

# iRVision®

## Integrated Robot Vision System

### Basic Description

The FANUC Robotics' System R-30iA™ Controller comes standard with iRVision hardware. By loading the vision software option and connecting a 2-D camera or 3DL sensor directly to R-30iA Controller, the user can immediately add a vision process to the robotic application.

iRVision is a ready-to-use robotic vision system that requires no additional hardware except for a camera or sensor and cable. It provides a 2-D or 3-D robot guidance and/or error proofing tool to accomplish part location, presence detection, and other operations that normally require special sensors or custom fixturing. Setup and training for FANUC iRVision is done using any PC running Microsoft® Internet Explorer, connected to the robot via Ethernet. Camera-to-robot calibration and part training are all accomplished through a web page user interface.

For production, iRVision includes run mode and data displays that can be simultaneously viewed on any network PC and the iPendant™. Production data can be logged to the internal memory card or system memory.

### Features and Benefits

#### Hardware

- 2-D cameras or 3DL sensors connect directly to the R-30iA Robot Controller. No additional hardware is required (no external processor, special enclosures, or other equipment on the factory floor).
- No additional robot hardware is required to set up the vision process.

Note: iRVision® is a registered trademark of FANUC LTD.



- Compact 3DL Laser Based Sensor provides locating of parts in all six degrees of freedom without compromising space on your robot end-of-arm tooling.
- Browser-based setup and training over Ethernet.
- View run-time images and data on iPendant or network PC.

#### Software

- Setup is accomplished using Microsoft® Internet Explorer.
- Powerful 2-D and 3-D geometric image processing.
- Intuitive Based Programming and Setup Tools. (Spreadsheet configurations are not required.)

#### System Tools

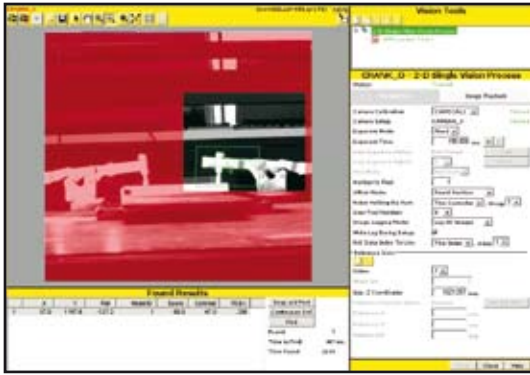
- A web-based user interface provides easy-to-use menu structures covering camera setup, calibration, vision processes, and data logging.

- Includes powerful vision tools such as Calipers, Histograms, Blobs, Auto Exposure Control, Dynamic Image Masking, Nested Conditions, Failed Image Logging, and many more.

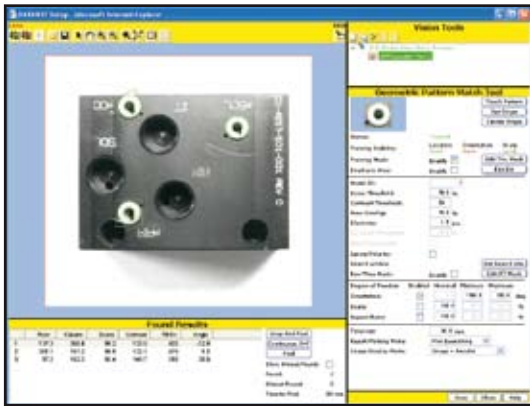
#### Powerful Geometric Pattern Matching Technology and Robot Vision Application Tools

- Industry's best Geometric Pattern Matching (GPM) tool.
- Reliable part location and orientation regardless of variations in part size and occlusions.
- Robust handling of varying light and operating conditions.
- Process tools for combining multiple cameras and multiple planes.
- Sharing of vision hardware and results among multiple robots
- High-speed, reliable line tracking capabilities.

**FANUC**  
Robotics



VP1 – 2-D Single-View Vision Process  
(Error Proofing)

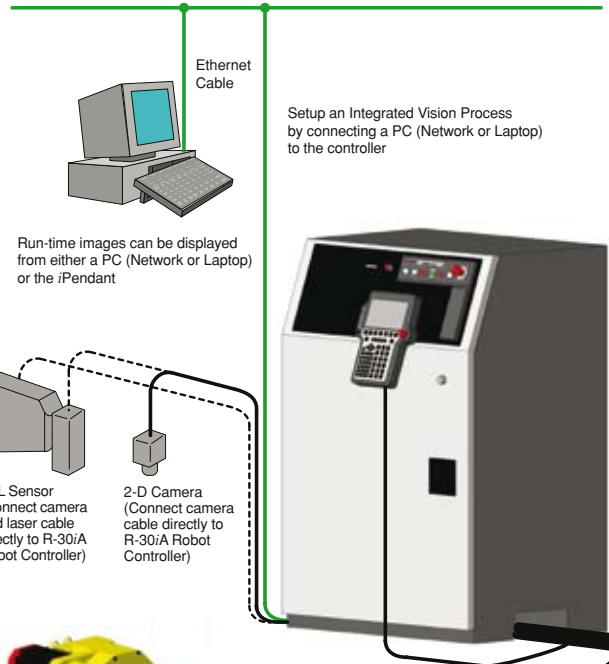


Geometric Pattern Match Tool



Runtime Display of 2-D and 3DL

## Ethernet Network

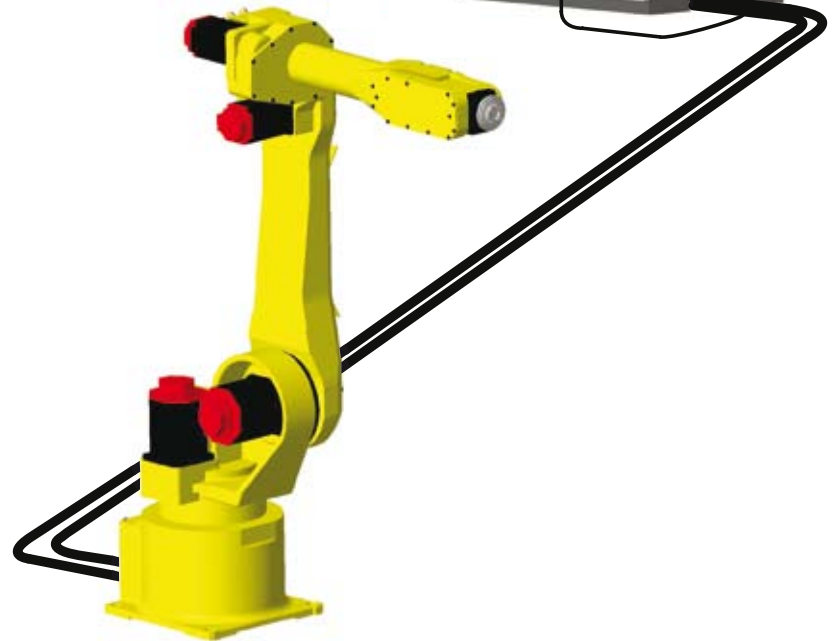


Run-time images can be displayed from either a PC (Network or Laptop) or the iPendant

Setup an Integrated Vision Process by connecting a PC (Network or Laptop) to the controller

3DL Sensor  
(Connect camera and laser cable directly to R-30iA Robot Controller)

2-D Camera  
(Connect camera cable directly to R-30iA Robot Controller)



## Additional Capabilities

- iRVision supports multiple cameras for larger parts or other advanced applications.

## Intelligent Robot Solutions

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