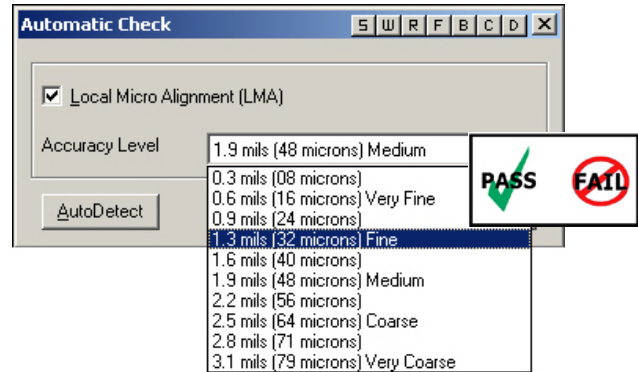


InspectScan VPI™

"Virtual Product Inspection"



WHAT IS InspectScan VPI?

InspectScan VPI is a fully integrated, stand-alone process control, measurement and inspection and programming workstation for use in setting up processes before the production floor in the PCB or Hybrid Microcircuit assembly industries.

InspectScan VPI uses a PC Windows based software package integrated with a high-resolution, calibrated, A3 size flatbed scanner. This combination allows inspection of artwork, PCB's, ceramic substrates, components, stencils and screens at virtually any stage of production. Parts can be inspected versus either Gerber data, CAD data or Golden parts. All variables come together as a virtual part to avoid costly problems before full production starts.

PCB ASSEMBLY APPLICATIONS

InspectScan VPI is capable of performing many different functions in a PCB Assembly facility such as:

- Design – Check Holes, Slots, Real Estate.
- Components – Compare parts from Multi-vendors including shape, color, size.
- Bare Boards – FR4, Ceramic or Flex parts. Compare from multi-vendors. Compare to Gerber or to Stencil.
- Stencils/Screens – Detect stretch, wear, missing, blocked or damages apertures. Use for incoming inspection or in production after cleaning.
- Wet Boards – Scan with standoffs. Compare paste or adhesive to Gerber, stencil or Golden part.
- Loaded Boards – Compare component locations, rotation, package type, etc to CAD data. First Article Inspection!

All variables come together in a virtual system before production!

HYBRID MICROCIRCUIT APPLICATIONS

In the Hybrid Microcircuit Industry the same system can be used to check:

- Design – Check Holes, Slots, Real Estate.
- Artwork – Compare mylar, diazo, glass, chrome, etc to Gerber, Golden parts or screens.
- Wet Substrates – Scan with standoffs and compare printed material to Gerber or Golden parts.
- Loaded Substrates – Compare component locations, rotation, package type, etc to CAD data. First Article Inspection!
- Stencils/Screens – Detect stretch, wear, missing, blocked or damages apertures. Use for incoming inspection or in production after cleaning.

All variables come together in a virtual system before production!

PROGRAMMING SYSTEM

In addition to creating a virtual part to avoid costly production problems, the InspectScan VPI system can also be used for programming.

- Create through hole or SMT assembly programs from either Gerber data, ASCII centroid data or scanned images of PCB's, film, stencils, etc.
- Create component vision files for SMT placement equipment from scanned images of components. Off-line and no more calipers!!

SIMPLE OPERATION

The InspectScan VPI system can be quickly learned and is simple to operate. Most inspection operations only take a few steps and can be completed very quickly. Operators can step between defects and zoom in and out to verify errors. Inspection reports can be easily generated.

SYSTEM FEATURES

WORKSTATION DESK SYSTEM

- Contact System
- Scanner Faces Up
- Part Faces Down
- Dry or Wet Parts with Standoffs
- Large Part Capability with Multiple Scans

SCANNING

- B&W or Color Imaging
- Top or Bottom Lighting
- Glass Plate Calibration
- Automatic Raster to Gerber Alignment

MEASUREMENT AND INSPECTION FUNCTIONS

- Verify feature sizes to 0.0005" and feature absence/presence as small as 0.002" (0.050mm)
- User Defined or Automatic Inspection Accuracy Level Setting.
- Check Feature Size, Shape and Position.
- Check Gerber Image against Scanned Image
- Compare Gerber Image against Gerber Image
- Check Scanned Image against Scanned Image
- Overlay ASCII Centroid Data over Scanned Image
- Point to Point Measurement Functions
- Perform Area Inspection Function of Scanned Features Such as Apertures, PADS, Wet Material, etc.

PROGRAMMING FUNCTIONS

- ASCII CAD, Gerber and BOM Inputs
- Scanned Images of PBS's, Film, Drawings, Stencils, Components, etc
- Create Assembly Programs From Gerber or Scanned Images When No CAD or Gerber Available
- Create Component Vision Files from Scanned Images of Components

OUTPUTS

- Pass/Fail Inspection Report
- Rework File Generation
- Over 70 Different Machine Output Formats
- Many CAM Package Outputs Supported
- Direct Component Vision File Generation for Fuji SMD3 and Siemens SIPLACE Pro
- Generic Component Vision File for Other Placement Machine Suppliers
- Gerber Files (274D & 274X)
- Comprehensive Aperture Tables
- Stencil Files
- HP-GL, DXF, PCX and TIFF Files

TECHNICAL SPECIFICATIONS

SCANNER

- High-Resolution Color Flatbed Scanner, Size A3: (400/1000/2000/3200*/4800* 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 & 4800 dpi

COMPUTER*

- Pentium (3GHz or higher) Personal Computer
 - 300 GB HD, 4 GB RAM
 - CD-ROM (CD-RW for archive purposes)
 - Monitor
 - Printer
 - Win XP Service Pack 2
 - 2 available USB ports
- *Recommended minimum requirements for customer-supplied PC.

ADDITIONAL SYSTEM COMPONENTS

- Precision Glass Calibration Grid
- ConvertPLUS CAM Software
- Software Protection Key
- Custom Transmissive Lighting Package
- Custom Workstation Desk
- Scanning Accessory Package



The following are trademarks of the indicated companies: Gerber, The Gerber Scientific Instrument Company; HP-GL, HP, Hewlett-Packard; Windows XP, Microsoft®.

(All specifications and designs subject to change without notice.)



Smart Sonic Corporation

6724 Eton Ave

Canoga Park, CA 91303 USA

Tel: +1-818-610-7900

Fax: +1-818-610-7909

E-mail: SMT@SmartSonic.com

Web: www.SmartSonic.com