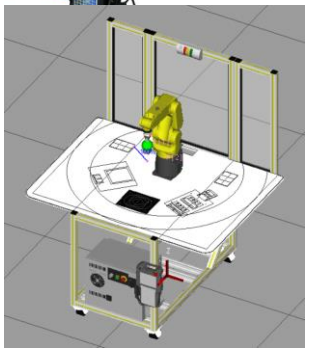
Robots/Cobots & Options



iRVision 2D Guidance

Feature

The iRVision 2D package is used to locate workpieces that shift in 2 dimensions. The workpieces can shift in parallel to the work surface (X,Y) and rotate on the work surface (Roll).

Function

Locates the workpiece using one of the following methods:

2D Single-View- 2D (X,Y,R) using a single camera view.

2D Multi-view- 2D (X,Y,R) using two or more camera views. Ideal for larger parts that are too large for a single camera view.

Depalletizing- 2D (X,Y,Z,R) using a single camera view. The height of the part can be estimated based on the scale or size of the found workpiece.

Floating Frame- 2D (X,Y,R) based on a single camera view. Used to find the 2D movement of a part relative to a robot mounted camera that positions the camera perpendicular to the work surface.

2D NoCal- 2D (X,Y,R) using an uncalibrated robot mounted camera. Provides easy vision setup without the requirement to teach user frames(UFRAMEs) and user tools (UTOOLs).

Benefit

Reduces the requirement for specialized fixtures and tooling.

Saves money by adding flexibility to robotic cells.

Advanced EIP Scanner Package

Feature

- The Advanced EIP Scanner Package includes the most widely used communication options. It includes: EtherNet/IP Scanner, Ethernet/IP Adapter, EtherNet/IP EDA, PC Remote iPendant, HMI Device, and Remote iPendant options in a single package. This option is recommended for FANUC Robot interface to a Rockwell GuardLogix, or a CompactLogix PLC.

Function

- EtherNet/IP Scanner Software initiates communication. With the scanner option, the robot can drive the physical output devices such as EIP compatible relays and solenoids. A robot with EIP Scanner can communicate with other robots loaded with the EIP adapter option. EIP Scanner also includes the adapter option and is recommended for more advanced applications. Ethernet/IP uses the Common Industrial Protocol (CIP) and is compatible with the Ethernet I/O of Rockwell PLC, and most other Ethernet/IP adapters.
- EtherNet/IP EDA (Enhanced Data Access) allows the robot and a Rockwell PLC to exchange data that is not typically available over a standard Input/Output connection.
- PC Remote iPendant allows you to connect to the iPendant and jog the robot remotely using a PC and Microsoft Internet Explorer.
- HMI Device (SNPX) allows an HMI Device to monitor and control data remotely
- from within a robot controller. The robot communicates with the remote HMI by using the same drivers and addressing as a GE Fanuc Series 90 PLC.
- Remote iPendant allows you use an HMI such as the Rockwell PanelView Plus or a Tablet, as a remote iPendant, including the ability to jog the robot in auto mode.

Benefit

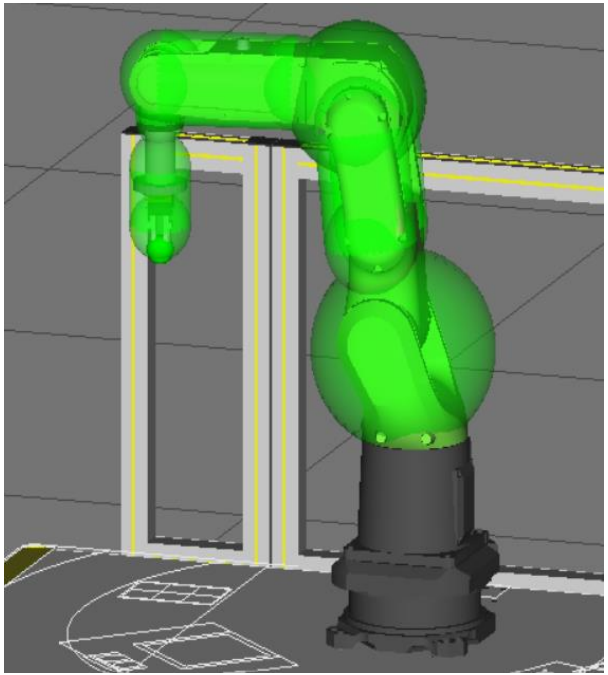
- A single, high value package of the most frequently used Ethernet options
- Simplifies communication.

Includes:
R785 Ethernet/IP Scanner
R822 Ethernet/IP EDA
R850 PC Remote iPendant
R553 HMI Device (SNPX)
R843 Remote iPendant

Advanced Dual Check Safety (DCS)

FANUC Dual Check Safety DCS

FANUC DCS is a smart integrated software solution designed to keep operators, robots and tooling completely safe. With no need to invest in costly, space-taking safety equipment, it also helps keep the space required for robot cells to a minimum. Using FANUC iPendant operators can visualize defined safety zones and confirm this from a 3D perspective in front of the robot cell.

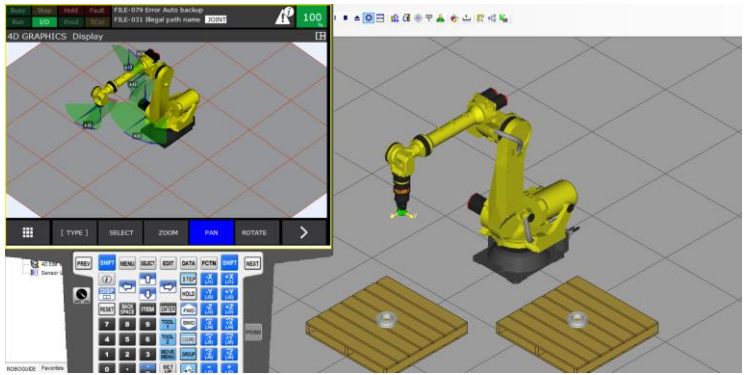


https://www.youtube.com/watch?v=BJu7cg1DE-E

4D Graphics

4D modelling
Highly realistic 4D graphics bring tool and frame settings, safety zones and robot paths to life.
Visual Jog
Confirms direction and distance of jogging quickly and conveniently using the 3D model.

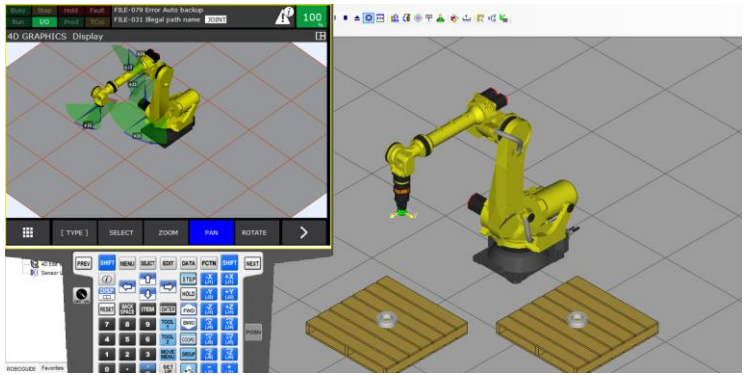
“An ability to use a Rockwell Automation HMI to operate a FANUC robot – allowing attendees to use a Rockwell Automation industrial computer which supports FANUC 4D graphics to operate a FANUC robot in an interactive kiosk.”



https://www.designworldonline.com/fanuc-rockwell-collaborate-ims/

4D Graphics

The 4D Graphics option allows a 3D graphics processing engine in the iPendant to display the robot, tooling, parts, and other cell components in 3D desktop quality graphics. When coupled with the robot controller internal data, the teach pendant displays invisible data in the robot as the 4th dimension of information.



Motion Package

Feature

- The Motion Package includes the most popular and most widely used motion options. It includes Collision Guard, Constant Path, ADV-CP Speed Control, ADV-CP Path Control, Singularity Avoidance, and Motion Interface options in a single package.

Function

- Collision Guard provides a highly sensitive method to detect that the robot has collided with an object and then stops the robot immediately
- Constant Path allows the robot to maintain the same path regardless of speed override changes, and to resume on the same path after HOLD or E-stop conditions.
- Advanced Constant Path consists of functions for easy teaching and cycle time reduction: Linear Distance, Corner Region, Corner Distance, Process Speed, and Max Speed
- Singularity Avoidance allows the robot to move through wrist singularity smoothly without excessive wrist rotation, and maintains TCP speed
- Motion Interface is used in conjunction with MotionPRO on a PC for motion optimization including cycle time optimization, path optimization, small shape optimization, RV life optimization, and power consumption optimization.

Benefit

- A single, high value package of the most frequently used motion options.
- Simplifies robot motion programming. − Provides additional protection for the robot through collision guard.
- Allows you to optimize robot motion easily

PC Remote iPendant

The PC Remote iPendant option allows you to connect as the iPendant and jog the robot remotely using a PC and Microsoft® Internet Explorer. The connection is only allowed when the robot is in Auto Mode. The teach pendant, if disabled, is logically disconnected from the robot. It also allows Remote Operation with no limitations. Some of the operations available by PC Remote iPendant function are:

- View all menus and change settings.
- Foreground editing a program.
- Change I/O status.
- Change register, position register, string register.
- Jogging the Robot.
- Running a robot using the FWD/BWD keys.
- Changing COORD.
- Changing Speed Override.
- Clearing DCS alarm.
- Applying DCS parameter

https://www.youtube.com/watch?v=U9ph3mM1hAs

Collision Guard Pack

- Collision Guard provides a highly sensitive method to detect that the robot has collided with an object and then stops the robot immediately. This helps to minimize the potential for damage to the end-of-arm tooling and robot. Collision Guard is effective for both program and jog motion.

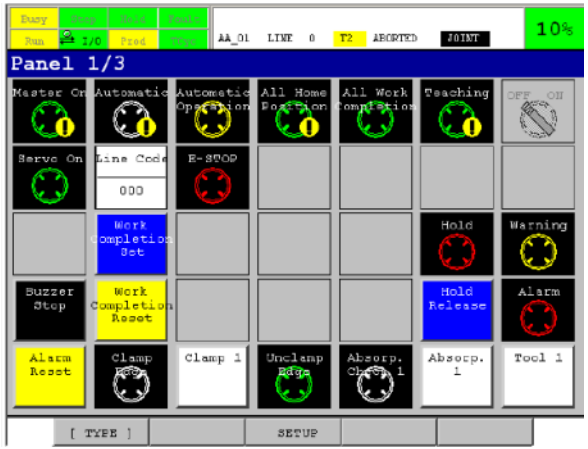
Interface Panel

Feature

- The Interface Panel Function allows you to create and display up to 10 simple operator panels on the teach pendant.

Function

- You can create and display up to ten (10) operator panels (the default is 3) directly on the teach pendant
- Functions include Push Buttons, Lamps, 2-Position Switches, Digital Switches, and Digital Displays
- Buttons and switches can be used to control I/O on the robot.
- Each item is customizable
- Each panel is automatically added to the Browser Menu for easy access



Benefit

- Simple to set up custom panels
- Access and control any I/O available on the robot
- Easy for operators to understand and use the panels
- Fully integrated into the robot system

Maintenance Package

Maintenance Reminder

- This diagnostic feature keeps track of and sends reminders for all programmed maintenance events (including customized third-party equipment) in the robot system. Maintenance reminders/schedules can help to increase system efficiency and robot life. Managers can keep track of this information using the iRConnect App from FANUC (Requires R-30iB v8.20 or higher):

Menu Utility

Feature

- Menu Utility provides the capability to develop many user interface functions for a robot program within minutes.

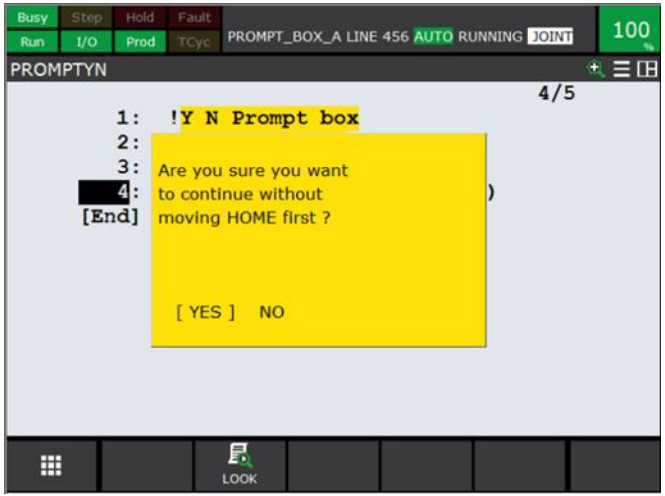
Function

- The following functions can be developed: -
- Prompt box message pauses a robot program until the operator presses ENTER to acknowledge the message.
- Prompt box yes/no utility asks the operator to answer “YES” or “NO” to make a choice during the application setup or robot operation. - Select from a list allows the operator to select a product from a list of available products before running production operation.
- Status menus allows a robot program to display the status of a selected list of items and periodically update the status during production operation.
- Operator entry allows a operator input required production data before continuing with production operation.

Benefit

- Reduces application program development time.
- Helps the programmer to develop user friendly application programs.
- Minimizes the time it takes to make program changes in the future.

Menu Utility



ZDT

FANUC's Zero Down Time application (ZDT) is designed to eliminate down time and enhance overall robot performance. While FANUC robots are highly reliable, manufacturers still need a solution to maximize uptime. Request Product Info Experience the Benefits of FANUC ZDT in Augmented Reality!

KEY BENEFITS

Prevent

- Prevent downtime for FANUC robots

Maximise

- Improve robot uptime and internal prosesses based on operational status monitoring resulting in maximised production

Detect

- Detect production quality issues at early tage

KEY FEATURES

- Condition Monitoring
- Operational status tracking
- Automatic e-mail notifications

PC Interface

Feature

- The PC Interface option enables the controller to respond to PC applications written with PC Developer's Kit (PCDK).

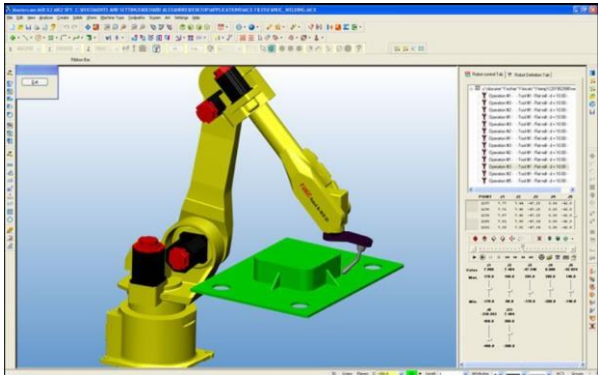
Function

- Remote procedure calls (RPC) provide high performance access between PCDK's Robot Server and the robot controller.
- KAREK and TPP Macros enable your robot programs to imitate events on which your PC application can take action.

Benefit

- This option is required for a PC application using the Robot Server to connect to a robot controller.

Robot Controller Requirements:
R-J3, R-J3iB, R-30iA, R-30iB, R-30iB PLUS and Later.



PCDK

FANUC Robotics PC Developer's Kit

is a powerful tool that enables high performance communication of information and instructions between a PC and FANUC controller.
The kit is both a development and run-time environment that gets the MS Windows™ application running quickly. Visual Basic programming expertise is required to develop application packages over PC Developer's Kit.

FEATURES

- Robot Server
- Robot Neighborhood
- FTP (File Transfer Protocol) for file access
- Visual Basic Integrated Development Environment
- Visual Basic Programming
- Online Documentation
- Source files for example programs that use all Robot Sever Features.