

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

rmi | 瑞茂光学
Decoding the Unforeseeable Future

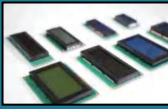
- System magnification: 2000X
- 160KV/500uA/1μm/diamond target
- 1μm high-accuracy measurement
- Twin-CT system integrating planar CT and cone-beam CT
- Dpi: 1536*1536pixel
- High-precision FPD with 360° rotation capability
- FPD tilt angle: ±70°
- Large platform inspection, with an effective inspection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

X-RAY Inspection System

Applications



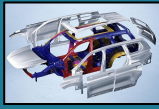
Semiconductor



LCM
Display
Module



Battery
protection
circuit board



Automotive
exterior
panels



LCD
Backligh



Bare PCB
Inspection

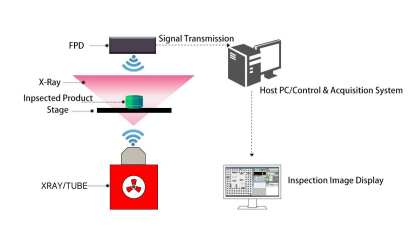
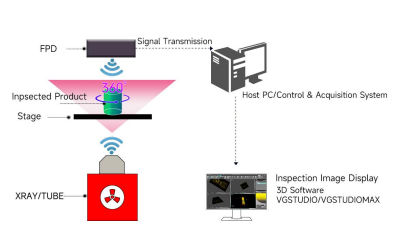
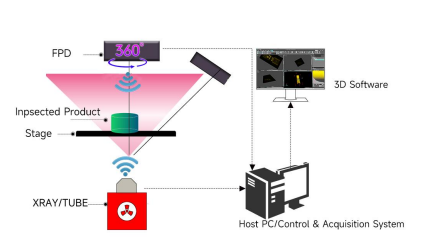


PCB Press
Lamination


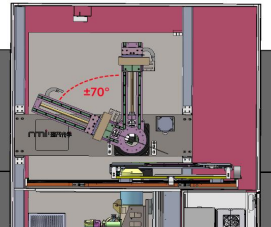
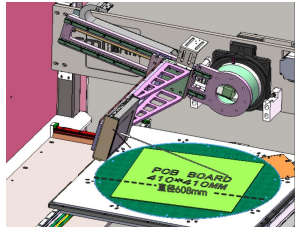
CT X-RAY Inspection Image

| 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 |
| | | |

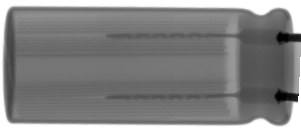
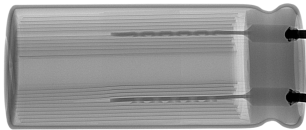
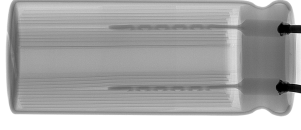
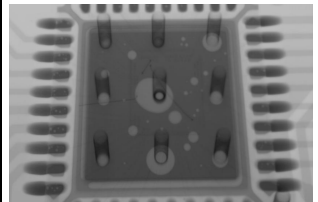
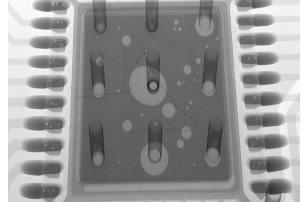
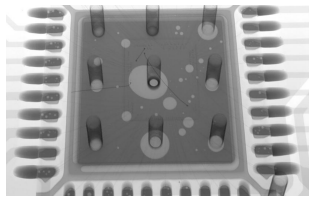
X-RAY Principle

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