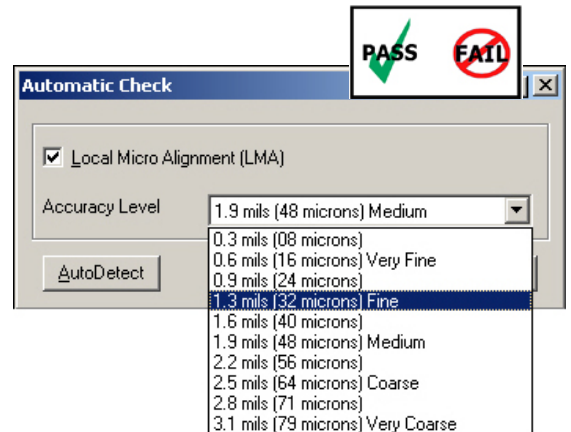


StencilScan™ AOI

Automatic Stencil Inspection System



WHAT IS StencilScan?

StencilScan is a fully integrated (AOI), stand-alone inspection workstation for stencils, screens and boards after fabrication or after cleaning.

StencilScan uses a PC Windows based software package integrated with a high-resolution, calibrated, A3 size flatbed scanner. This combination allows inspection of both stencils and screens for accuracy and blockage after cleaning, and the ability to inspect 100% for absence/presence and correct size of apertures.

CREATE STENCIL FABRICATION DATA

StencilScan adds flexibility to the stencil and screen inspection process. Utilizing its calibrated scanner, StencilScan inputs stencils, screens, silver or diazo film, mylar images, technical drawings, actual PCBs or original hand-taped designs. With these inputs StencilScan is able to verify cut stencils/screens for accuracy, size and blockage, as well as producing necessary Gerber data for stencil/screen production.

AUTOMATIC FEATURES

Tired of using slow manual inspection methods? StencilScan offers various functions that quickly and automatically create necessary Gerber and verification data:

- Cleanliness/Aperture Blockage
- Absence/Presence of Apertures
- Confirm Proper Aperture Shape and Size
- Compare Stencil/Screen vs. Gerber
- Compare Stencil/Screen vs. Stencil/Screen
- Compare Stencil/Screen vs. PCB
- Confirm Proper Aperture Position
- Create Stencil Files from Boards/Films
- Automatic Inspection Accuracy Level Detection

VERIFICATION

Worried about the quality of stencils, screens or Gerber files? Use StencilScan's "check functions" to verify the accuracy of the data. The new LMA option allows for checking apertures as small as to 0.002" diameter (0.050 mm).

These functions verify stencils and screens for production errors, accuracy, size, identify screen blockage, stretch or damage and step the operator automatically through all discrepancies of the verification results.

PRODUCTION USES

StencilScan creates Gerber files as well as other data used in stencil production, including: Silkscreens, Soldermasks, Padmasters, Stencil Files, Panelized Images, DXF and Gerber-274x files, etc.

StencilScan permits fast and accurate comparison of stencils/screens to bare PCBs bringing automation and increased productivity to QC departments.

WHY USE StencilScan?

- **Print Yields:** 100% automatic inspection of screen/stencils for cleanliness, damage and aperture blockage.
- **Quality:** 100% automatic inspection of screen stencils for absence/presence and size of apertures.
- **Accuracy:** Pre-inspect boards and stencils to Gerber data. Detect aperture size error down to 0.0003" (0.008mm) at 3200 dpi.
- **Flexibility** Supply production with required Gerber data. Use one software product to create data required by the stencil production process.

StencilScan™ AOI

**100% Automatic inspection of stencils, screens and boards after fabrication or cleaning.
Create Gerber files from boards, artwork or stencils**

CAPABILITIES

- Inspect for cleanliness or absence / presence of apertures
- Pre-inspect boards and stencils to Gerber data
- 4000 dpi allows inspection of apertures as small as 0.002 inch / 0.050 mm using Local Micro Alignment (LMA)
- Guarantee stencil & screen accuracy and cleanliness
- Supply production with required Gerber data
- Create stencil files from boards, films and stencils

SYSTEM FEATURES

SCANNING

- Scan Stencils, Screens, Film or PCB's
- Verifiable Image Alignment
- Automatic Raster to Gerber Alignment

INSPECTION FUNCTIONS

- Compare new Stencils and Screens against Gerber image or actual PCBs for errors
- Compare used Stencils and Screens to Gerber image or Golden image for blockage, stretch or damage.
- Verify aperture sizes to 0.0003" and aperture absence/presence as small as 0.002" (0.050mm)
- Highlight D-Codes
- Check Gerber Image against Scanned Image
- Compare Gerber Image against Gerber Image
- Design Rule Check

AUTOMATIC FUNCTIONS

- Pad Recognition: Circle, square, oval, rectangle
- Pads on Grid
- Local Micro Alignment (LMA)

EDITING

- Multi-Color Display
- Multi-Level Zoom Function
- Edit Accuracy: 0.0001" (0.00254mm)
- Customized Aperture Tables
- Snap-to: Pad Center
- Snap-to-Grid: Pads
- Multi-Layer Display
- Macros: Create & Store
- Automatic Text Function
- Metric or Inch

OUTPUT

- Pass/Fail Inspection Report
- Rework File Generation
- Gerber Files (274D & 274X)
- Comprehensive Aperture Tables
- Stencil Files
- Solder Mask
- Pad Master
- Silkscreen
- HP-GL
- DXF
- PCX and TIFF
- Panelized Images

TECHNICAL SPECIFICATIONS

SCANNER

- High-Resolution Color Flatbed Scanner, Size A3: (400/1000/2000/3200*/4000* dpi)
 - Calibrated Accuracy: $\pm 0.0015"$ ($\pm 0.0381\text{mm}$)
 - A3-Scanning Bed Area: 11.7" x 16.5" (297mm x 419mm)
 - Maximum Work Area: 32.0" x 32.0" (813mm x 813mm)
- *Reduced scanning area for 3200 & 4000 dpi

COMPUTER*

- Pentium III (1GHz) Personal Computer
- 60 GB HD, 512 MB RAM
- Windows 95//NT/Me requires:
1 ISA slot, 1 PCI slot, 1 Parallel port
- Windows 98(SE)/2000 requires:
2 USB ports
- CD-ROM (CD-RW for archive purposes)
- Monitor (17" or larger)
- Printer

*Recommended customer supplied minimum PC requirements.



ADDITIONAL SYSTEM COMPONENTS

- Precision Glass Calibration Grid
- Scanner Interface Cards/Cables
- Software Protection Key
- Custom Transmissive Lighting Package
- Custom Desk
- Scanning Accessory Package

SOFTWARE OPTIONS

- **Assembly Module** - Integrates off-line programming, inspection and measurement to the StencilScan workstation. Produces assembly programs and process documentation for Pick and Place, Insertion, Test, Inspection and Dispensing machines.

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Specifications subject to change without notice.

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