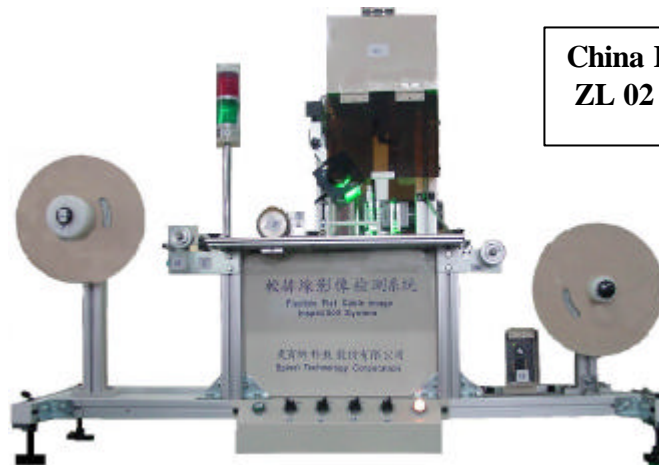# STC-FIS-001 Flexible Flat Cable Image Inspection System

China Patent No.:
ZL 02 2 43046.6

■FEATURES

The image inspection system adopts digital image processing technology. It allows customer to preset tolerance or spec. It then inspects conductor pitch, width, right and left side width and length for flexible cables. It eliminates error caused by inconsistent human inspection and the quality issues derived from it. It produces high quality inspection results at extremely high throughput of 14,400 pcs/hour if conductor length is smaller than 200 mm. For conductor length greater than 200 mm, it inspects at a throughput (pcs/sec) = 800/ (conductor length in mm), e.g. for line length of 400 mm, throughput = 800/400 = 2 pcs/sec = 7,200 pcs/hr. Due to low cost, high throughput, full automation, and consistent quality inspection, it is widely adopted as best inspection tool for flexible flat cables.

■SYSTEM FUNCTION

A. HIGH THROUGHPUT AND LOW COST
1. Maximum throughput of 4 pcs/sec, for conductor length less than 200 mm. This throughput is equivalent to 14,400 pcs/hour.
2. For conductor length greater than 200 mm, throughput (pcs/sec) = 800/(conductor length in mm), e.g., for conductor length of 400 mm, throughput is 800/400 = 2 pcs/sec, or 7,200 pcs/hour.
3. Due to the high throughput and full automation, the inspection cost per piece is the lowest in the market, by significant margin.
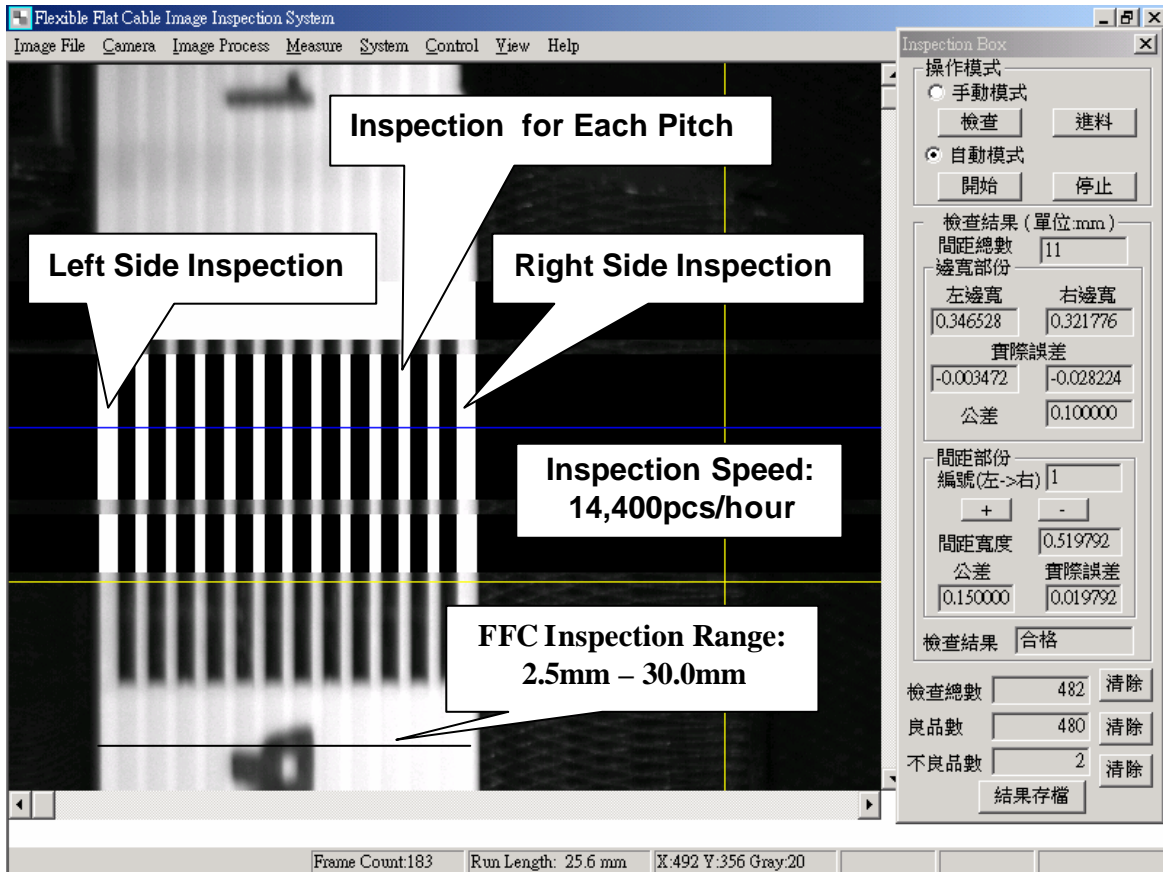
B. FULL RANGE OF CAPABILITIES
1. Allows image calibration to working standard by software.
2. Allows standard dimension setting (0.5, 1.0 and 1.25 pitches)
3. Allows measurement of line width (2.5 mm – 30 mm).
4. Allows standard spacing.
5. Allows tolerance or spec setting.
6. Allows marking of reject parts.
7. Allows single image processing for engineering use, and continuous mode for production use.
8. Tally cycle, acceptable and reject counts.

C. EASY INTERFACE AND APPLICATION

1. Window interface for easy use.
2. Allows uploading, storing and transmitting single BMP file.
3. Allows image input and time filtering processing.
4. Since data can be stored, down stream data processing such as SPC and customer certification is easy.

■Hardware Specification

- Image inspection capture card: IEEE 1394 interface
- Digital camera resolution: 1300x1030
- Light: High light green color LED
- Motion controller: 2 axis motion control card
- Computer: Pentium III 850MHz
- Voltage: AC 110V/60Hz or AC 220V/50Hz
- Size: 1240L x 400W x 850H (mm)
- Weight: Under 100Kg

Left Side Inspection

Inspection for Each Pitch

Right Side Inspection

Inspection Speed: 14,400pcs/hour

FFC Inspection Range: 2.5mm – 30.0mm