



High-Precision  
X-Ray Inspection System  
3D/CT (Open tube)  
**X-7900 Ultra**



- System magnification: 2000X
- 160KV/500uA/1μm/diamond target
- 1μm high-accuracy measurement
- Twin-CT system integrating planar CT and cone-beam CT
- Dpi: 1536\*1536pixel
- High-precision FPD with 360° rotation capability
- FPD tilt angle: ±70°
- Large platform inspection, with an effective inspection area of 600\*600mm.

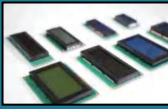
**SemiStar Corp. ,the distributor in North America : [sales@semistarcorp.com](mailto:sales@semistarcorp.com)**

# X-RAY Inspection System

## Applications



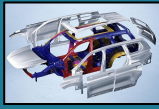
Semiconductor



LCM  
Display  
Module



Battery  
protection  
circuit board



Automotive  
exterior  
panels



LCD  
Backligh



Bare PCB  
Inspection

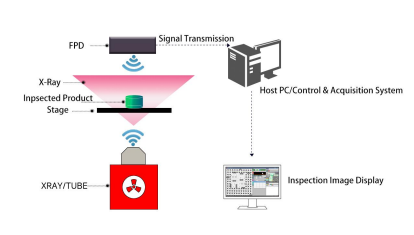
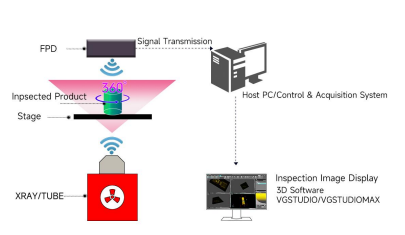
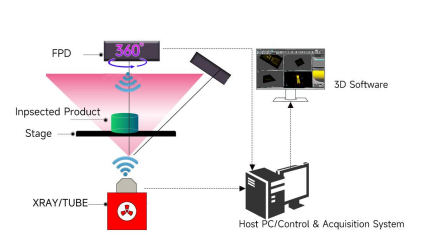


PCB Press  
Lamination


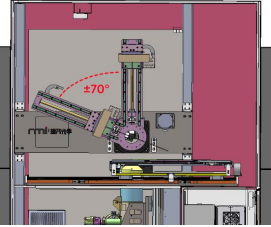
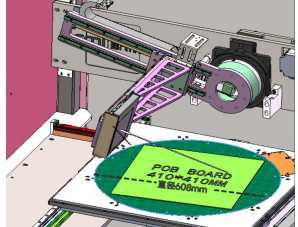
## CT X-RAY Inspection Image

X-RAY inspection image	AI Automatic algorithm image	CT-3D inspection image
IC WIRE	CPU	Battery
Through hole	MOS tube	PCBA
BGA voids	BGA	BGA

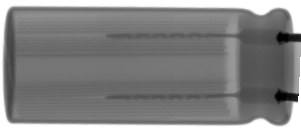
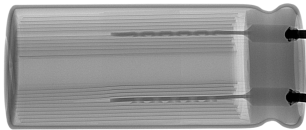
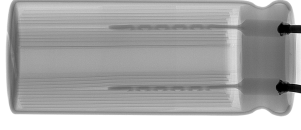
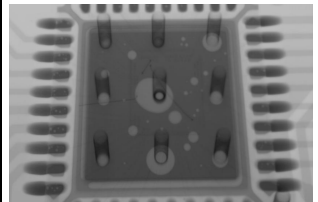
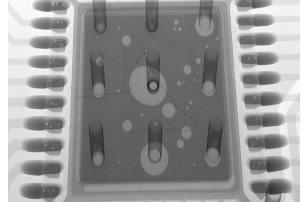
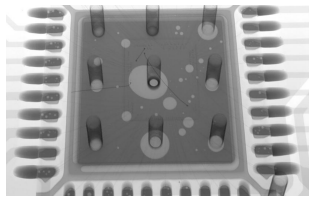
# X-RAY Principle

X-ray 2D Working Principle Diagram	Cone-beam CT Working Principle Diagram	Planar CT Working Principle Diagram
<p>The X-ray tube generates and emits a beam, which is acquired by the X-ray detector. The computer then processes the captured image and conducts AI-based analysis.</p>	<p>Industrial cone-beam CT (CBCT) operates by scanning objects with a conical X-ray beam and employing advanced 3D reconstruction algorithms to generate high-resolution volumetric images.</p>	<p>Industrial planar CT employs specialized scanning trajectories and reconstruction algorithms to achieve 3D imaging of workpiece cross-sections or thin-layer regions.</p>
		

## Quality Accessories

Open tube - domestically produced	Digital HD X-Ray detector	360° rotatable specimen stage
		
<p>The X-Ray tube is the domestic open tube which is stable and up to 1μm resolution.</p>	<p>The flat panel detector features real-time image acquisition and real-time image correction, delivering high-quality images. It can also inspect samples at angles of up to ±70°.</p>	<p>The motorized rotary stage enables 360° sample inspection, minimizing manual adjustments while ensuring precise positioning for optimal observation.</p>

## AI-Powered Debate Image Super-Resolution Technology

Name	Other domestic brand	RMI Image	Image quality benchmark against international competitors with 200%+ price differential
Capacitance			
QFN			

# Specifications & Dimensions Display (mm)

	Model	X-7900-Ultra	3DDimensional Illustration
Tube	Tube type	Open tube	<p><b>Front view</b></p> <p><b>Side view</b></p> <p><b>Top view</b></p>
	Spatial resolution	1μm	
	Tube voltage	160kv	
	Tube current	500μA	
FPD	Image taking type	Flat-panel Digital	
	Imaging precision	85um	
	A/D convert quantified density value	16bit (65536)	
	Dpi	1536*1536 pixel	
	Frame frequency	20 (FPS)	
System	Optical magnification	2000X	
	System magnification	7500X	
	Operating system	WINDOWS 11	
	Power supply	AC110-220V 50-60HZ	
	Power	1200W	
	Radiation safety test	<1 uSV/H	
Structure	FPD tilt angle	±70°	
	Stage size	670mm×670mm	
	Sensing range	600mm×600mm	
	Load-bearing	≤10kg	
	Machine size	1578*1675*1910mm(L*W*H)	
	Machine size (Including three-color light)	1578*1675*2265mm(L*W*H)	
	Machine weight	2200kg	
	Stage movement	Automatic / manual	
Safety	CE Certificate	Yes: STE23113101S	
	State immunity	Yes	
	Radiation Safety Permit	Yes: Guangdong Environmental Radiation Safety Permit [B0640]	