

## X8011 PCB

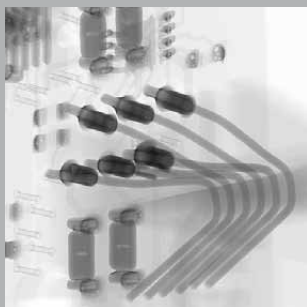
High Performance  
X-ray Inspection  
for SMT/Electronics



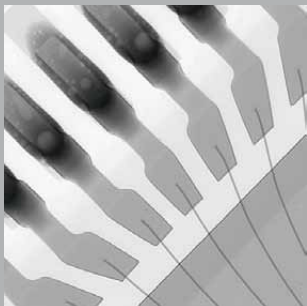
**MXI**

**With Quality Uplink!**

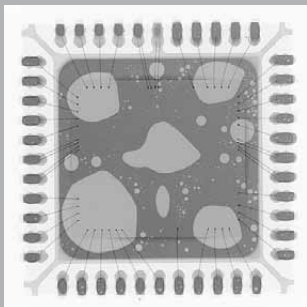
# The Best of Two Worlds



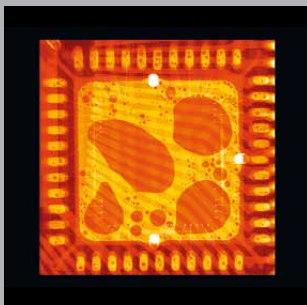
THTs under angled radiation



QFP orthogonally radiated



QFP orthogonally radiated



Pseudo colors display of a QFP in XMC

Fast automatic inspection and high performance sample testing in one system

**Two inspection concepts in one system**

**High performance open microfocus transmission tube, optional sealed direct beam tube**

**Highest magnification and excellent image quality**

**Optional use of flat panel detectors**

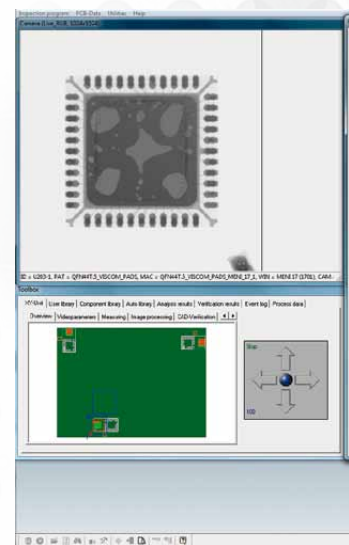
**Intuitive operation and comprehensive analysis functions: Viscom XMC und Viscom SI**

**Upgradable with Viscom proprietary computed tomography**

**EasyClick principle for easy mounting of handling units**

**Unique Viscom Quality Uplink for simplified classification and effective process control**

**Worldwide competent service on site, hotline and remote maintenance**



*In modern SMT production, components such as BGA, QFN or QFP are gaining ground. Because their connectors are mostly hidden, many soldered connections can only be reliably checked with X-ray inspection. The high resolution X-ray inspection system X8011 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 PCB, now electronics manufacturers can draw on the first class automatic analysis routines of the Viscom AXI family X7056 with this offline 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, highest flexibility

With the X8011 PCB, Viscom offers a **smart and economical X-ray inspection system**.

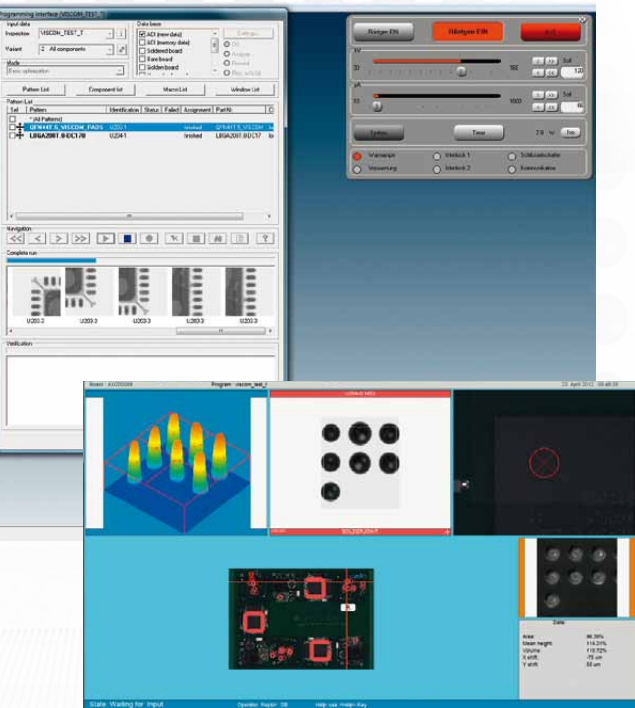
The application scope reaches from **sample testing analysis** and **special inspection** of individual components, up to **automatic start-up support** and **small series inspection**. Thanks to integration of the proven automatic SI inspection analyses, the system is ideally suited for **high-mix low-volume production** in which only a few components need to be X-rayed.

The heart of the X-ray technology is the **open microfocus transmission tube** (up to 200kV). Optionally, a **sealed direct beam tube** (up to 130 kV) can also be employed. Both tubes are distinguished by their **stable X-ray radiation during continuous operation**. For the **highest magnifications and best image quality**, a digital flat panel detector which can also be used for angular views is employed.

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

The particular strength of the system is the **fully automatic X-ray analysis** with the Viscom software SI. It cumulates over 25 years' experience in assembly inspection and is **specially oriented to SMT production**. With it, now the well-known Viscom inspection depth of the X7056 in-line family is also available for the off-line world. An additional advantage for Viscom customers is the **uniform user interface**, under which the X8011 PCB now can also be operated. This **saves training expense**, and **facilitates direct communication between the systems and synchronization of the results**.

Thus the X8011 PCB can be equipped with the **unique Viscom Quality Uplink**. Through the linking of inspection results from SPI, AOI, AXI and AXI, this function provides for a **simplified classification** and **effective process control**. For example, all inspection data from the Viscom 3-D solder paste inspection can be displayed directly on the verification station of the X8011 PCB. **Failure analysis** and **correction of process errors** are therefore very **easily realized**.



# Technical Specifications

X8011 PCB *eco* | X8011 PCB *plus* | X8011 PCB *flex*

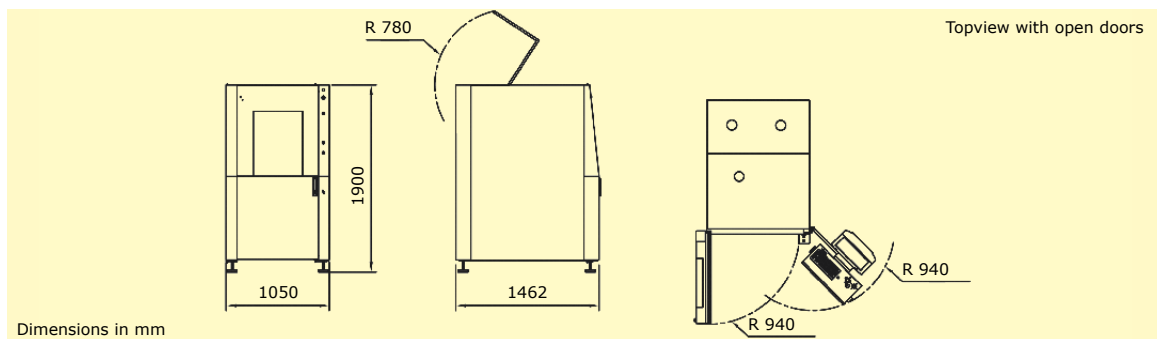
X-ray technology			
X-ray tube	Sealed direct beam tube	Both X-ray tubes available	Viscom XT9000-T series open all-metal tube with transmission target
High voltage	10 - 130 kV	10 - 130 kV/10 - 160 kV	10 - 160 kV
Tube current	50 - 300 $\mu$ A	50 - 300 $\mu$ A/5 - 1000 $\mu$ A	5 - 1000 $\mu$ A
Target power	Max. 20 W	Max. 20 W/Max. 40 W	Max. 40 W
Geometric magnification	> 40 times	> 40 times/> 2500 times	> 2500 times
Image intensifier	6" image intensifier 12 Bit	4" digital detector 12 Bit	8" digital detector 14 Bit
Pivoting range	0°	0 - 52°	0 - 52°
Resolution (at 90 kV/80 $\mu$ A)	< 16 - 50 $\mu$ m	< 16 - 50 $\mu$ m/< 4 $\mu$ m	< 4 $\mu$ m
X-ray cabinet	Fully protected device according to R6V (German X-ray regulations) dated 30 April 2003 and US Standard 21 CFR § 1020-40 and additional international standards. Radiation leakage rate < 1 $\mu$ Sv/h		

Software	
User interface	Viscom XMC (Viscom SI optional)
Available software packages	BGA analysis software BGA-S QFN analysis software QFN-S Surface analysis software (voiding calculation) ACA-S THT analysis software THT-S Wire sweep analysis software WSA-S Verification station (Res-File-Viewer) Viscom Process Uplink (to Viscom AOI, AXI, 3-D SPI)

System computer	
Operating system	Windows®
Monitor	24" TFT Display

Sample handling			
Manipulator	X-Y-Z	X-Y-Z plus rotating table	
Max. traversing range table	Horizontal X/Y axis: 460 x 435 mm (18.1" x 17.1") Vertical Z axis: 290 mm (11.4")		
Max. traversing range rotating table	-	Horizontal X/Y axis: 330 x 430 mm (12.9" x 16.9") Vertical Z axis: 290 mm (11.4") n x 360°	
Max. test piece weight	10 kg (22 lbs) (with rotating table, 5 kg (11 lbs))		
Sample handling	Pneumatic front window		
Additional axes optionally available	Yes	Yes	Yes

Other system data	
Connection values	230 V; 1 P/N/PE; 50/60 Hz; 1 kVA; Air pressure 6 - 10 bar (oil-free)
System dimension	1050 x 1900 x 1462 mm (41.3" x 74.8" x 57.6") (W x H x D)
Weight	1600 kg (3527 lbs)



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