

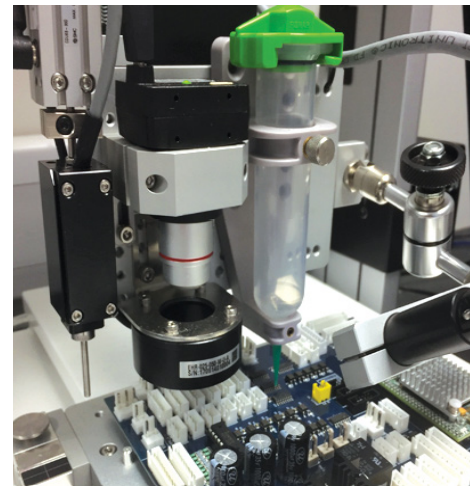
CCD Camera Vision System

A powerful and intelligent CCD vision programming and auto adjustment system for creating both simple and complex dispense routines. This results in improved quality due to precise dispense positioning alongside improved production yield and reduced processing time and costs.

Dispense programs are created quickly and easily in the Fisnar proprietary vision-controlled Fluid-In-Motion (FIM) software by using the displayed camera image to jog the robot to the exact required dispense location, and then selecting the operation wished to be carried out (dispense dot, line start etc).

Vision System software is supplied with an auto-part alignment function to guarantee fluid is being dispensed at the exact required location. This is achieved by the system capturing an image of two separate fiducial locations on the component and using pattern recognition software to compare the live image against a stored image. Any difference found in X or Y position results in the dispense coordinates being automatically adjusted to suit.

Dispense positional accuracy and repeatability is further optimised by the simple auto-calibration routine and part alignment function.



Item Number

F4000AKIT-VISION

Features

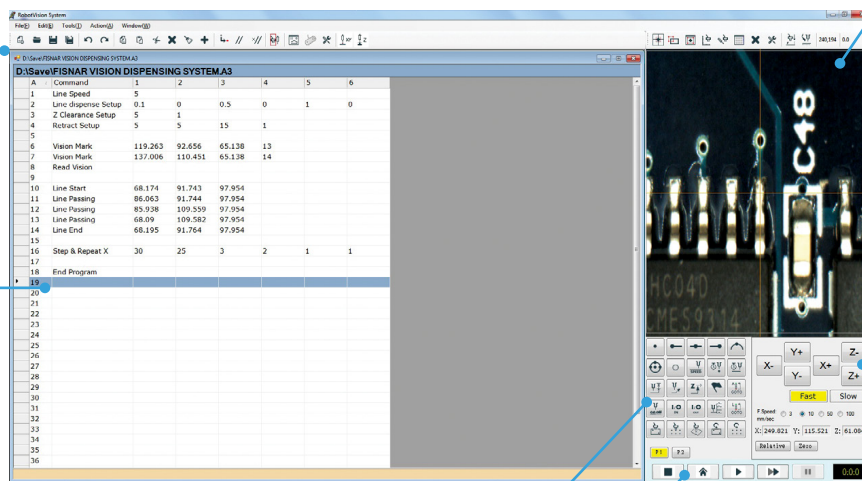
- Auto 3-axis tip calibration function
- Auxillary camera to monitor dispense process live
- High resolution CCD camera
- LED Light & Brightness Controller
- Simple & fast transfer of CAD data (.DXF/Gerber) into software
- Quick to set up and easy to program/operate using proprietary
- Industrial windows based PC system included
- Glue Check/Verification function*

Benefits

- Vision system can be easily installed at any time onto a F4000
- ADVANCE 3-axis robot using plug and play system design
- Peripheral hardware is mounted directly onto robot reducing space envelope taken up
- Images can be captured and stored for quality and process control purposes
- QR codes can be scanned by the camera, causing the relating program to be automatically selected

Proprietary User Interface

For simple user setup, programming and operation.



Tool Ribbon
Used for quickly accessing program setup and management functions.

Programming Window
Gives full and simple view of complete dispense program. Values can be edited directly by clicking on the line.

Camera Display
Real time view of camera viewing area. Cross hair designates dispense location to ensure precise positional control. Clicking on imaging area will jog robot to position clicked on.

Robot Movement
Icons used to control robot movement and speed while also displaying absolute/relative dispense coordinates.

Dispense Function
Graphical icons used for quick robot programming.

Robot Actuation
Icons used to start, stop and view robot program.

*Glue check function not suitable for all applications. To be certified by Fisnar application team.



1 F4000 ADVANCE Desktop Robot

Highly robust and durable based on their cast aluminium base and heavy duty extruded aluminium twin vertical side pillars supporting the horizontal X-axis. This rigid design concept allows for long term precision dispensing and dependable repeatability.

2 PC

Industrial specification PC installed with Windows 7 and supplied installed with Fluid-In-Motion (FIM) software ready to use. Unit mounted directly onto robot to reduce overall space envelope. TFT LCD monitor, keyboard & mouse included.

3 CCD Camera

For high resolution color and greyscale image capturing.

4 LED Ring Light & Controller

For optimising image contrast and definition. Adjustable light brightness controller is mounted directly onto the robot to reduce the overall space envelope.

5 Tip Calibration Module

Works by the camera capturing an image of the purged fluid and uses pattern recognition to compare it against a pre-defined datum image. Any difference found between the center positions result in the X and Y coordinate values being automatically adjusted and dispense program re-aligning to suit. The Z-axis is automatically calibrated by the dispense tip contacting a touch pad.

6 Aux Camera

Displays a live image on the TFT LCD monitor allowing the user to clearly monitor the fluid being dispensed onto the component part while a dispense cycle is taking place.