

X8011-II PCB

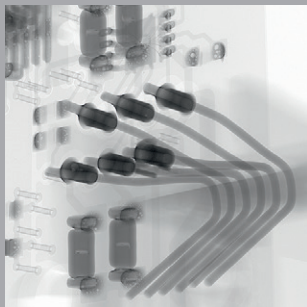
Very Precise Offline X-rays –
Intelligently Networked and
Future-Oriented



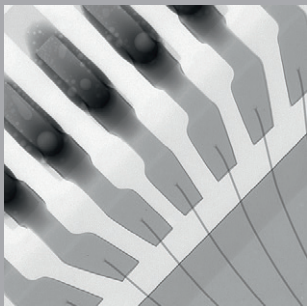
3D MXI

With Quality Uplink!

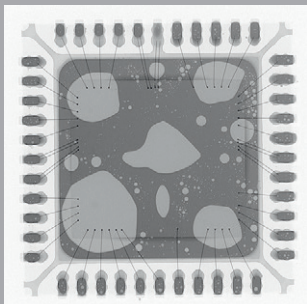
Brilliant Image Quality, Optimized Process



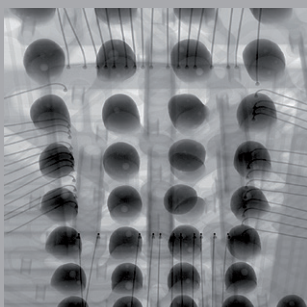
THTs under angled radiation



QFP orthogonal radiation



QFN orthogonal radiation



BGA under angled radiation

Fast automatic inspection and highly precise random sample checking in one system

Very long service life, flexible use

Powerful open microfocus transmission tube; sealed direct beam tube optional

Highest magnification and excellent images

Use of high-quality flat-screen detectors

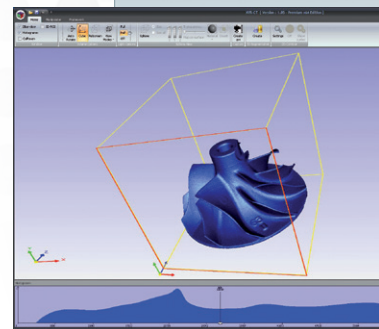
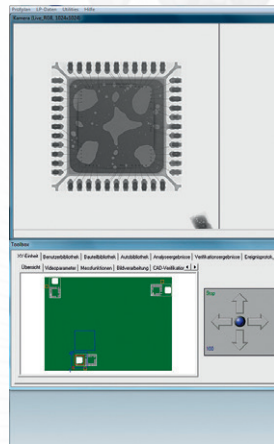
Intuitive operation and comprehensive analysis functions: Viscom XMC and Viscom SI

Upgrade possible with Viscom proprietary computed tomography

EasyClick principle for easy mounting of handling units

Unique Quality Uplink for simplified classification and process control

Worldwide competent on-site service hotline and remote maintenance



XVR-CT analysis by Viscom

In modern SMD production, components such as BGA, QFN or QFP are gaining ground. Because their connectors are mostly hidden, many solder joints can only be reliably checked with an X-ray inspection. The high resolution X-ray inspection system X8011-II PCB was developed especially for these tasks. Typical applications are, for example, the inspection of electronic assemblies and components, quality assurance in power electronics, or non-destructive special inspections. With the X8011-II PCB, electronics manufacturers can draw on the first-class automatic analysis routines of the Viscom AXI family X7056 with this off-line solution as well. Through the simultaneous availability of the automatic X-ray analysis (Viscom SI) and the manual or semi-automatic inspection (Viscom XMC), this system offers the highest flexibility.

First-class inspection results, great system versatility

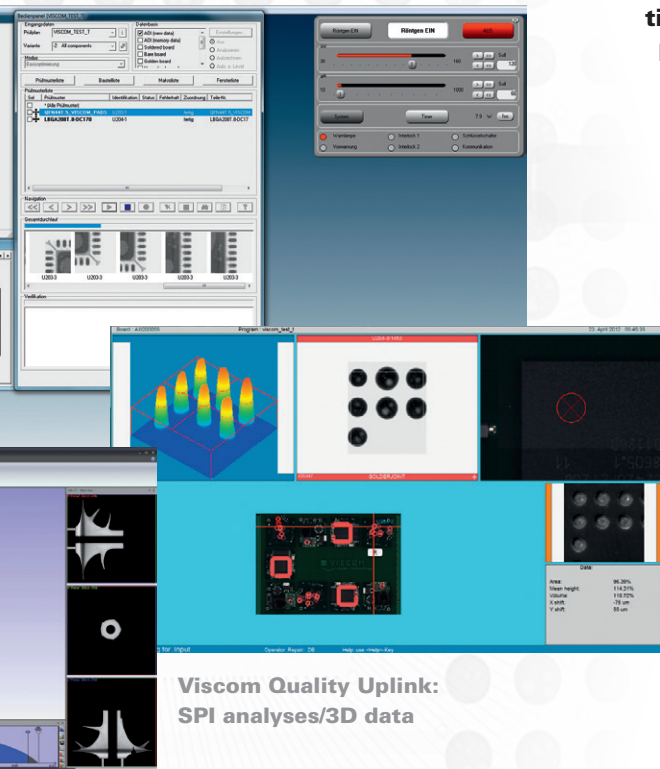
With the X8011-II PCB, Viscom offers a **smart and economical X-ray inspection system**. The application scope reaches from **random sample analysis** and **special inspection** of individual components up to **automatic start-up support** and **small series inspection**. Thanks to integration of the proven automatic SI inspection analyses, the system is ideally suited for **high-mix low-volume manufacture**.

The heart of the X-ray technology is the **open Viscom microfocus transmission tube** (up to 200 kV) with high resolution. Optionally, a **sealed direct beam tube** (up to 130 kV), for example, can also be employed. Both tubes are distinguished by their **stable X-ray radiation during continuous operation**. High resolution **digital flat panel detectors** are used for the **highest magnifications** and **optimum image quality** for evaluation of X-ray images. The practice-oriented, modular Viscom system concept offers practically every individual user **optimum inspection possibilities**.

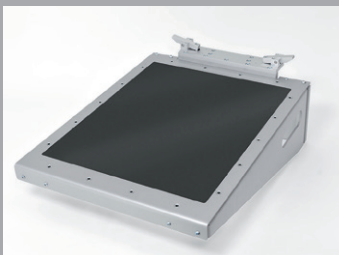
The **Viscom XMC software** is available on the system for special inspections or non-standard components. With the **intuitive operation** and **comprehensive analysis functions**, the inspection objects can be easily and precisely checked. In addition, **3D reconstruction** with the Viscom proprietary **XVR computed tomography** is also possible here. Thus, in addition to the improved **localization of defects**, individual **slices** or **section images** can also be visualized with this process.

The very special strength of the system is the **fully automatic X-ray analysis** with the Viscom SI software. It combines over 30 years of experience in assembly inspection and is **especially oriented to SMD production**. And so the well-known Viscom inspection depth of the X7056 inline family is also available for the offline world. Yet another advantage is the **uniform user interface**. This **saves training expense** and facilitates **communication between different inspection systems**.

The practical feature **Viscom Quality Uplink** can be used for the X8011-II PCB. By linking the inspection results from SPI, AOI, AXI and MXI, this function provides a **simplified classification** and **effective process control**. For example, all inspection data from the Viscom 3D solder paste inspection can be displayed on the verification station of the X8011-II PCB. **Defect causes** are **easier to track down** and **process optimization** is **simplified**. With these features, the system X8011-II PCB offers many possibilities in **high performance X-ray inspection**.



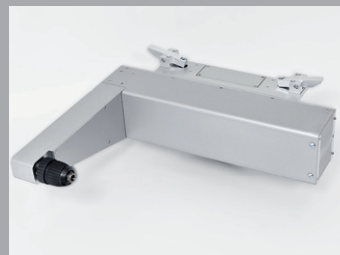
Universal, versatile exchangeable modules for perfect sample handling



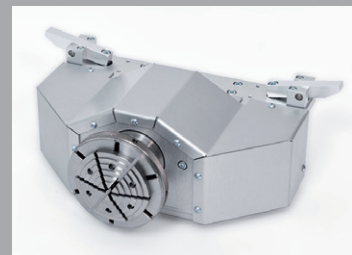
Object table



Rotation module



Motorized rotation/tilt axis



CT axis

Technical Specifications

X8011-II PCB *eco* | X8011-II PCB *plus* | X8011-II PCB *flex*

X-ray technology

X-ray tube	Sealed direct beam tube or open microfocus transmission tube (optionally also TXD X-ray tube, < 1.5 µm)		
High voltage	20 - 130 kV / 20 - 160 kV / 20 - 200 kV		
X-ray current	50 - 300 µA / 5 - 1000 µA		
Target power	max. 20 W / max. 40 W		max. 40 W
Geometric magnification	max. 35 times / max. 2650 times		max. 2650 times
Image converter	High resolution		High resolution
Diagonal	7.3" FPD, 14 bit		11" FPD, 14 bit
Proven resolution (at 90 kV/80 µA)	< 16 - 50 µm / < 4 µm / < 1.5 µm		
Detector swivel range	0°	0 - 60°	0 - 60°
Additionally via the rotation and tilt axis +/- 45° (90°)			
X-ray cabinet	Designed to meet requirements for fully protected devices in accordance with German Radiation Protection Act (StrlSchG), German Radiation Protection Ordinance (StrlSchV), CE mark and additional international standards for worldwide use. Radiation leakage rate < 1 µSv/h		

Software

User interface	Viscom XMC / Viscom SI optional
Available software packages	BGA analysis software QFN analysis software THT analysis software ACA analysis software (surface analysis) Fully automatic Viscom SI analysis software XVR-CT software (planar, rotary) Verification station Viscom HARAN Viscom Quality Uplink to AOI, AXI, and SPI from Viscom for process optimization

System computer

Operating system	Windows®
Monitor	High-resolution 24" LCD display for special depiction of grayscale values in the SMT and electronics sectors (DICOM Standard)

Inspection object handling

Manipulator	X-Y-Z	X-Y-Z plus rotation module
Max. table travel range	Horizontal x/y-axis: 460 mm x 435 mm (18.1" x 17.1") Vertical z-axis: 290 mm (11.4")	
Max. rotation module travel range	–	Horizontal x/y-axis: 350 mm x 430 mm (13.8" x 16.9") Vertical z-axis: 290 mm (11.4") n x 360°
Inspection object weight	Up to 10 kg (22 lbs) (with rotation module, 5 kg/11 lbs)	
Sample change	Motorized window opening	
Optional additional axes available	Yes	

Other system data

Power requirements	230 V (other voltages on request), 1P/N/PE, 16 A
System dimensions	Approx. 1144 mm x 2007 mm x 1420 mm (W x H x D) (45" x 79" x 55.9")
Weight	Approx. 2100 kg (4630 lbs)

