



X-7900

High-precision X-Ray Inspection System

X-Ray Inspection Equipment Series

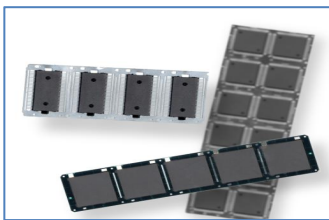
High-precision, NDT system



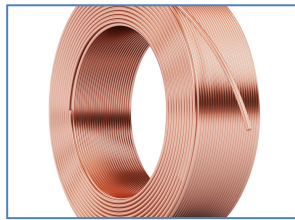
The X-7900 electronic semiconductor inspection equipment can be used to detect integrated circuit chip semiconductors with high precision testing, such as BGA, IGBT, flip chip and PCBA module welding, LED, photovoltaic etc.; Widely used in industrial manufacturing field, such as automobile parts, casting testing, quality testing for pressure vessel and pipe welding; Can detect defects of various types of battery, such as power battery, cylinder, soft packaging, square battery and laminated board.

Application:

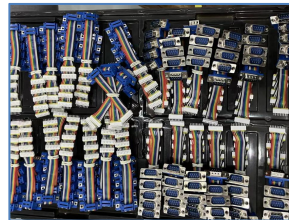
1. Semiconductor package
2. Electronic wire harness
3. Lithium battery
4. Automotive sensors
5. PCBA assembly
6. Mini LED package



Semiconductor package



Cable connection



Electronic wiring harness



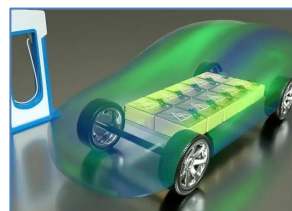
Automotive sensor



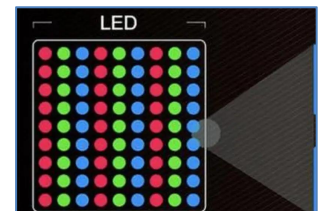
Lithium battery



PCBA assemble



Power battery



Mini LED package

Specifications:

	model	X-7900
Tube	Tube type	Enclosed type
	Spatial resolution	3μm
	Tube voltage	130kv
	Tube current	300μA
Detector	Image taking type	Flat-panel Digital
	Imaging precision	85μm
	A/D convert quantified density value	16bit (65536)
	Dpi	1536*1536px
	Frame frequency	20 (FPS)
System	Optical magnification	450X
	System magnification	2000X
	Operating system	WINDOWS 10
	Power supply	AC110-220V50-60HZ
	Power	1200W
	Radiation safety test	<1 uSV/H
Structure	Detector rotation angle	60°
	360° rotary stage	Diameter 430mm
	Stage size	540*540mm
	Sensing range	510*510mm
	Load-bearing	≤10kg
	Machine size	1100*1360*1950mm(L*W*H)
	Machine size (Including monitor)	1400*2010*2300mm(L*W*H)
	Machine weight	1050kg
	Detector rotation angle	Automatic / manual
Safety	CE Certificate	Yes: STE23112101S
	State immunity	Yes
	Radiation Safety Permit	Yes: Guangdong Environmental Radiation Safety Permit [B0640]

High-end Configuration:

Joystick control	Numerical control programming
<p>FPD Control Tube Control</p> <p>■ Function of button controls are shown in the figure</p>	<p>Simple mouse-click operation to write the inspection program The carrier can be positioned in X, Y direction; X-Ray tube and detector in Z direction. The current and the voltage can be set by the software. Image Settings: brightness, contrast ratio, automatic gain, and exposure The user can set the pause time for the program switching The collision protection system can satisfy the maximum tilt and observation of objects</p>

Functional Advantage:

Function	Advantage
CNC program: Automatic batch inspection of different sample locations	Automatically ON / OFF X-Ray tube detect batch of samples
Array function: Automatically detect batch of samples with fixed position and same spacing	With high-stability and high-precision X-Ray tube
Bubble measurement: measure the bubble size, cavity rate, tin climbing height with one button	High definition digital X-Ray detector
Length and width measurement: the length and width of the measured inspection area	The stage can place a large number of samples of various sizes
Visual navigation interface: accurate positioning, accurate displacement from x - y with joystick	The stage can do 360° rotation to detect sample
Simulated color: to better observe and detect the image	Can do 60° tilt observations

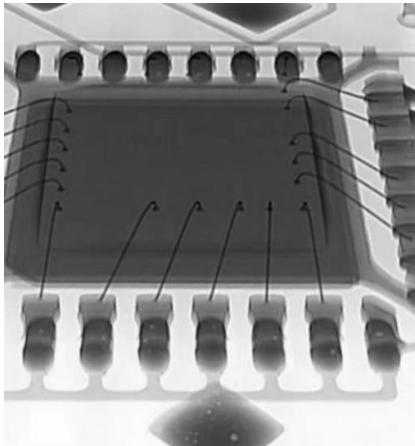
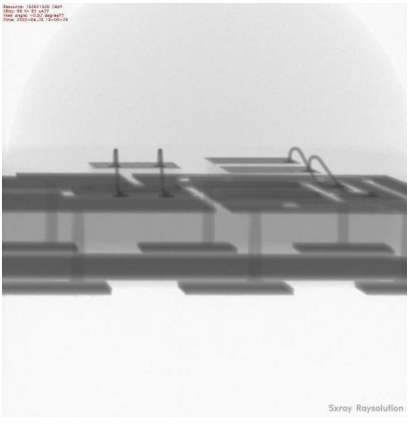
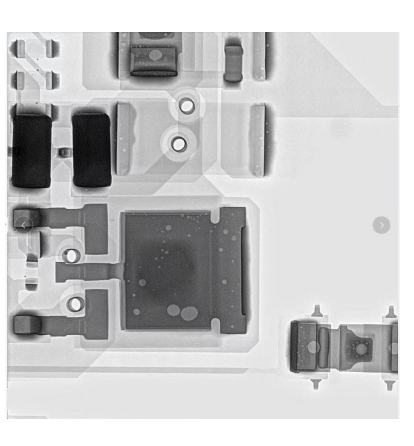
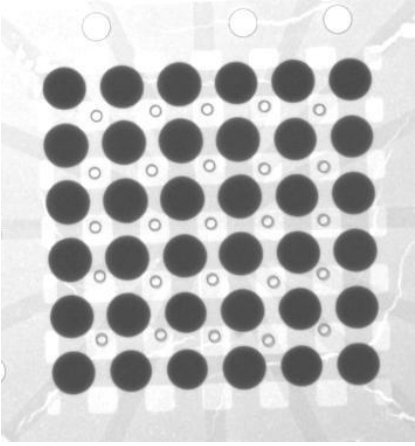
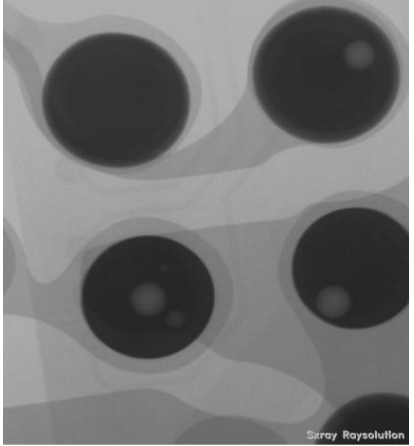
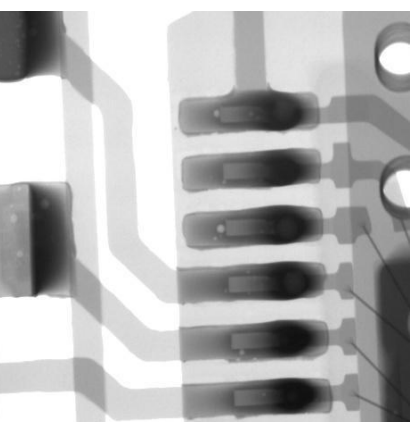
High Quality Accessories:

Japanese Hamamatsu X-Ray tube	Digital HD X-Ray detector	Roatry stage (optional)
<p>X-Ray, voltage / current variation range</p>		
<p>The X-Ray tube is the HAMAMATSU tube from Japan, which is the most stable in the world and has a long service life.</p>	<p>The X-Ray detector has real-time image acquisition, real-time image correction, provides high quality image, passive cooling device, built-in temperature sensor can display the working temperature in real time, a variety of different gain gear PGA + Binning combined working modes.</p>	<p>The rotatry stage can detect samples by 360°, reduce the number of manual adjustments, achieve accurate positioning, and easy to observate samples</p>

X-Ray Principle Description:

A Schematic representation of the X-Ray working principle	A Schematic diagram of the X-Ray lifetime decay
<p>平板探测器 Detector</p> <p>信号传输 Signalling</p> <p>X射线 X ray</p> <p>被测物体 Tested object</p> <p>载物台 Stage</p> <p>光管 Light pipe</p> <p>图像采集卡 acquisition</p> <p>电脑显示屏 Computer display</p>	<p>Long term stability for L9181</p> <p>CONFIDENTIAL HAMAMATSU</p> <p>Tube Voltage : 130KV Tube Current : 300µm Spot Size : 4µm X 5µm Mode : Continuance Detector : X-raymonitor (Si-PD + P43 with Al)</p> <p>CONFIDENTIAL HAMAMATSU PHOTOGRAPHIC ELECTRON TUBE DIVISION 9518</p> <p>This material is controlled by the information on the internet site. No warranty, expressed or implied, is made by Hamamatsu regarding the information.</p>

Inspection case:

<p>IC WIRE</p>	<p>LED</p>	<p>IGBT</p>
		
<p>BGA tin ball</p>	<p>BGA air bubble</p>	<p>IC weld</p>
		
<p>Gold wire welding</p>	<p>IC circuit</p>	<p>Semiconductor inspection</p>
