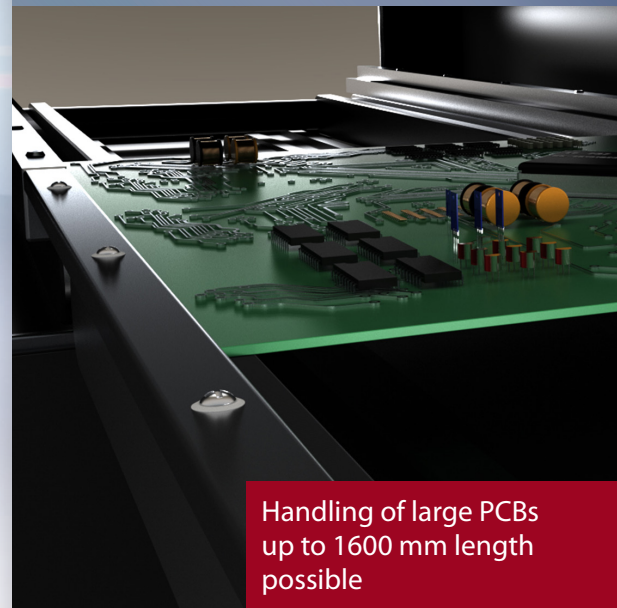




Cutting-Edge
3D X-ray
Inspection for
PCB Assemblies
in the Process Line

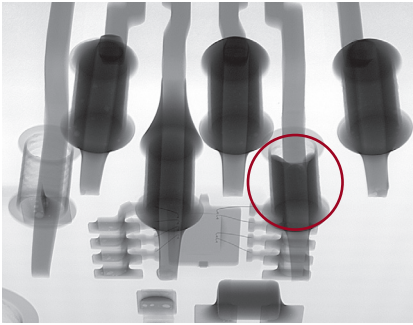


Handling of large PCBs
up to 1600 mm length
possible

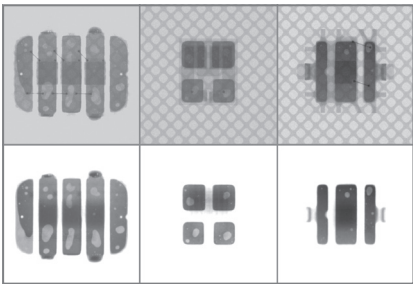
iX7059 PCB and iX7059 PCB Inspection XL

Innovative X-ray inspection for maximum
product quality and process efficiency

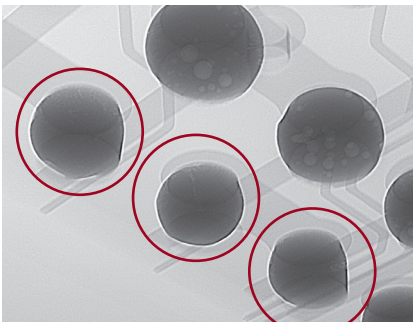
Pioneering Quality Assurance for Modern Electronics Manufacturing



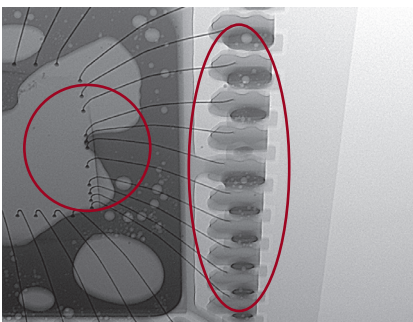
THT solder joint, good/poor, insufficient degree of filling



Comparison of 2D AXI and 3D AXI slice images of different LEDs



Head in pillow defect



Poor QFN, insufficient solder volume

Complete defect detection on densely populated, thick and even double-sided PCBs

Smooth handling of very large assemblies such as server boards, LEDs, semiconductors and 5G electronics

High-precision solder joint inspection, even on extremely small components and the complex assemblies of high-performance processors

Measurement of voids in surface soldering to ensure efficient heat dissipation

Quality inspection of THT solder joints, pin height and degree of filling to prevent short circuits

Modern operating software for extremely fast programming and incredibly simple verification

Service, hotline support and remote maintenance worldwide

When it comes to quality assurance in the production line, cycle time and inspection coverage play a crucial role. Having 100% reliable and comprehensive inspection coverage directly impacts process efficiency and ensures consistently high product quality with zero rejects. A high-precision 3D inline X-ray inspection solution capable of reliably inspecting hidden solder joints and complex assemblies with THTs, BGAs, CSPs, QFPs, SSOPs, chips and LEDs provides optimal first pass yield results. The innovative 3D X-ray inspection technology in the iX7059 PCB systems ensures shorter capture times thanks to a unique dynamic 3D image acquisition concept and provides excellent 3D slice images by means of integrated computed tomography – for peerless measurement precision and maximum throughput rates.

Best first pass yield results

Viscom Quality Uplink provides maximum quality and process efficiency by means of intelligent networking of 3D SPI, 3D AOI, 3D AXI and verification station



Defect-free and stable high-end electronics production

Ensuring complete 3D X-ray inspection in the production line while at the same time meeting the highest cycle time requirements is a challenge that Viscom has long overcome. The new system design of the iX7059 generation adds space-saving installation, intelligent networking and extremely simple operation by way of a 24" touch monitor. The biggest advantage of the new line is its ability to flexibly handle PCB assemblies, even **very large PCBs measuring up to 1600 mm in length** and weighing up to 15 kg.



The iX7059 PCB Inspection XL system inspects very long PCBs: up to 1000 mm long by default and up to 1600 mm with external transport tunnel

In addition to traditional SMD inspection, the iX7059 PCB (XL) also provides high-precision, reliable inspection of soldering defects such as head-in-pillow and pores in BGA and LGA components and voids in surface soldering, fill levels on THT solder joints and measurement of press fits. This makes the iX7059 PCB (XL) ideal for use in LEDs, security technology in the automotive industry, high-end telecommunications, server technology and anywhere reliable functionality is absolutely essential.

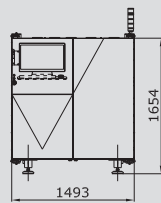
At the heart of the iX7059 PCB (XL) inspection systems is **CT-based 3D X-ray technology** which provides image recordings at high-speed and high-quality levels. The combination of a powerful microfocus X-ray tube, state-of-the-art flat panel detector and innovative dynamic image acquisition produces sharpened **tomographic images of the highest quality**.

Thanks to its extensive component inspection library, the new line provides extremely user-friendly and fast programming and can be automatically optimized due to the integrated Viscom verification — a significant plus when it comes to creating new inspection programs. The AI-backed verification technology helps to optimize the classification and releases additional resources. The iX7059 PCB (XL) Inspection is the number one choice for ensuring **maximum ROI** and defect-free production of high-end electronics capable of meeting growing demands.

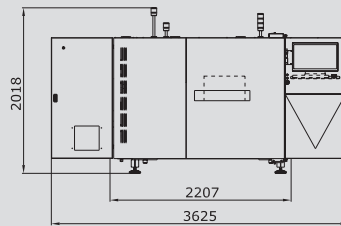
Technical specifications



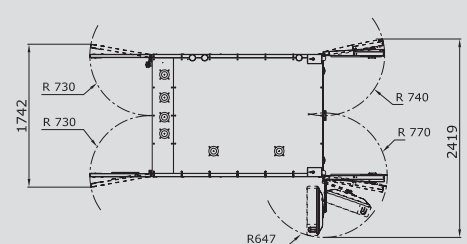
Front view



Side view



Top view



Dimensions in mm

		iX7059 PCB Inspection	iX7059 PCB Inspection XL
X-ray technology	X-ray tube	Sealed microfocus X-ray tube	
	High voltage	130 kV	130 kV (160 kV optional)
	Tube current	300 µA	300 µA (500 µA)
	Detector	Flat panel detector type FPD T2 (FPD T3 optional), 14-bit grayscale depth	
	Resolution	8.5 - 25 µm/Pixel	
	3D image capture mode	Evolution 4 as standard, Evolution 5 optional for unique dynamic image recordings	
	X-ray cabinet	Designed to meet requirements for fully protected devices in accordance with the German Radiation Protection Act (StrlSchG) and the German Radiation Protection Ordinance (StrlSchV). Radiation leakage rate < 1 µSv/h	
Software	User interface	Viscom vVision/EasyPro	
	Statistical process control	Viscom vSPC/SPC, open interface (optional)	
	Verification station	Viscom vVerify/HARAN	
	Remote diagnosis	Viscom SRC (optional)	
	Programming station	Viscom PST34 (optional)	
	Operating system	Windows®	
	Processor	Intel® Core™ i7	
Handling	PCB dimensions	Up to 610 x 600 mm (24" x 23.6") (L x W)	Up to 1600 x 660 mm (63" x 26") (L x W)
	PCB weight	Up to 10 kg (22 lbs)	Up to 15 kg (11 lbs)
	Transfer height	850 - 980 mm ± 20 mm (33.5" - 38.6" ± 0.8")	
	Width adjustment	Automatic during setup	
	Clamping	Pneumatic	
	Support area	3 mm (0.1")	
	Upper transport clearance	Up to 50 mm (2")	
	Lower transport clearance	Up to 50 mm (2")	
Other system data	Positioning unit	Synchronous linear motor	
	Interfaces	SMEMA, IPC Hermes (optional)	
	Power requirements	400 V (other voltages on request), 3P/N/PE, 8 A, 4 - 6 bar working pressure	
	System dimensions	1493 mm x 1654 mm x 2207 mm (58.8" x 65.1" x 86.9") (W x H x D)	
	Line integration dimension	+30 mm (1.2") on both sides, plus side tunnel for the extended longboard option	
	Weight	2245 kg (4949 lbs)	