on press. By intelligently reinforcing the plate floor in these critical areas, it ensures structural stability throughout the print run. The result is reliable reproduction of ultra-fine highlights and flawless, smooth-to-zero fades



Without X!Mask support
(Microscope picture 1% dots at 200 lpi)



After X!Mask support
(Microscope picture 1% dots at 200 lpi)

Adaptive Surface Geometry & Edge Definition

Move beyond fixed patterns. X!Mask is a configurable surface engineering platform, giving the prepress professional unmatched control:

- **Customizable Surface Texturing:** Select the optimal bitmap geometry for any substrate—from non-porous film to high-absorbency corrugated.
- **Intelligent Edge Definition:** Manage the transition between textures and object boundaries to protect the clarity of fine details, preventing "ink squeeze" and halos.
- **Anilox-to-Plate Synchronization:** Tailor micro-patterns to match your specific anilox LPI and volume (cm^3/m^2), ensuring maximum transfer efficiency.

Main Benefits

- **Smooth Ink Coverage:** Targeted elimination of pinholing, mottling, and ink starvation in solids.
- **Optimized Ink Density:** Achieve higher Solid Ink Density (SID) with lower impression pressure, reducing dot gain and increasing plate life.
- **Integrate Instantly – RIP-Independent works on-the-fly:** Real-time optimization of standard 1-bit TIFF files.
- **Universal LAMS Compatibility:** Delivers premium results on all standard digital photopolymer plates.