

# FANUC R-50iA Controller

# FANUC R-50iA Mate Controller



R-50iA Mate Controller



A-Cabinet



B-Cabinet

## Features

### Hardware/Control Performance

- Higher accuracy improvement of signal output and sensor tracking on the motion path.
- ISO 13849-1 Category 4, PL e support for position/speed check function in addition to E-stop function.
- Flexible network configuration using 4 Ethernet ports and PROFINET without an option board.
- Battery-less main board for easy maintenance.

### iRVision

- Easily set up and operate Ethernet cameras using integrated robot vision functions.
- Redesigned 5 million pixels camera packaging provides more straightforward cable access and lens adjustment.



### Energy Saving Environment

- Low power fans and amplifiers with low loss power elements save energy. High efficiency brake control reduces power consumption.
- A new Eco mode allows the robot to move smoothly along the taught path and also reduces power consumption.

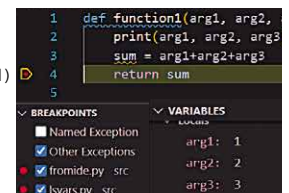
### Cybersecurity

- Cybersecurity certificates for IEC 62443-4-1 and IEC62443-4-2 are supported.
- Security by design functions support SFTP, HTTPS, firewall, and so on.
- Corporate user authentication is provided with an improved password function.



### Rich Development Function

- Allows you to execute Python scripts on the controller and provides Visual Studio Code <sup>NOTE1)</sup> integration.
- Supports a ROS 1/ROS 2 robot framework and IEC 61131-3 software PLC function on the robot.



NOTE1) Visual Studio Code is trademark or registered trademark of Microsoft Corporation in United States of America or other countries and regions.

### Remote Maintenance

- Connect a smartphone to your robot controller with a USB cable to allow FANUC service personnel to maintain your robot controller remotely.
- A FANUC service location connects to your robot controller using a secure communication method.



# Specifications and Supported Robot Models

	R-50iA Controller		R-50iA Mate Controller
	A-Cabinet	B-Cabinet	
			
Rated Supply Voltage	200V AC to 575V AC +10%–15% 50/60Hz ± 1Hz, 3-Phase		200V AC to 240V AC +10%–15% 50/60Hz ± 1Hz, 1/3-Phase
Mass of Controller(kg)	120 to 140 NOTE 1)	160 to 180 NOTE 1)	35/40 NOTE 1)
Dimensions(W×D×H mm)	600×470×500	600×550×950	470×322×400 470×402×400 NOTE 1)
Overvoltage Category / Pollution Degree	Overvoltage Category III, Pollution degree 3, IEC60664-1, IEC/EN/UL61010-1		
Protection Class	IP54		
Safety Function	Emergency stop function Position/Speed check function		PL=e, Cat4(ISO13849-1) SIL3(IEC61508) PL=e, Cat4(ISO13849-1) SIL3(IEC61508)
External Memory	USB, SD		
Field Network	Ethernet, FL-net, DeviceNet, PROFIBUS, PROFINET, CC-Link, CC-Link IE, EtherNet/IP, EtherCAT		
Supported Robot Model			
LR Mate	○	○	○
ARC Mate	○	○	○
M-10	○	○	○
M-20	○	○	○
M-710	○	○	-
M-800	○	○	-
R-1000	○	○	-
R-2000	○	○	-
M-900	○	○	-
M-910	-	○	-
M-1000	○	○	-
M-2000	○	○	-
M-410	○	○	-
DR	○	-	○
CR	○	-	-

NOTE1) These values differ depending on the robot model.

## FANUC CORPORATION

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