ODD FORM COMPONENT

OPTICAL INSPECTION SYSTEM

AMS ADVANCED MECHATRONICS SOLUTIONS, INC

ams-fa.com
ams@ams-fa.com
619.661.5985
10030 Via de la Amistad, San Diego, CA 92154

FEATURES

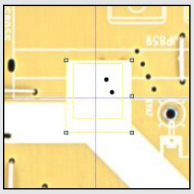
THIS SYSTEM EFFECTIVELY INSPECTS LARGE PARTS THAT ARE DIFFICULT TO DETECT WITH A GENERAL AOI MACHINE

- Detects defects, e.g. Reverse Polarity Missing Broken (and wrong insert through pattern matching, binary counter, brightness, color, width verification algorithm (limited to specific parts)
- Displays schema based inspection results
- Seamless schema editing function for users
- Defect location display function
- GI E based video interface function
- H/W interface function in addition to conveyor units and lighting devices

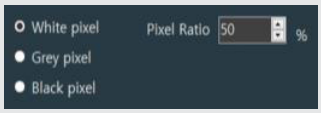
INSPECTION ALGORITHM

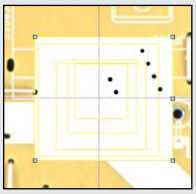
IDEAL FOR IN-DEPTH	**STRONG-PERFORMING** SMT INSPECTION
Pattern Matching	Find the registered image at the target location, and if there is no such image, determine that it is a defect.
Binary Counter	An inspection area is defined as a binary image, the number of white pixels or black pixels is counted, and the presence/absence of defects is determined by a ratio in the whole area.
Brightness Checker	After obtaining the average brightness value for the inspection area, inspects that if this value falls within the specified range.
Width Verification	An algorithm for examining the size of a taught window and its proportion to the width of the object to be inspected Check the width by the difference in brightness of the object.
Simple Color Checker	Verify that the selected area color matches the desired color.

INSPECTION IMAGE

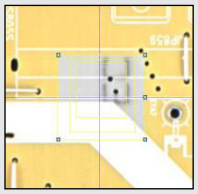


BINARY COUNTER

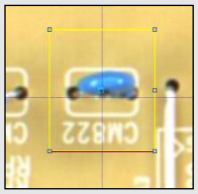




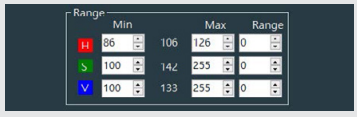
BLOB CHECKER



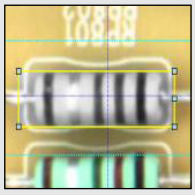
BRIGHTNESS CHECKER



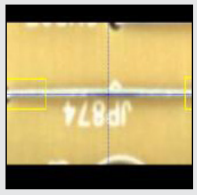
SIMPLE COLOR CHECKER



PATTERN MATCHER



PATTERN IMAGE



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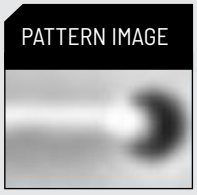

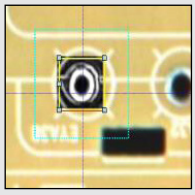

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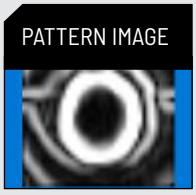

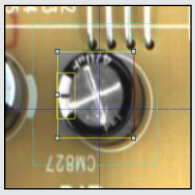

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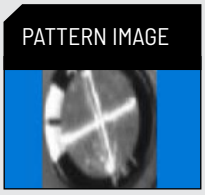

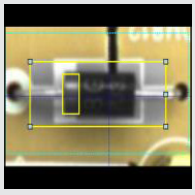

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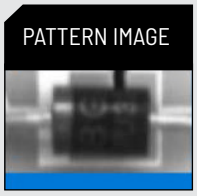

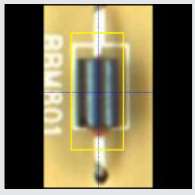

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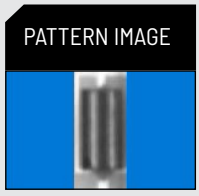

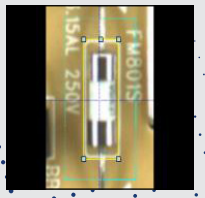

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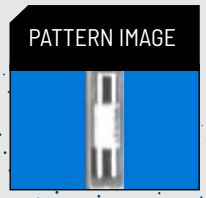

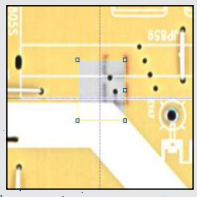

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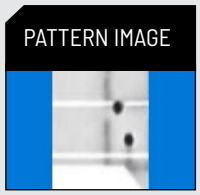


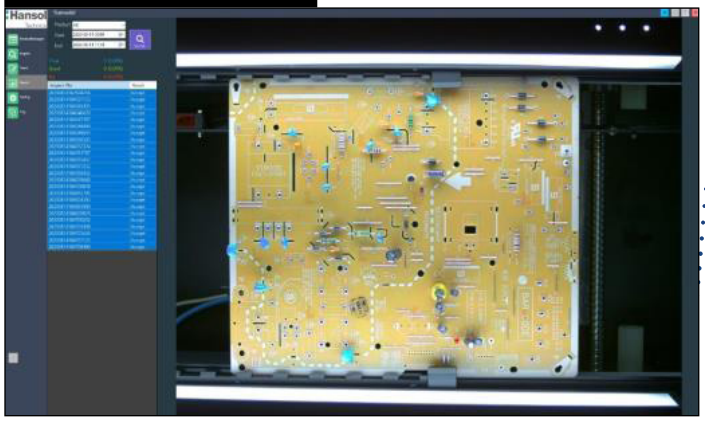
INSPECTION SOFTWARE

INSPECTION

DISPLAY THE INSPECTION INFORMATION AND RESULTS

- Inspection area designation and Algorithm tuning function
- Displays schema-based inspection results
- Seamless schema editing function for users
- Defect location display function in case of defects

REPORT



IN-DEPTH REPORT

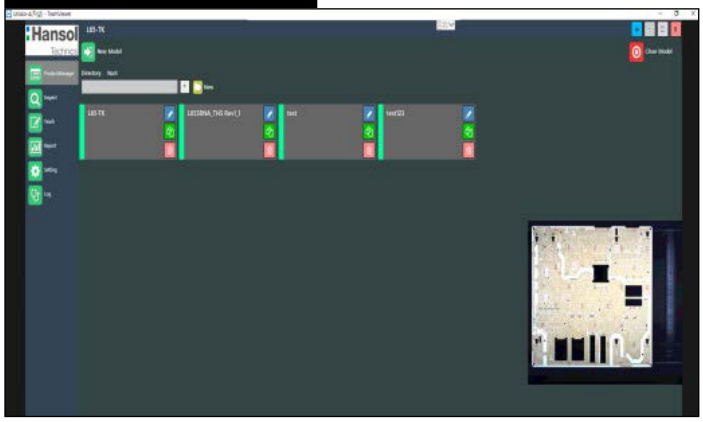
- Saving inspection result values and images

TEACHING

ENABLE TEACHING MODE

- Provides coordinated teaching and simple teaching functions

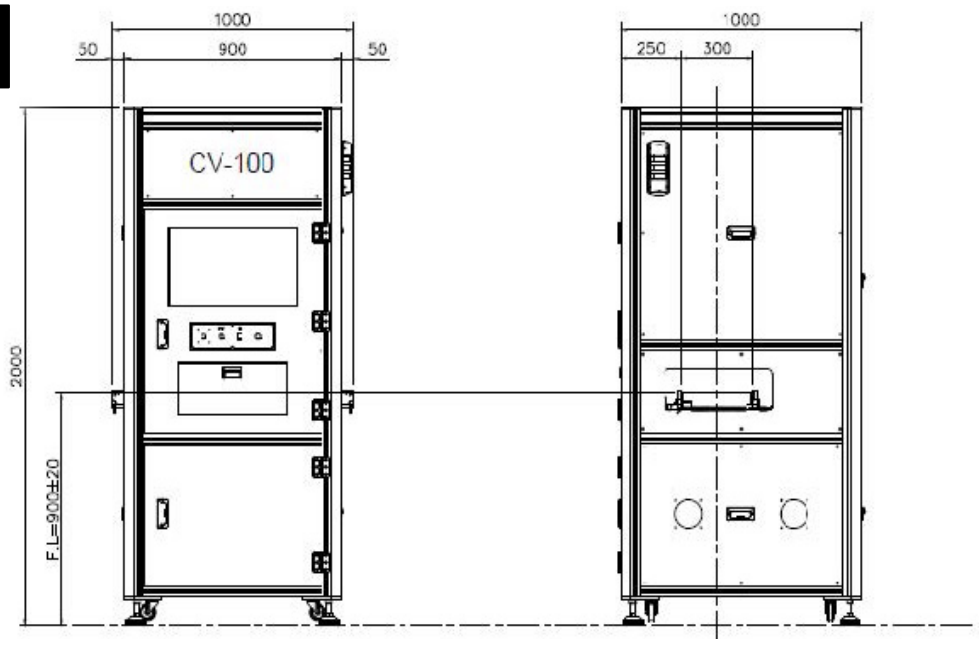
MANAGEMENT



OPTIMAL MANAGEMENT

- User/ Model management

SPECIFICATION

ITEM	DESCRIPTION
CAMERA	10 Mpixel Area Gie type
Working Distance [mm]	Aout 350mm
Frame Grabber	Mil Library Base
FOV [mm]	350 x 300 mm (standard)
Resolution [㎛/pix]	100 um
Inspection Time	2.0s @ 1 PCB Sheet 350x300mm (Excluding PCB transfer time)
Light System	High-intensity LED Light
PC	I7 windows10 / 24" WIDE LCD Monitor
Inspection Item	Reverse Polarity, Missing, Broken (cracked) and Wrong Insert (limited to specific parts)
Power	AC 220V 1.0KW
Dimension	1,000 (W) x 1,000 (L) x 2,000 (H)

DIMENSION