VISCOM
vision technology

# X7056-II BO

## AOI and AXI for Wire Bonds and Other Inspection Areas

The inspection system X7056-II BO effectively combines optical in-line wire bond control with automatic X-ray inspections. This comprehensive inspection concept enables higher efficiency, optimizes cycle times and thus improves throughput. Where the bottom line is concerned, procurement costs are significantly lower than purchasing two separate inspection systems.

The Viscom inspection software is designed for maximum inspection depth and accuracy. The standard library contains inspection patterns for die, ball-wedge, wedge-wedge and security bonds. The inspection scope can be individually extended. During the inspection, high-resolution optical camera technology capture all bond sites and wires. The automatic X-ray inspection then follows seamlessly. Thus, for example, hidden connection sites can also be reliably inspected in one run.

The quality of wire paths, dies, component positions and other features are inspected. It makes no difference whether the connections are of copper, aluminum or gold, or whether ribbon or thick or thin wires are involved. Damaged and misplaced components are also reliably detected. Viscom also offers the full scope of high-powered verification, offline programming and SPC evaluation for this system.

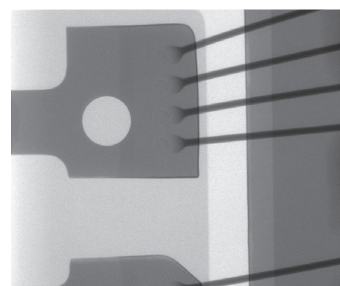
**Bond AOI and bond AXI combined in one system**

**High-performance inspection software from Viscom**

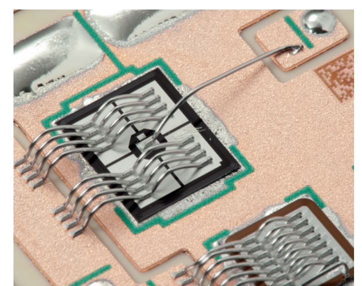
**Extremely high accuracy and inspection depth**

**Versatile camera module selection for thick and thin wires**

**Maintenance-free closed microfocus X-ray tubes**



Wire bond inspection on the X-ray image



Defect detection on multiwire connections and multiple loops

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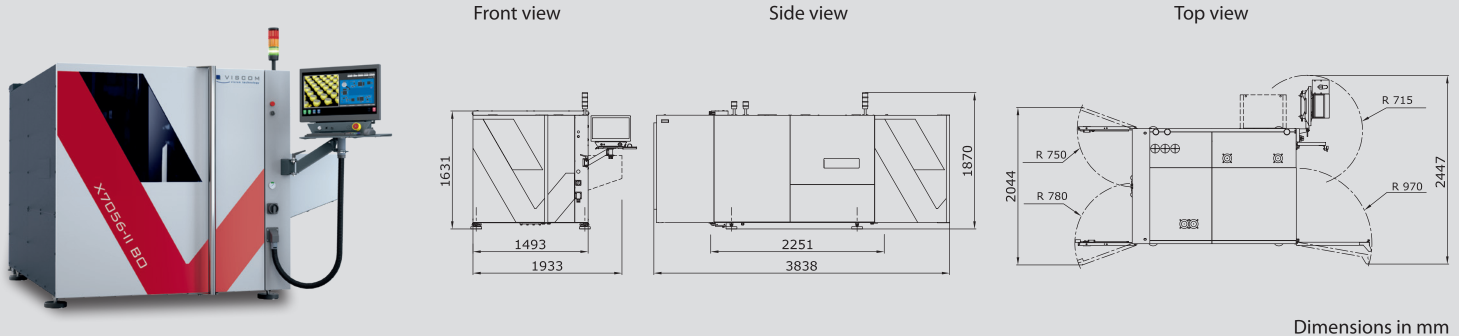
# Technical Specifications




| | | X7056-II BO |
|---|---|---|
| **X-ray technology** | X-ray tube | Sealed X-ray tube |
| | High voltage | 60 - 130 kV |
| | Tube current | 50 - 300 µA |
| | Detector | Flat panel detector (FPD), 14-bit grayscale depth |
| | Resolution | 6 - 30 µm/Pixel (depending on configuration) |
| | X-ray cabinet | Designed to meet requirements for fully protected devices in accordance with German Radiation Protection Act (StrlSchG) and German Radiation Protection Ordinance (StrlSchV). Radiation leakage rate < 1 µSv/h |
| **Camera technology*** | **XM Bond HR module – orthogonal camera** | |
| | Field of view | 23 mm x 23 mm (0.9“ x 0.9“) |
| | Resolution | 4.5 µm |
| | Number of megapixel cameras | 1 |
| **Software** | User interface | Viscom EasyPro/vVision-ready |
| | Verification station | Viscom HARAN |
| | SPC | Viscom SPC (statistical process control), open interface (optional) |
| | Remote diagnosis | Viscom SRC (software remote control) (optional) |
| | Off-line programming | Viscom PST34 (external programming station) (optional) |
| | Systematic defect analysis and continuous system monitoring | Viscom PDC (process data control), TCM (technical chain management) |
| **System computer** | Operating system | Windows® |
| | Processor | Intel® Core™ i7 |
| **Substrate handling** | Substrate size | Up to 450 mm x 350 mm (17.7" x 13.8") (L x W) |
| | Transport clearance | 850 - 980 mm ± 20 mm (33.5" - 38.6" ± 0.8") |
| | Substrate clamping | Pneumatic |
| | Substrate support width | 3 mm (0.1“) |
| | Upper transport clearance | Up to 25 mm (1“); FPD with 8 µm resolution: 20 mm (0.8“) |
| | Lower transport clearance | 50 mm (2“) |
| | Handling time | ≥ 4 s (with xFastFlow) |
| **Other system data** | Positioning/handling unit | Synchronous linear motors |
| | Interfaces | SMEMA, SV70, customer-specific |
| | Power requirements | 400 V (other voltages on request), 3P/N/PE, 8 A, 4 - 8 bar working pressure |
| | System dimensions | 1493 mm x 1631 mm x 2251 mm (58.8“ x 64.2“ x 88.6“) (W x H x D) |
| | Line integration dimension | +25 mm (1“) |
| | Weight | 2245 kg (4949 lbs) |

*Other camera technologies on request

Subject to technical changes. Windows® and Intel® Core™ i7 are registered trademarks.

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