

S3088 *ultra*

High-Speed 3D AOI for the
Most Reliable Assembly Inspection –
Economical and Versatile



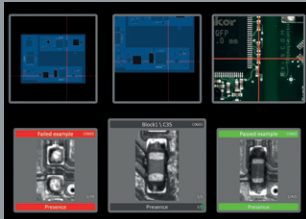
3D AOI

S3088 *ultra gold*

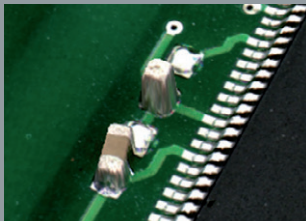
Maximum Output with a Minimum Footp

High-speed solder joint inspection
Highest inspection depth
Simple operation

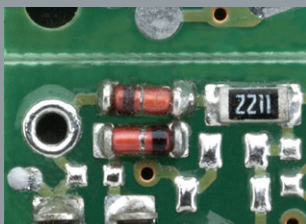
**Fast, precise, and virtually shadow-free
3D analyses with high-performance
sensor technology for rapid throughputs**



Clear overview at the verification station vVerify



Tombstone in 3D view



Wrong polarity



Lifted lead, angled view

**Unique analysis of
QFN, DFN, and QFP dewetting
using angled views**

**Resolution of up to 8 μm –
reliable 03015 inspection**

**Simple operation,
fast inspection program generation**

**Confirmed zero defect escape
thanks to Integrated Verification**

**Viscom FastFlow Handling –
PCB change in up to 2.5 s**

**Powerful add-on modules:
verification, off-line programming,
and SPC evaluation**

**Worldwide, competent service on-site,
by hotline, remote maintenance, and
customer support area on the
Viscom website**

In today's electronics manufacturing environment, reliable and economical quality assurance is demanded. AOI systems must be adaptable to a wide variety of requirements. In addition, the operation must be simple and intuitive while the inspection depth is first-class, reliably covering the most up-to-date component generations in compliance with IPC standards. All of this is combined in the S3088 ultra – and much more: The performance is further increased with the camera module XMplus in the S3088 ultra gold model. The ideal relation of high throughput and high resolution achieved in this system has yet to find its equal. Combination with intelligent software add-ons and the Viscom Quality Uplink results in the optimal solution for electronics assembly and process control.



Versatile configuration possibilities with latest high-performance sensor technology for a first-class throughput

The S3088 *ultra* combines the flexibility of the Viscom S3088 AOI family with the overall convincing strengths of the high-performance camera modules XM and XMplus. Their sensor technology makes very fast inspections possible, both for **high-resolution views** as well as for **color 3D analyses**. The image data rate achieves up to **3.6 gigapixels per second**.

The **high-performance 3D sensor technology** works with an integrated **structured light projector**. This unique solution provides the possibility to use up to 9 cameras. This guarantees **virtually shadow-free 3D inspection** and is the only way to uniformly inspect the same component types on an electronics assembly.

In addition to the orthogonal image acquisition, Viscom uses **angled camera views**. This requires technically fully-developed solutions, as for example **maximum sharpness over the entire field of view**. This is the only way to reliably detect dewetting on QFPs and typical defects on QFNs and DFNs. Other 3D solutions and pure orthogonal inspections fail here.

With a field of view of 50 mm x 50 mm and an inspection speed of up to 65 cm²/s, the 3088 *ultra gold* model has been designed to satisfy highest throughput demands.

Every S3088 *ultra* can be operated through the user software EasyPro and using vVision. This guarantees **intuitive control** and **simple inspection program generation**. In connection with intelligent Viscom software add-ons such as **Extended Lifted Lead Detection**, **Integrated Verification** or **Viscom Quality Uplink**, the full potential of the AOI system can be completely utilized.

A further highlight is the **Viscom FastFlow Handling**. The high-speed transport facilitates interference-free and extremely high throughput, thanks to the synchronous input and output of assemblies, with a transfer time of as little as 2.5 seconds. Together with the high-speed 3D sensor technology, **extreme cycle time requirements** are met exceptionally well.

As a central feature, the **integrated defect verification** simplifies the reduction of pseudo defects and offers a convenient tool to ensure a zero defect escape strategy. Thus, the quality of the inspection programs can be confirmed quickly and easily at any time, whether for in-house production needs or documentation during customer audits. If Viscom SPI/AXI/MXI are used in addition to Viscom AOI, the Quality Uplink provides a unique tool to **link all inspection results**. This avoids wrong defect classifications, facilitates optimization of product-specific inspection strategies and provides an **effective process control mechanism**. Powerful add-on modules like **verification, off-line programming** and **SPC evaluation** round out the offer.



Technical Specifications

S3088 ultra
S3088 ultra gold
Inspection scope

Solder joints, placement, solder paste

Camera technology
XM
XMplus

Total number of megapixels	Up to 65	Up to 121
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3D sensor technology

Z-resolution	0.5 μm
Z-range	Up to 30 mm (1.2")

Angled view cameras

Number of cameras	4 (8, optional)	8
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Orthogonal camera

Resolution	8 μm	10 μm
Field of view	40 mm x 40 mm (1.6" x 1.6")	50 mm x 50 mm (2" x 2")

Inspection speed

Up to 50 cm ² /s	Up to 65 cm ² /s
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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)

System computer

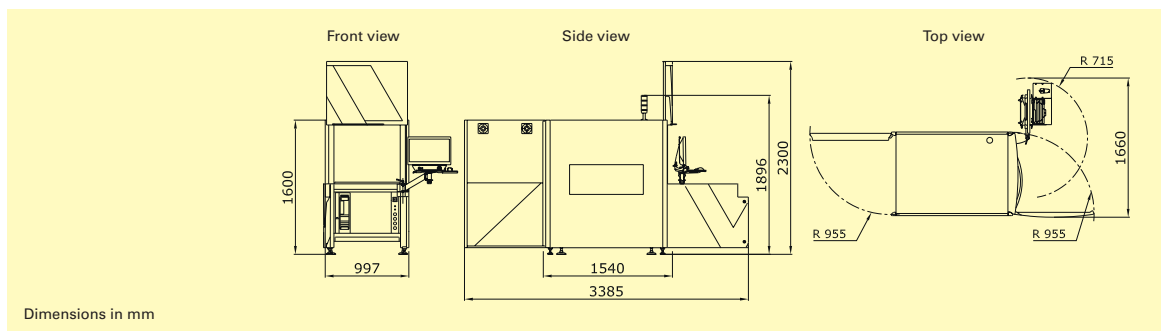
Operating system	Windows®
Processor	Intel® Core™ i7

PCB handling

PCB dimensions	508 mm x 508 mm (20" x 20")
PCB support	Optional
Transport height	850 - 950 mm \pm 20 mm (33.5" - 37.4" \pm 0.8")
Width adjustment	Automatic
Transport concept	Single track transport
PCB clamping	Pneumatic
Upper transport clearance	50 mm (2")
Lower transport clearance	Up to 85 mm (3.4"), 40 mm (1.6") with PCB support

Other system data

Positioning/handling unit	Synchronous linear motors
Interfaces	SMEMA, SV70
Power requirements	400 V (other voltages on request), 3P/N/PE, 8 A, 4 - 6 bar working pressure
System dimensions	997 mm x 1600 mm x 1540 mm (39.3" x 63" x 60.6") (W x H x D)
Weight	Max. 800 kg (1764 lbs)


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