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858-536-5050
for Pricing

Extended Height
provides increased
oblique viewing!



High-Resolution, X-Ray Inspection System

The Verifier HR (FSX-090) is an affordable high-resolution and high-magnification x-ray system ideally suited for advanced failure analysis, manufacturing process validation and rework verification. Systems are CE, CSA and TUV certified and exceed all safety requirements set forth by CDRH and FDA regulations.

Key Features

The Verifier HR (FSX-090) is an affordable high-resolution and high-magnification x-ray system designed for virtually any electronics or materials quality inspection and defect detection application. Its greater than >715X magnification provides excellent viewing of internal semiconductor connections such as: wire-bonds, die-attach, delamination, voiding and solder joint opens.

- Easy-to-use
- >715X magnification
- Superior imaging quality
- Flexible board/part handling
- Multipurpose inspection tool
- Portable, small 32" x 34" footprint
- 90kV source provides sufficient power to penetrate challenging packages and dense materials

***Safe:** The Verifier exceeds all safety and radiation protection requirements set forth by CDRH and FDA regulations. Systems are CE, CSA & TUV certified.

Easy-to-Use Controls

Intuitive controls and indicators for On/Off, Gain, Zoom, Focus and Interlock functions. Operators can be trained quickly and easily.



Motorized Tilt/Rotation Fixture

Specifications

Hardware

- Footprint: 32"W x 34"D x 65"H
- Board handling: up to 16 x 18" | 406 x 457mm
- Angled viewing: up to 70° (standard fixture) 360° w/ rotation fixture (small boards)
- X-ray source: 90kV, 5 micron Microfocus
- 2/4" high-resolution image intensifier
- Magnification: >715X
- Field-of-View: up to 2" (51mm)
- Resolution: >40 lp/mm
- PC: Intel/ATX mini tower w/ printer & CDRW
- Flat panel display 19" std. (20" optional)
- Network ready: Ethernet 10/100 base-T

System/Image Processor Software

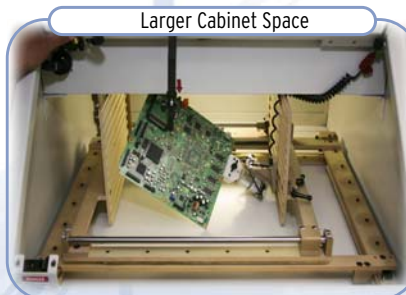
- **Operating System:** Windows™ XP Pro
- **Image Processor:** Verifier VIP (standard)

Optional Image Processors

- VIP Plus Enhanced Image Processor
 - VIPx Advanced Image Processor
- * See FocalSpot VIP Series Datasheet for details

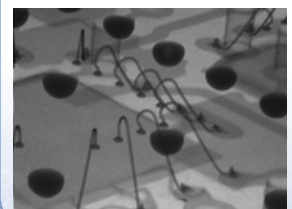
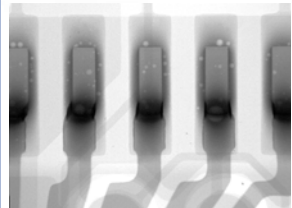
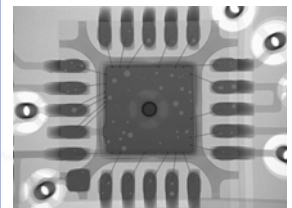
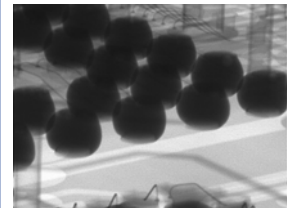
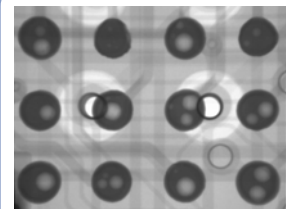
Flexible Sample Holder

- **Sample Door:** 28" wide, for easy load/unload
- **Manual X/Y sample positioner:** 16" x 18"
- **Angled Viewing:** 0-70° (standard fixture)
- **Rotation Fixtures:** Manual and Motorized options for 360° rotation on small boards.



Larger Cabinet Space

Sample Images



About FocalSpot

FocalSpot, Inc. is recognized worldwide as a leader in the design and manufacture of affordable high-quality x-ray inspection systems; providing Inspection and Rework solutions for Electronic Manufacturers worldwide. FocalSpot is also a regional distributor and value-added reseller for DEN-ON BGA/SMT rework solutions; Optilia BGA/SMT video microscopes; and First Article AOI Inspection Systems; providing sales, service and support in North/South America, Canada and Mexico.

The Verifier, Verifier Plus and Verifier HR X-Ray Inspection Systems are portable, fit through a standard doorway and with exceptional performance and value. Ideal for prototyping, failure analysis, manufacturing process validation, rework verification and more...

Verifier Series X-Ray Inspection Systems

Verifier Series Feature Comparisons	Verifier FSX-080	Verifier FSX-075	Verifier FSX-090
System Features			
X-Ray Source	80kV	75kV	90kV
Magnification	>100X	>200X	>650X
Spot Size	50 micron	33 micron	5 micron
Resolution	>20 lp/mm	>30 lp/mm	>40 lp/mm
Field-of-View (max.)	>70mm	>70mm	>40mm
Inspection Capabilities			
Measurement Reporting	●	●	●
Solder Joint Quality (BGA, Leaded)	●	●	●
Bridging	●	●	●
Voiding	●	●	●
Opens	○	●	●
Bare boards (Inner layers, traces, vias)	○	●	●
Component Package Inspection (wire bonds)	○	●	●
Subtle Defect Inspection	○	●	●
Flip Chip Capable	○	●	●
Board Handling			
Maximum PCB Size	16 x 18" 40 x 46cm	16 x 18" 40 x 46cm	16 x 18" 40 x 46cm
X/Y Board Manipulation	Manual Controller	Manual Controller	Manual Controller
Tilt/Rotate Fixture (motorized)	Optional	Optional	Optional
Tube Z1 (motorized)	N/A	N/A	Optional
Detector Z2 (motorized)	N/A	N/A	Optional
X-Ray Image Processors (IP)			
VIP	Standard w/ Piccolo™	Standard w/ Piccolo™	Standard w/ Piccolo™
VIP Plus	Standard w/ Piccolo™	Standard w/ Piccolo™	Standard w/ Piccolo™
VIPx	Optional w/ Cronos™	Optional w/ Cronos™	Optional w/ Cronos™
Computer System			
Computer (DELL™) w/ 3yr Onsite Warranty	Latest Optiplex Model	Latest Optiplex Model	Latest Optiplex Model
Computer Operating System (OS)	Microsoft® XP Pro / 7	Microsoft® XP Pro / 7	Microsoft® XP Pro / 7
Computer Peripherals (Keyboard, mouse, CDRW, printer, cables, software /manuals)	Complete	Complete	Complete
10/100 Ethernet, Network ready (NIC)	NIC	NIC	NIC
Frame Grabber Card (Image Capture)	See IP	See IP	See IP
Video (Flat Panel LCD) Display	19" 48cm	19" 48cm	19" 48cm

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