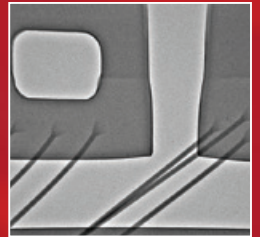
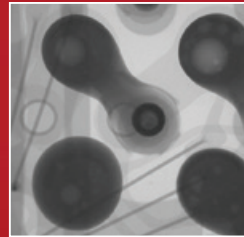
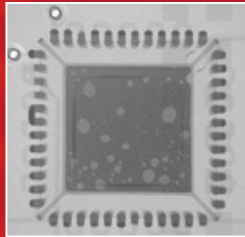
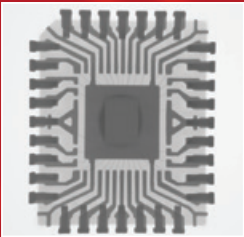




PDR GenX X-Ray Systems

Ultra High-Performance * High Resolution Image Quality
Compact X-Ray Systems



Trusted by Experts

PDR | XRAY
REWORK AND INSPECTION

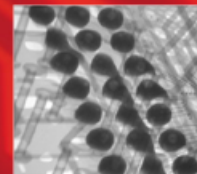
PDR GenX-90P

Ultra High-Performance * High Resolution Image Quality
Compact X-Ray System

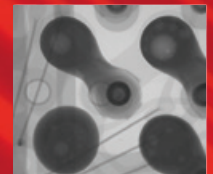


• BGA Inspection/Analysis • Failure Analysis • Counterfeit Inspection • Wire Bond Inspection • LED Inspection

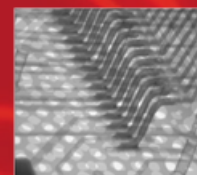
- Truly Remarkable Image Clarity with proprietary HD Camera and Software
- Compact System, PCB sizes up to 21" (533mm) X 17.5" (445mm)
- Customizable Flat Panel Detectors or Image Intensifier options to meet your application requirements
- 90kV, 8 Watt, 4um X-Ray tube, 0.18mA with Magnification up to 1100X
- Programmable 4 Axis (X,Y, Z1/Z2) fully motorized Motion Control
- BGA/QFN/Flip Chip Software Pass/Fail – Sphere Size - Void * 3D Gray Scale Option
- Wide Range of Analysis and Enhancement Tools Powered by PXI Technology
- Frame Averaging, Quad View Analysis, Image Filters, Reporting, More...
- Tilt/Rotate Oblique View and LED Targeting System Options
- Flexible and EASY-To-OPERATE system controls and Software
- Easily Upgrades to 130kV X-Ray as your needs change
- Quality Built Made in the U.S.A. Supported Worldwide
- Engineered for Low Maintenance and Trouble Free Operation



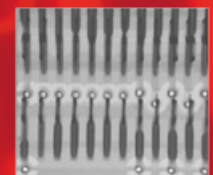
BGA Inspection



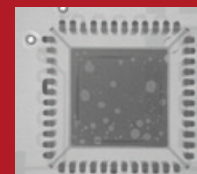
BGA Inspection - Hi Mag



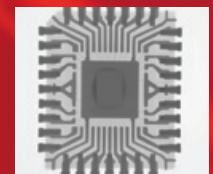
QFP Solder Joints



SMT Connectors



QFN Inspection



Counterfeit Detection



Bond Wire Inspection

PDR | XRAY

PDR GenX-90P

Specifications



Physical Dimensions

Dimensions	62" (H) x 33" (W) x 46" (D) (10.5 sqft, 1 sqm)
Footprint	10.0 sq. ft. (0.86 sq. m)
Weight	2000 lbs. (907 kg)
Safe operating temperature	32° to 99° F (0 to 40°C)
Power consumption	500 watts at 120 VAC
Line voltage	110/230 VAC 50/60 Hz

X-Ray Source

Energy	90kV, 0.18mA
Power	8 Watts maximum
Focal spot size	4 microns (auto adjusting w/power)

Image Detector

Detector type (Options)	4/2" (10cm/5cm) dual view X-ray Imaging Intensifier with HD Camera
	2" x 2" Flat Panel Detector FPD (16,000+ Gray Scale)
	4.7" x 5.9" Flat Panel Detector FPD (16,000+ Gray Scale)
	<i>*Special Application Detectors/Intensifiers also available</i>
Image Monitor	High-resolution 23" flat panel LCD color monitor

Image Performance

Field-of-view	Variable
Max inspection area	15.5" (X) x 18" (Y) on table surface / 39.4cm (X) x 45.7cm (Y)
Max board handling	17.5" x 21" (445mm x 533mm)
Spatial resolution	>40 lp/mm
Magnification	>1100X

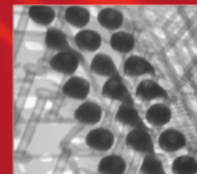
PDR GenX-130P

Ultra High-Performance * High Resolution Image Quality
High Power Compact X-Ray System

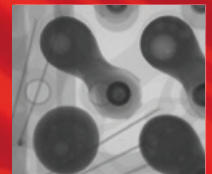


• BGA Inspection/Analysis • Failure Analysis • Counterfeit Inspection • Wire Bond Inspection • LED Inspection

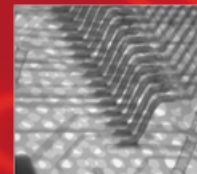
- Truly Remarkable Image Clarity with proprietary HD Camera and Software
- Compact System, PCB sizes up to 21"(533mm) X 17.5" (445mm)
- Customizable Flat Panel Detectors or Image Intensifier options to meet your application requirements
- 130kV, 16W, 5um to 6um X-Ray tube, 0.18mA with Magnification up to 665X
- Programmable 4 Axis (X,Y, Z1/Z2) fully motorized Motion Control
- BGA/QFN/Flip Chip Software Pass/Fail – Sphere Size - Void * 3D Gray Scale Option
- Wide Range of Analysis and Enhancement Tools Powered by PXI Technology
- Frame Averaging, Quad View Analysis, Image Filters, Reporting, More...
- Tilt/Rotate Oblique View and LED Targeting System Options
- Flexible and EASY-To-OPERATE system controls and Software
- Engineered for Low Maintenance and Trouble Free Operation
- Quality Built Made in the U.S.A. Supported Worldwide



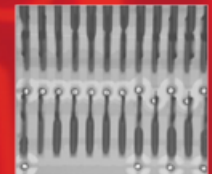
BGA Inspection



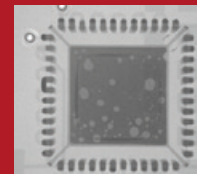
BGA Inspection - Hi Mag



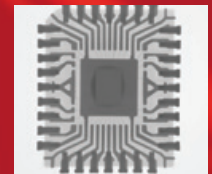
QFP Solder Joints



SMT Connectors



QFN Inspection



Counterfeit Detection



Bond Wire Inspection

PDR | XRAY

PDR GenX-130P

Specifications



Physical Dimensions

Dimensions	62" (H) x 33" (W) x 46" (D) (10.5 sqft, 1 sqm)
Footprint	10.0 sq. ft. (0.86 sq. m)
Weight	2000 lbs. (907 kg)
Safe operating temperature	32° to 99° F (0 to 40°C)
Power consumption	500 watts at 120 VAC
Line voltage	110/230 VAC 50/60 Hz

X-Ray Source

Energy	130kV, 0.356mA
Power	16 Watts maximum
Focal spot size	6 micron (auto adjusting w/power)

Image Detector

Detector type (Options)	4/2" (10cm/5cm) dual view X-ray Imaging Intensifier with HD Camera
	2" x 2" Flat Panel Detector FPD (16,000+ Gray Scale)
	4.7" x 5.9" Flat Panel Detector FPD (16,000+ Gray Scale)
	<i>*Special Application Detectors/Intensifiers also available</i>
Image Monitor	High-resolution 23" flat panel LCD color monitor

Image Performance

Field-of-view	Variable
Max inspection area	15.5" (X) x 18" (Y) on table surface / 39.4cm (X) x 45.7cm (Y)
Max board handling	17.5" x 21" (445mm x 533mm)
Spatial resolution	>40 lp/mm
Magnification	>665X

Intelligent X-Ray Software

Powerful Image Processing Algorithms and Analysis Tools for X-Ray Inspection

Analyze BGA's, QFN's and related bottom terminated devices automatically to render detailed pass/fail reporting for complex multi-layered/double-sided board designs. Easily recall or import settings for the best image quality utilizing user created system setting templates stored to the library.

- Detect, Analyze, Report
 - Voiding (Individual Pocket/Solder Joint Percentage and Cumulative Percentage Totals)
 - BGA Sphere Circularity
 - Pass/Fail Detection
 - Bridging
- (Optimum Pro Module Standard)**

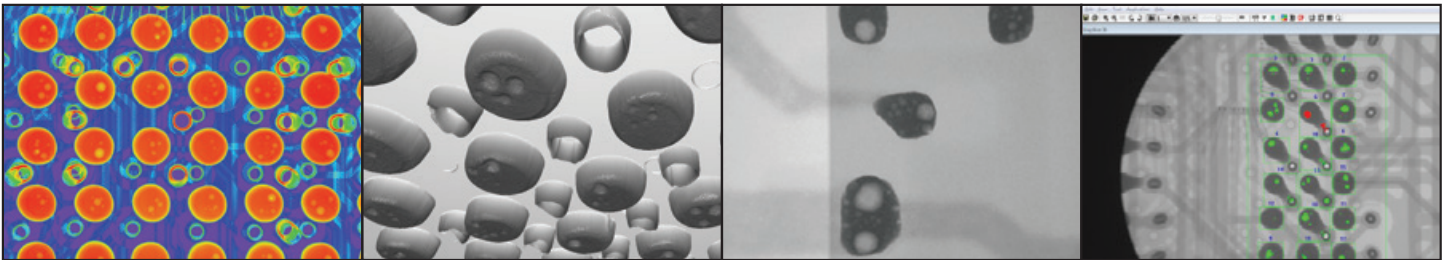


Image Processing Filters and Enhancement Tools

- Sharpen, Smooth, Edge Detect, Negative, 3D Gray Plot, Psuedo Color, Image Histogram
- Post Capture Image Enhancement Library
- Point to point Distance Measurement tool
- Image Annotation Tools
- Quad View

Gull Wing, QFP, SOIC, Measurement tools (Pro Advanced Module)

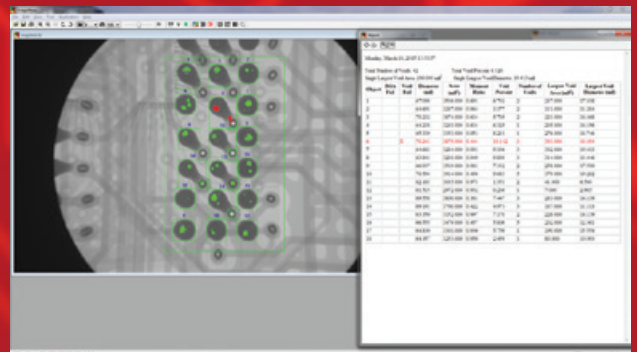
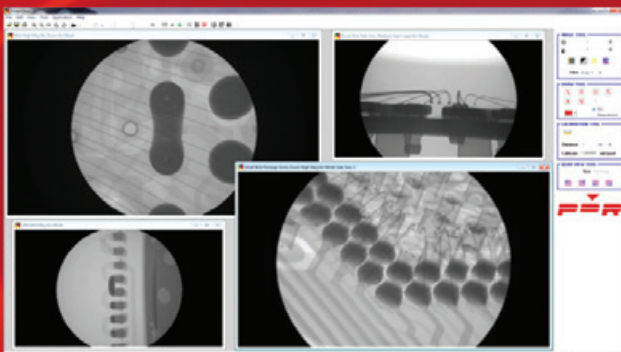
- Joint Area Measurement
- Percent Void
- Pass/Fail Analysis

Drill Offset Measurement (Pro Advanced Module)

- Center to Center Offset (X,Y) Measurement.

Semiconductor Measurement Tools (Pro Advanced Module)

- Bond Wire Sweep
- Die Attach Void Measurement
- Pass/Fail Analysis



Why Choose PDR?

Founded in 1985, PDR products are distributed worldwide with systems commissioned in over 50 countries and supported via PDR's Global Network of Sales and Technical Support Specialists to assist your organization in achieving only the highest of quality control standards. Based in the United Kingdom and the U.S.A., PDR Products are designed and manufactured in keeping with PDR's core principles; that ease of use, intuitive design, easy to learn and operate systems, and most importantly "superior value" systems are key to successful partner relationships with industry.

At PDR we know that earning your business and keeping your business is our Mission.

PDR X-Ray Inspection Systems offer truly remarkable "best in class" image detail as a result of proprietary X-Ray Tube Technology, Superior Imaging enhancement Software/Filters, and a wide selection of either Flat Panel Image Detectors or Traditional Image Intensifiers to render superior image clarity per your specific application requirement.

Engineered as well as Manufactured in the USA, special application/ custom X-Ray Solutions expertise is available to help your firm when designing and implementing specialized X-Ray solutions for your unique applications.

We thank you for the opportunity to participate in your organization's success and pledge our commitment to you to provide first quality X-Ray Solutions and "Gold Standard" Customer Service when you buy PDR X-Ray Solutions.

Sincerely, Rog Gibbs





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PDR's products are available worldwide via our international distributors, all offering professional sales and support.

For contact, product and company details please visit www.pdr-rework.com

