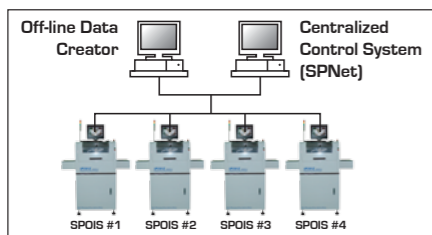


MAIN SPECIFICATION

Inspection Method	Subpixel Detection, HIS Color
Camera	CCD Color Camera
Resolution	20 micron (standard) 25 micron (option 1) 17 micron (option 2)
View Size (FOV)	24 x 32 mm (@20 micron) 31 x 42 mm (@25 micron) 21 x 24 mm (@17 micron)
Light	3-Tier White LED Light
Inspection Time	Approximately 0.5 sec/frame
Origin Point	Lower left PCB
Process Flow	Both directions controlled by SPOIS software
PCB Fixed Side	Front Fixed (standard) Rear Fixed (option)
PCB Size	Min. 50 x 50 mm Max. 250 x 330 mm
PCB Thickness	0.5 mm x 2.0 mm
PCB Weight	Max. 3 kg
PCB Wrap Tolerance	Max. 2 mm @20 micron
X/Y Table Driver	Ball Screw / AC Servo Motor (±0.01)
Part Maximum Height	25 mm
PCB Bottom Margin	25 mm
Operating System	Window XP Professional
Monitor	17 inch LCD Monitor
Detect Items (Solder Print)	Insufficient, Excess, Misalignment, Bride
Detect Items (Part Check)	Missing, Shifting, Tombstone, Polarity, Rotate, Lead Bridging, Fillet
Power & Air Supply	AC230V or AC100V & 0.5 Mpa Dry
Power Consumption	Less than 1 KVA
Weight	300 kg
Dimension	720 mm (W) x 765 mm (D) x 1320 mm (H) excluding tower light (M size)

NETWORK COMPATIBLE (OPTIONAL)

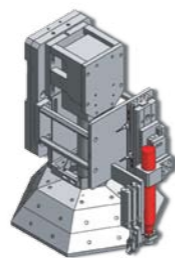


The above network system able to transfer data through LAN or wireless network mode.

The off-line Data Creator software is used to debug the program step by step and create new library without disruption or interference in the In-line machine operation.

The SPNet is a Centralize software where one or 99 SPOIS machine can be connected using the network access. Information regarding the particular error will send to SPNet operator and be verified by the supervisor at the end of the day.

NG MARKING UNIT (OPTIONAL)



When there is a defective spot on the PCB board, it can easily be detected by the use of NG Marking Unit, so that the correction for the NG Board can be done in ease.

SPOIS
SERIES II

**SIMPLE PROGRAMMING
OPTICAL INSPECTION
SYSTEM**



- Automated Data Conversion System
- 0603 & Silless Inspection
- Solder Printing Inspection
- High Speed Optical Inspection
- Components Inspection
- 2.0 Mega Pixel CCD Color Camera
- 2D Barcode Inspection

SPOIS presents high and accurate visual inspection of PWB by using the latest image processing tools to analyze subpixel images accurately; even if there are non-linear illumination changes, SPOIS also covers a wide 24 x 32 mm field of view with its high-resolution 20 micron, 2.0 mega pixel color camera.

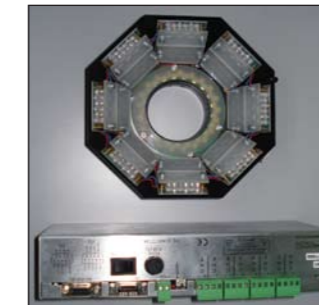
The system can be installed at any location on SMT line, such as after screen printer (as solder paste inspection system), before reflow oven and after reflow oven (so-called AOI), performing a high precision and accurate inspection in the PWB assembly line.

High Performance Servo System



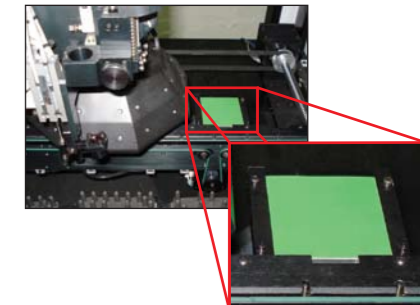
High speed and accuracy with advance vibration control to enhance machine performance

Strobe Lighting Unit



Speed up high quality image grabbing process

Auto Lighting Unit

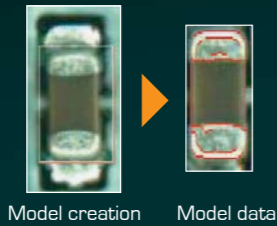


Lighting is calibrated automatically to maintain the consistency after every cycle of inspection

Chip - C & R

Replaces multi step approach to just a single step as shown below with just a click supports our latest Auto Train feature

- Minimal user interaction
- Withstands variation
- Industrially tested and proven
- Minimal false call

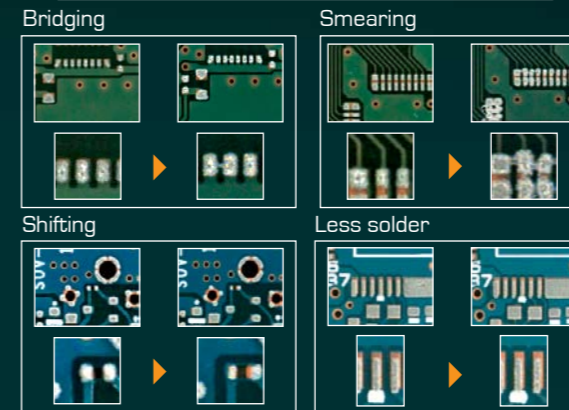


Improved Character Recognition

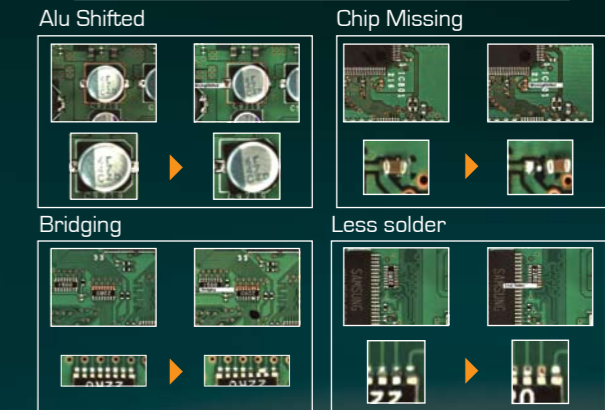
- Designed to overcome the short comings of present Algorithm
- Easier to use
- False call reduced to a NIL
- Supports characters or prints of any size
- Intelligent to detect shift, rotation or other allowed variations
- Supports multiple models for a single step.
- Includes our latest Auto Train feature



Solder Paste Checking

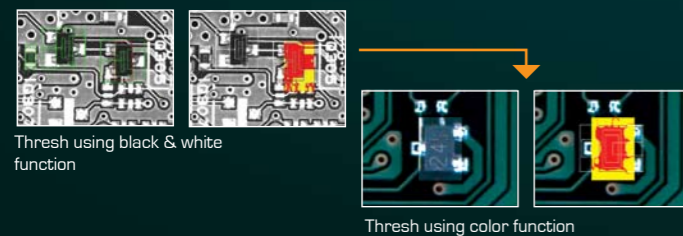


Component Checking



Color Image Processing

- Uses human eye perception
- Low false alarm
- No image quality is compromised for processing
- Designed with user in mind - easy to use with minimal understanding
- Perfect color threshold with minimal effort as shown in picture
- Industrially tested and proven solution



Barcode Detection

- Supports 1-D and 2-D
- All industrial standards are supported
- Detects modules as small as 2 pixels
- Very efficient and stable in varying conditions
- Rotation and flipping invariant
- Automatic compensation for changes in quality of print or image
- Error correction feature integrated

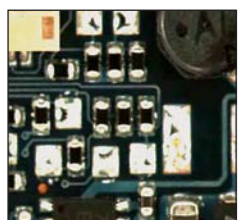


SPOIS
SERIES II
PWB OPTICAL INSPECTION SYSTEM



High Resolution Images

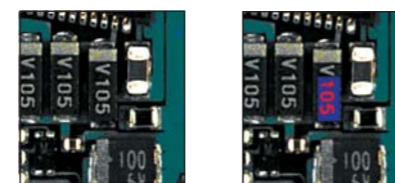
2.0 megapixel, High performance color camera



Fitted with 2.0 megapixel, high resolution 20 μm color camera enables a wide visual field of view (24 x 32 mm)

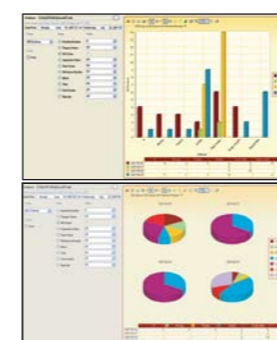
The high-resolution and high-performance of the camera enabling adequate obtainment of information for small components such as 0603 and 1005 chips, for high precise inspection and measurement

OCR Function



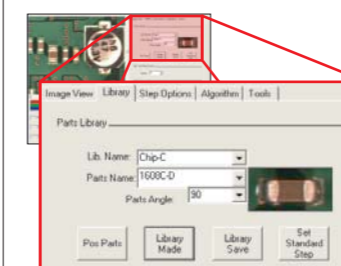
The OCR System is added which reads letters and numbers on components and printed board

SPC



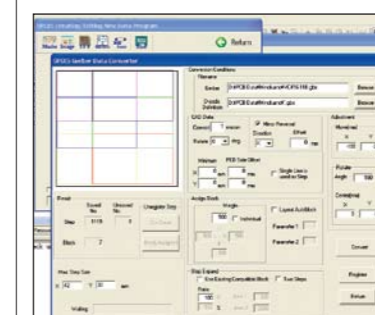
Statistical Process Control (SPC) tool for database rewards analysis

Library System



All created part data can be saved in a system in SPOIS software called library system. The image of the parts can also be saved

Data Creation Using CAD File



Inspection Data Program can be created using CAD file conversion

Auto Switch A/B Side

Only one program is selected to run both sides of PCB.

Identified by the PCB fiducial mark.

