

FANUC R-50iA Controller

FANUC R-50iA Mate Controller



Teach Pendant



R-50iA Mate Controller



A-Cabinet



R-50iA Controller

B-Cabinet



C-Cabinet

Features

Hardware/Control Performance

- Higher accuracy improvement of signal output and sensor tracking on the motion path.
- DCS Position/Speed Check zones expanded four times from R-30iB Plus.
- Flexible network configuration using 4 Ethernet ports and PROFINET without an option board.
- Battery-less main board for easy maintenance.
- Newly designed Teach Pendant with comfortable experience.

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.

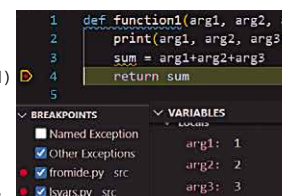
Cybersecurity

- Cybersecurity certificates for IEC 62443-4-1 and IEC62443-4-2 are supported.
- Security by design functions support HTTPS, SFTP, 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 (NOTE1) integration.
- Supports a ROS 1/ROS 2 robot framework and IEC 61131-3 software PLC function on the robot.
- Easy creation of an operation panel displayable on a Tablet device



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-50 <i>i</i> A Controller			R-50 <i>i</i> A Mate Controller
	A-Cabinet	B-Cabinet	C-Cabinet	
				
Rated Supply Voltage	200-575V AC +10%–15% 50/60Hz ±1Hz, 3-Phase			200-240V AC +10%–15% 50/60Hz ±1Hz, 1/3-Phase
Mass of Controller(kg)	120-140 ^{*1)}	180-200 ^{*1)}	190-210 ^{*1)}	35/40 ^{*1)}
Dimensions(W×D×H mm)	600×470×500	600×550×950	740×600×870	470×322×400 470×402×400 ^{*1)}
Overvoltage Category / Pollution degree	Overvoltage Category Ⅲ, Pollution degree 3, IEC60664-1, IEC/EN/UL61010-1			
Protection Class	IP54			
Emergency stop	Emergency stop function PL=e, Cat4(ISO13849-1) SIL3(IEC61508) Position/Speed check function PL=d, Cat3(ISO13849-1) SIL2(IEC61508)			
External Memory	USB, SD			
Fieldbus	Ethernet, DeviceNet, PROFINET, CC-Link, CC-Link IE, EtherNet/IP, EtherCAT			
Supported robot model (○: Supported –: Not supported)				
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	○	—	—	—

*1 : These values differ depending on the robot model.

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 PT. FANUC INDONESIA
 FANUC OCEANIA PTY. LIMITED
 FANUC SOUTH AFRICA (PROPRIETARY) LIMITED

Phone: (+1)248-377-7000
 Phone: (+352)727777-1
 Phone: (+86)21-5032-7700
 Phone: (+82)55-278-1200
 Phone: (+886)4-2359-0522
 Phone: (+91)80-2852-0057
 Phone: (+65)6567-8566
 Phone: (+66)2-714-6111
 Phone: (+60)3-3082-1222
 Phone: (+62)21-4584-7285
 Phone: (+61)2-8822-4600
 Phone: (+27)11-392-3610

● Headquarters 3580, Shibokusa, Oshino-mura, Minamitsuru-gun
 Yamanashi, 401-0597, JAPAN
 Phone: (+81)555-84-5555 <https://www.fanuc.co.jp/>

<https://www.fanucamerica.com/>
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