

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

BF-10Z

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 in. x 34.25 in.) - 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.

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.

Saki's Innovative Coaxial TopLight - the Best Lighting for Solder Inspection

Like all Saki's 2D AOI Systems, the new BF-10Z uses Saki's powerful Coaxial TopLight concept that illuminates the PCB surface from 90 degrees, perpendicular angle. Coaxial TopLight eliminates shadowing when shorter components are located next to much taller ones. Component libraries created with Coaxial TopLight are fully transportable - from location to location, board to board, and machine to machine.

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.

Selective Resolution System

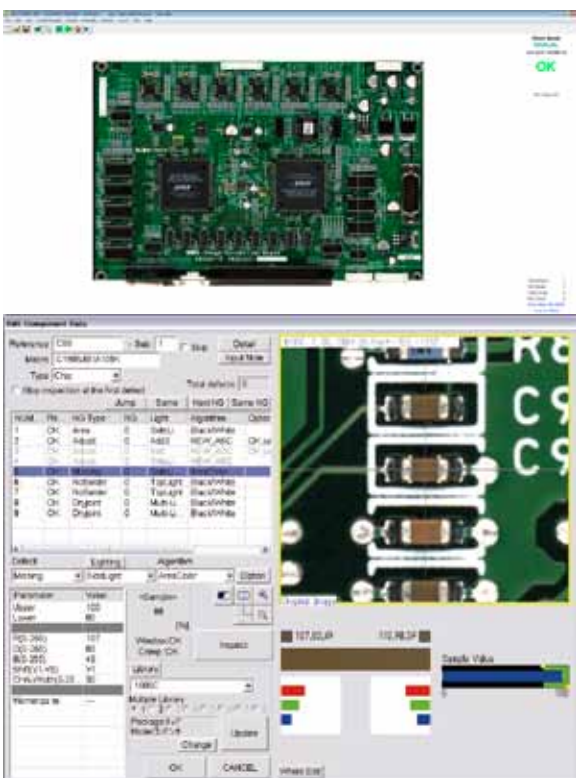
For manufacturers building XXL assemblies with ultra-small components like 0402 (01005) or 0.38 mm (0.015 in.) pitch ICs, Saki has equipped the new BF-10Z with a powerful 10 μm resolution scanning mode for accurate inspection of the micro-sized features of these devices. When operating in its standard 10μm resolution scanning mode, the BF-10Z can still inspect a maximum-size panel in 63 seconds. When running in its optional 20μm 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 tact time for a 686 x 870 mm (27.01 in. x 34.25 in.) panel is 39 seconds. Now users can select between either resolution operating modes, choosing the one that best matches their accuracy needs with their throughput needs.

XXL-Size Flexibility

The BF-10Z features a 40 mm (1.575 in.) 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.

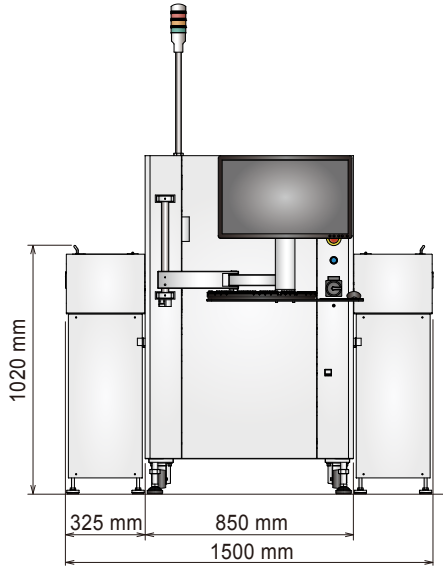
Rely on the BF-10Z's Real Time Defect Management & Analysis

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 (SPC & Quality Management Environment) and the BF-Monitor (AOI process management platform).

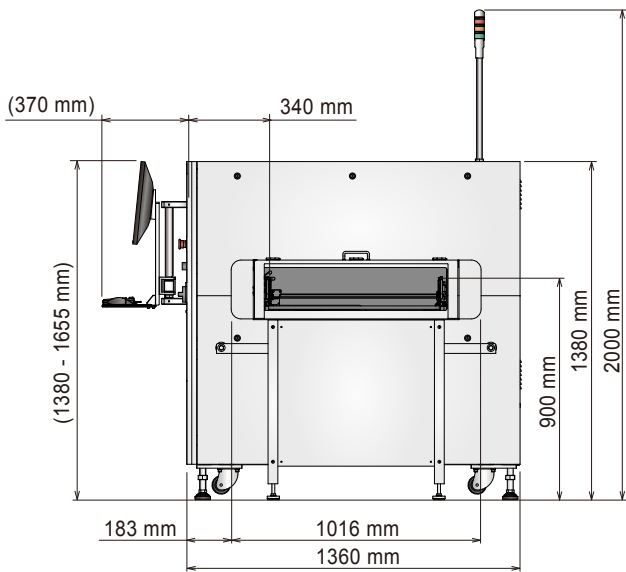


Dimensions

■ Front View



■ Side View



System Specifications

Model	BF-10Z
Resolution	10µm, 20µm (Selective Resolution System)
Board Size	50 W x 60 L - 686 W x 870 L mm (1.97 W x 2.36 L - 27 W x 34.25 L in.)
Board Thickness	0.6 - 5.0 mm (0.02 - 0.196 in.)
Board Warp	2 mm (0.078 in.) or less
PCB Clearance	Top : 40 mm (1.575 in.) Bottom : 40 mm (1.575 in.)
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 arranged freely by the system function.
Tact Time	10µm : Approx. 63 sec. 20µm : Approx. 39 sec.
Image Scanning Time ^(*)	10µm : Approx. 15 sec. x 3 20µm : Approx. 8 sec. x 3
Camera (Image processing)	Line color CCD camera
Lighting	LED lighting system
Transfer Conveyor Method	Flat belt transfer
Transfer Conveyor Height	880 - 920 mm (34.65 - 36.22 in.)
Transfer Conveyor Width Adjustment	Auto width adjustment
Operating System	Windows 7 Professional
Optional System	BF-Editor / BF-RP1 / BF-Monitor / BF-View
Optional	2D Barcode Recognition, Journal Printer

(*) If a PCB size is smaller than 686 W x 870 L mm (27 W x 34.25 L in.), 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, 800VA
Air Requirement	0.5 MPa, 5L/min (ANR)
Usage Environment	15°C(59F) - 30°C(86F) / 15 - 80% RH (Non-condensing)
Dimensions ^(*)	1500 W x 1360 D x 1380 H mm (59.06 W x 53.54 D x 54.33 H in.)
Weight	Approx. 530 Kg (1168 lbs)

(*) Monitor and keyboard arm is not included.

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