

BF-10Z

Automated Optical Inspection System

XXL Size Inline High Resolution and High Speed Automated Optical Inspection System



Line Scan Technology AOI for XXL-size PCBs

The new BF-10Z automated optical inspection system employs SAKI's unique line scan technology for inspecting PCB panels up to 686 x 870 mm (27.01" x 34.25") - a 40% increase in scanning area over SAKI's previous XXL model. The BF-10Z is ideal for manufacturers building oversized products like communication base stations, server & storage assemblies and LED back panels.

SAKI's Innovative Co-axial Toplight - the Best Lighting for Solder Inspection

Like all SAKI's 2D AOI systems, the new BF-10Z uses SAKI's powerful Co-axial Toplight concept that illuminates the PCB surface from a 90°, perpendicular angle. Co-axial toplight eliminates shadowing when shorter components are located next to much taller ones. Component libraries created with Co-axial Toplight are fully transportable - from location to location, board to board, and machine to machine.

High Throughput - with High Resolution

When running in its standard 20 µm resolution mode, the new BF-10Z boasts a 10% increase in scanning speed over the previous XXL model, even with its 60% increase in scanning area. The BF-10Z's inspection time for a 686 x 870 mm (27.01" x 34.25") panel is 39 seconds.

Selective Resolution System

For manufacturers building XXL assemblies with ultra-small components like 01005s or 0.015" pitch ICs, SAKI has equipped the new BF-10Z with a powerful 10 µm resolution scanning mode for accurate inspection of the micro-sized features of these devices. When operating in 10 µm resolution scanning mode, the BF-10Z can still inspect a maximum-size panel in 63 seconds. Now users can select between either resolution operating modes, choosing the one that best matches their accuracy needs with their throughput needs.

XXL Inspection in a Compact Footprint

With the BF-10Z, SAKI incorporates an innovative scanning method called "Multi-threading". This enables BF-10Z to inspect XXL-size panels within its compact body, requiring the smallest production floor space of any system in its class.

XXL-Size Flexibility

The BF-10Z features a 1.57" clearance on both the top and bottom sides, providing enough room for the largest SMT components. This means the BF-10Z can be installed anywhere in the assembly process: post-paste, post-placement, post-reflow, or after hand soldering.

Rely on the BF-10Z's Real Time Defect Management & Analysis

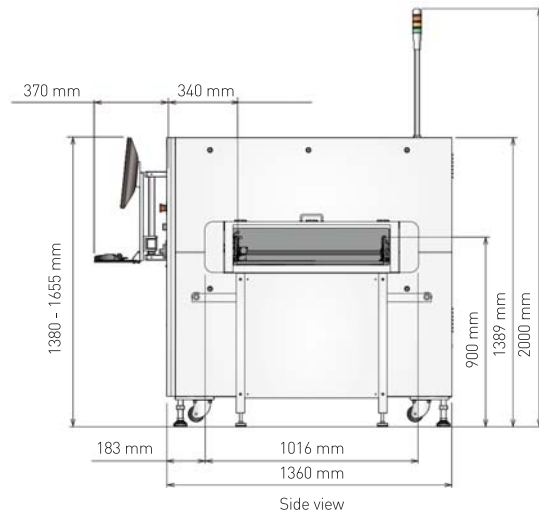
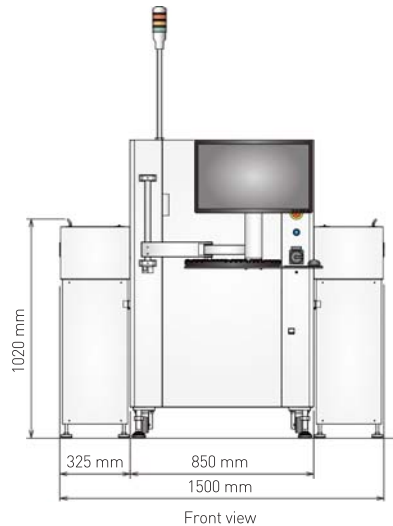
The built-in real-time SPC functionality of the BF-10Z helps you to combine exceptional quality with high productivity for your SMT process. For more efficiency, network the BF-10Z with SAKI's family of optional AOI enhancements including the BF-Editor (off-line programming), the BF-RP1 (remote repair station), the BF-View (AOI process management platform) and the BF-Monitor (SPC & Quality Management Environment).

Need Traceability ?

Like the rest of SAKI's 2D AOI Family, the BF-10Z can be equipped with both 1D & 2D barcode (QR code and data matrix) reading capability. This option makes assembly tracking and defect monitoring more effective and efficient.



Dimensions



BF-10Z

Resolution	10 µm, 20 µm (selective resolution system)
PCB Size	60 x 50 - 870 x 686 mm
PCB Thickness	0.6 - 50 mm
Board Warp	2 mm or less
PCB clearance	Top : 40 mm, Bottom : 40 mm
Inspection Categories	Presence / absence, misalignment, tombstone, reverse, polarity, bridge, foreign material, absence of solder, insufficient solder, lifted lead, lifted chip, and fillet defect. Each defect name can be changed freely by system function.
Tact time	10 µm : Approx. 63 sec. 20µm: Approx. 39 sec.
Image scanning time	10 µm : Approx. 15 sec. x 3 *1, 20µm: Approx. 8 sec. x 3 *1
Camera (image processing)	Line color CCD camera
Lighting	LED lighting system
Transfer conveyor method	Flat belt transfer
Transfer conveyor height	880 - 920 mm
Transfer conveyor width adjustment	Auto width adjustment
Operating system	Windows 7 professional (microsoft)
Optional system	BF-editor / BF-RP1 / BF-monitor / BF-view
Optional	2D barcode recognition, Journal printer

*1 If a PCB size is smaller than 686 W x 870 L mm, Image scanning time will be shorter than these values. Shading process is performed when a PCB is loaded to the machine.

Installation Specifications

Electric Power Requirement	Single phase ~100 - 120V / 200V - 240V+/-10%, 50/60Hz
Power Consumption	800 VA Cable 5 m with a plug
Air Requirement	0.5 MPa, ≥ 5L/min (ANR), High coupler 20PM (NITTO KOHKI)
Dimensions	1500 (W) x 1360 (D) x 1380 (H) mm
Weight	Approx. 520 kg (1146.4 lb)

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