

Desktop High Resolution, High Speed Automated Optical Inspection Machine

BF-Voyager

Large-Sized PCB Inspection System on a Desktop

Designed for space conservation, BF-Voyager is the definitive solution for large-sized PCB inspection system on a desktop. With the same high resolution, high speed scanning technologies used in Saki Corporation's inline model, the BF-Voyager delivers inspection performance to the desktop.

High Resolution Optical System

With a superior resolution of 18 μ m and a scanning line color CCD camera, the BF-Voyager provides a more accurate and stable inspection capability. Solder fillets on components as small as the high density mounted 0201 (0603) chip as well as ICs with 0.4mm pitch lead are easily inspected and analyzed with the BF-Voyager.

Flexibility

An upper and lower clearance of 40mm and 60mm respectively allows the BF-Voyager to inspect PCBs with tall components on either side. In addition, BF-Voyager can be placed at any stage of PCB production process, post pick & place to post-flow / reflow.

Real-Time SPC Information

1D/2D (QR, data matrix) can be recognized automatically by using the optional Barcode reading function. This option allows for easy PCB inspection data management.

High Accuracy

The BF-Voyager inspection system utilizes a *Telecentric Lens System* (1) and an *Automatic Digital Brightness Control System* (2) for improved repeatability and increased accuracy of the inspection result. For Character Recognition, Polarity, and Solder Fillet, the BF-Voyager also employs a *Brilliant MLT Lighting* (3) which helps capture a clearer PCB image.

Industry-Leading High Throughput

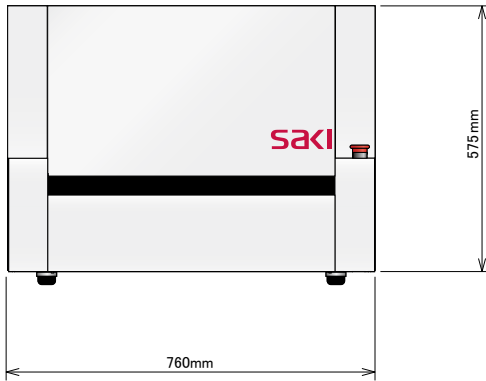
To maximize throughput, the BF-Voyager uses Saki's unique *Alternating Lighting Digital Scanning System* (4) to scan and capture images of the entire PCB in a single pass. In addition, the scanning sequence is optimized to dramatically reduce inspection tact time. The average scanning speed is approximately 19 seconds for an extra large-sized PCB (18inx20in, 460mmx500mm).

1. The BF-Voyager's unique telecentric lens system was designed to compensate for image distortion for more accurate detection.
2. Pixel brightness is automatically adjusted to produce a clearer image.
3. The system employs 3 types of high intensity LEDs: Top light, Full-color Side Light, and Low Light.
4. The alternating lighting system in conjunction with the system's line scanning capability enables the system to capture multiple images of the entire PCB in a single scan.

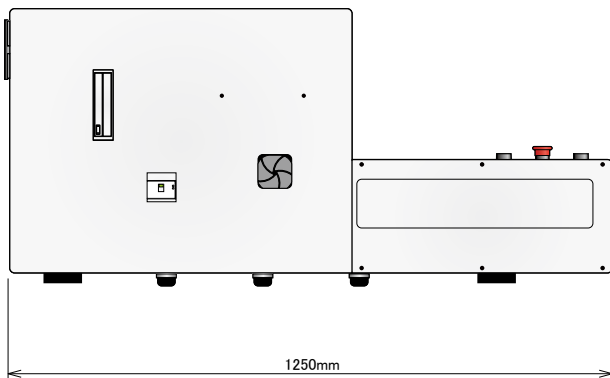


Dimensions

Front View



Side View



System Specifications

| | |
|---------------------------|--|
| Model | BF-Voyager |
| Board size | 53×60-460×500mm, 2x2.4-18×20in |
| Board Thickness | 0.6-2.5mm, 24-200mils |
| Board Warp | +/-2mm, 79mils |
| PCB Clearance | Top: 40mm, 1.57in Bottom: 60mm, 2.36in |
| Rotated component Support | Available for 0-359°rotation (unit of 1°) |
| Inspection items | Presence/Absence, Shift/Skew, Misalignment, Tombstone, Manhattan, Reverse, Polarity, Bridge, Foreign material, Absence of solder, Insufficient solder, Lead lifting, Chip lifting, and Fillet defect |
| Scanning speed | 460×500mm: 19seconds |
| Typcal inspection Speed | 3seconds/10,000windows(reference) |
| Image resolution | 18μm |
| Camera (Image Processing) | Line Color CCD |
| Lighting system | LED |
| Adjustment of conveyor | Manual |
| OS | Windows XP English |
| System Option | Possible to connect with BF-RP1/BF-Editor |
| Option | External Barcode Reader, Journal Printer |

System Requirements

| | |
|------------------------|---|
| Electrical Requirement | AC100-120V, 200-240V, 50/60Hz, 700VA |
| Air Requirement | N/A |
| Temperature/ Humidity | 15°C(59F) to 30°C(86F)/15 to 80%RH (Non-condensing) |
| Dimensions | W760×D1250×H575mm (Main body) |
| Weight | About 130kg |

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Global Network

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