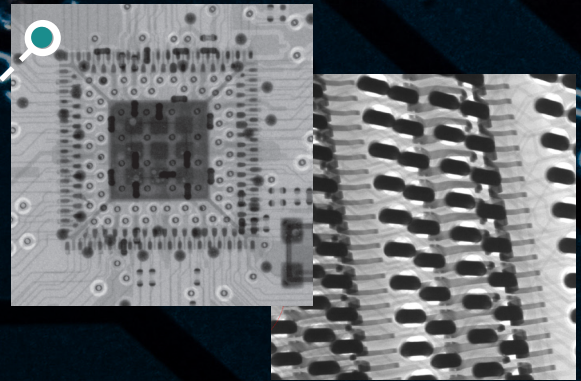


Microfocus X-ray Inspection



*At Line Inspection of PCBs,
Components, and Assemblies.*

FEATURES & BENEFITS

Optimal Performance and Operability at a Fraction of the Cost of Comparable X-ray Inspection Systems

Key Features:

- + 90kV Sealed X-ray Tube, 4 μ m Focal Spot
- + Oblique Angle Inspection up to 45°
- + 5" HD Digital Flat Panel Detector
- + 6-Axis Motion Control
- + Programable Inspection Sequences
- + On-screen Point & Click Navigation
- + 41X Geometric/180X Digital Magnification
- + 2D & 2.5D X-ray Imaging
- + Built-in Tools for Image Manipulation
- + Real-time Image Visualization & Capture
- + Automated Defect Enhancement Option

The APOGEE 90 was built to fulfill the need for an affordable and reliable inspection system with advanced features for defect detection, failure analysis, and NDT in production environments. The system is capable of capturing the highest clarity 2D & 2.5D x-ray images that provide operators with confidence in their findings.

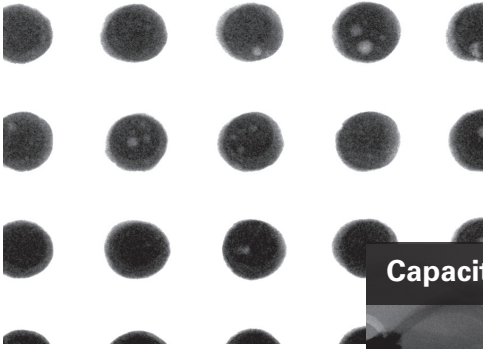
Equipped with powerful and versatile Vi3 Software, the APOGEE 90 creates efficiency in almost any inspection task - from quick spot checking of random samples and automated inspection routines, to enhanced analysis of BGAs and QFNs and more. Operators can easily navigate the intuitive GUI and perform tasks with minimal training.

Creatively designed with the superior resolution and automation typically found in higher cost systems, the APOGEE 90 is one of the most powerful and economical, maintenance-free x-ray inspection systems available today.

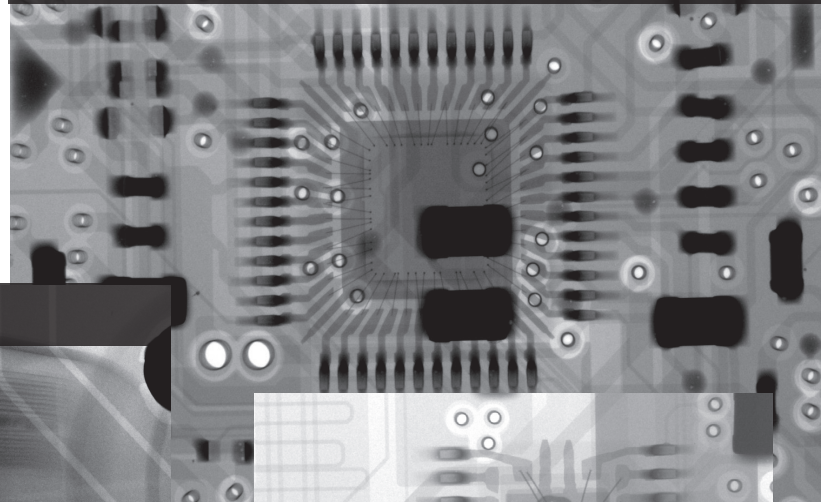
APOGEE 90 - TECHNICAL SPECIFICATIONS

TECHNOLOGY	X-ray Source	Sealed, Microfocus		
	Power/Voltage/Current	8W	90kV	0.160mA
	Min. Spot Size	4µm		
	Detector	5" FPD	Grey Scale: 16-bit (65,536 shades)	2.36 MP
	Pixel Pitch	85µm		
	Field of View	2.875"x2.875" (73mm x 73mm)		
	Imaging Speed	10 FPS/Location		
	X-ray Cabinet/Safety	<0.1 mR/hr (1.0 uSV/hr)		IEC, CE, & FDA
PERFORMANCE	Stage/Sample Size	18.1" x 18.1" (460 x 460mm)		
	Max. Inspection Area	17"x17" (430mm x 430mm)		
	Axis of Manipulation	6-Axis (Sample X,Y Source Z Detector X, Z, 45° Tilt)		
	Motion Control	X/Y - Joystick	On-screen Navigation	
	Magnification	Geometric Max: 41X		Digital Max: 180X
	Software	VJE's Proprietary Vi3		
	Programming & Automation	Manual Programming	CAD/Gerber Data Import	
	Image & Data Processing	Manipulations & Control: <ul style="list-style-type: none"> + Contrast Control + Exposure Control + 9x Image Filters + Pseudo Color + Pseudo3D 	Measurement & Analysis: <ul style="list-style-type: none"> + Basic Measurements (angle, distance, wire sweep, offset, diameter) + Void Analysis (BGA, QFN, Large Area) + PTH Analysis (Barrel Length, % Fill) + Pass/Fail Status 	
	Data Output	Image: TIF, BMP, JPG (Raw Image and/or annotated)		
		Analysis Data: .XLS		
System	OS: Windows 10	Display: 24" High-Res LCD		
Sample Change	Large Sliding Front Door			
INSTALLATION	System Footprint	47 x 55.5 x 71 inches (1200 x 1400 x 1800 mm)		
	System Weight	1452Kg (3200lbs)		
	Power Requirement	100 – 240 VAC (50/60 Hz), 4.2A @ 120V and 2.3A @ 220V		
	Warranty	1 Year		

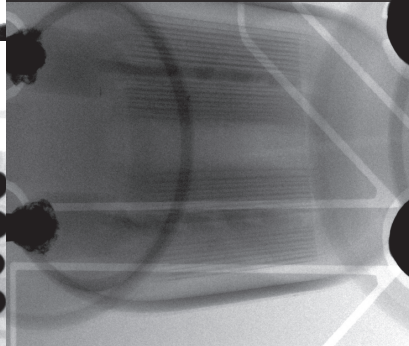
BGA Void, Improper Wetting



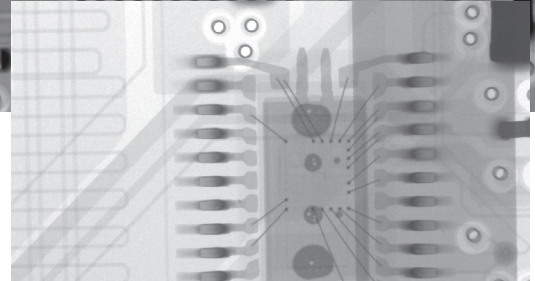
QFP Wire Bonds



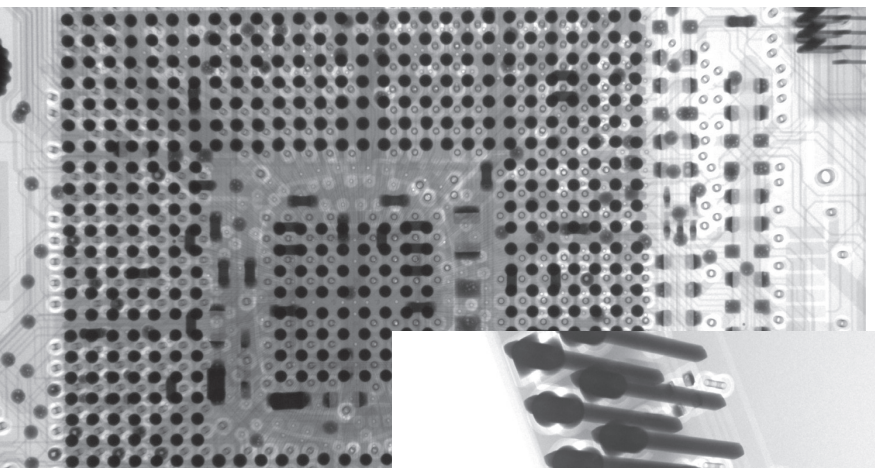
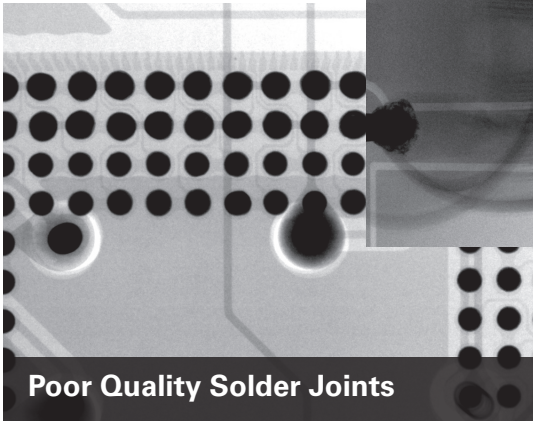
Capacitor Tilted



DIP Wire Bonds, Die Bond Voiding

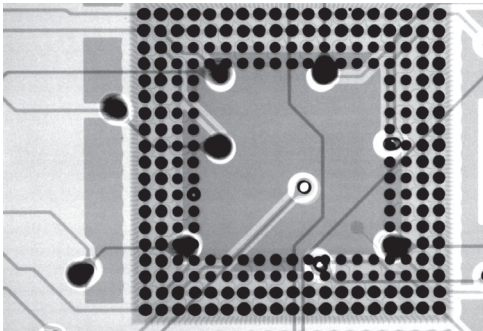


Poor Quality Solder Joints

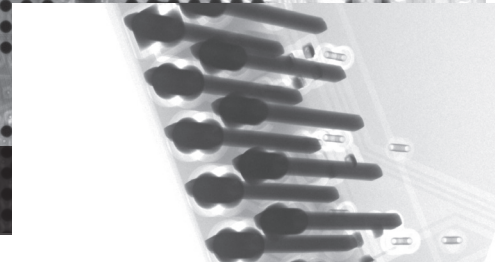


BGA w/ Large FOV, Poor Solder Consistency

Mechanical Assembly



PTH Connector Off Axis View



Why Choose VJ Electronix — VJE combines years of industry leadership, technical expertise, and product development knowledge to manufacture state-of-the-art x-ray and SMT rework systems. VJE is your one-stop source for intelligent solutions that boost the productivity of high-value, high-precision applications in electronics manufacturing and industrial markets worldwide. VJE is affiliated with VJ Technologies Inc., a global leader in x-ray technology.