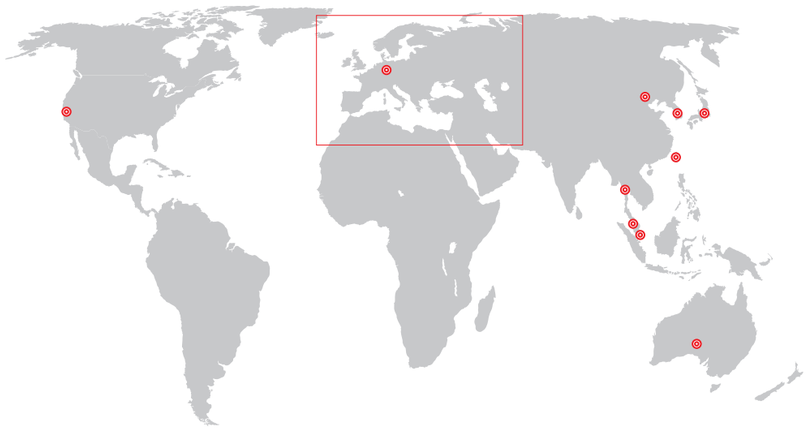
DENSO



DENSO

www.densorobotics-europe.com

THE RC8

- Germany (Headquarters)
- Austria | Benelux | Czech Republic (covers Slovakia & Poland) | Denmark (covers Norway) | Finland | France | Israel | Italy | Lithuania (covers Latvia) | Romania (covers Hungary) | Russia (covers all Russian speaking countries) | Serbia (covers Slovenia, Croatia, Bosnia & Herzegovina, Montenegro, Macedonia & Bulgaria) | Spain | Sweden | Switzerland | Turkey | United Kingdom (covers Ireland)

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For more information

The QR-Code's inventor

EN_RC8_042015_V2

www.densorobotics-europe.com

English

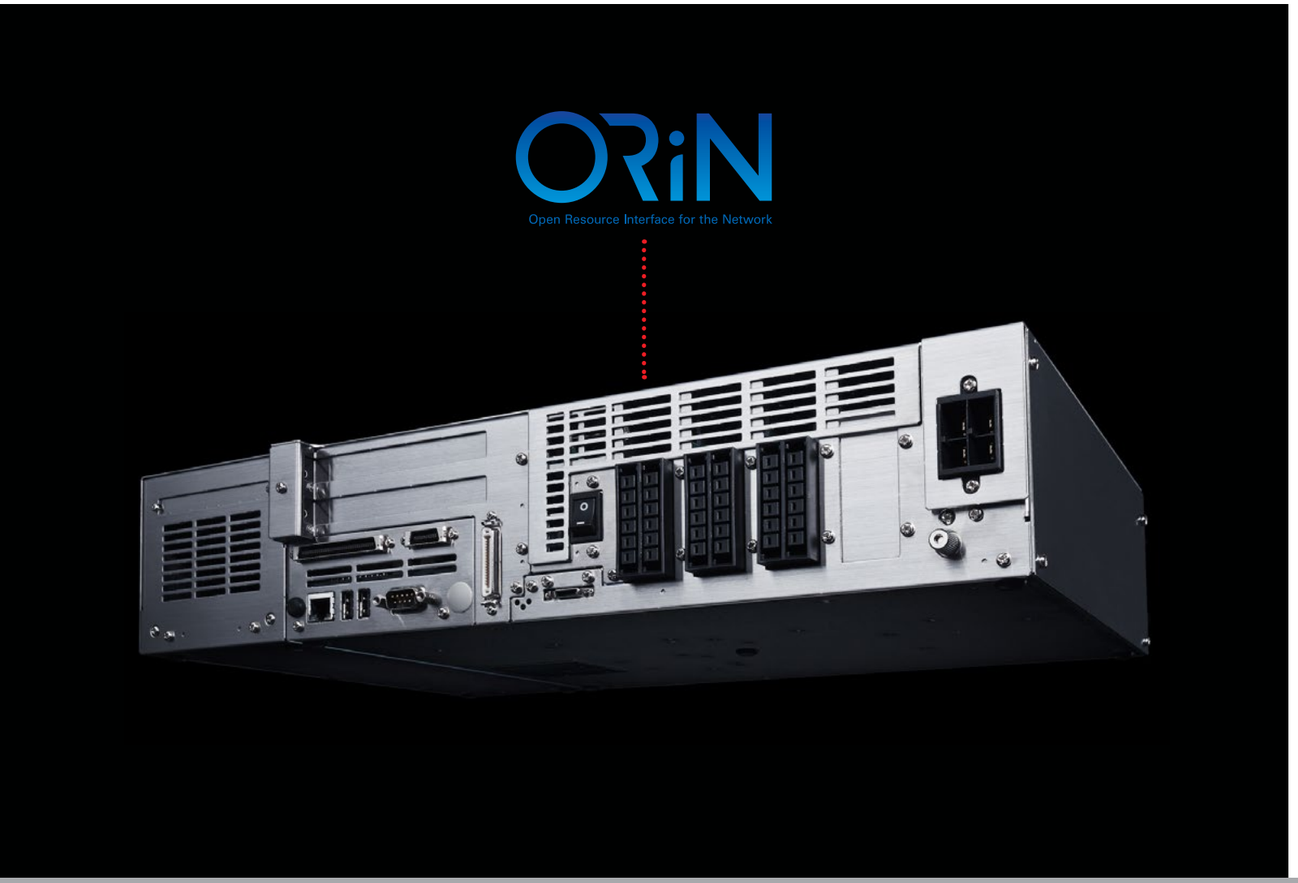
THE RC8

DENSO robot controllers are characterized as being compact and user-friendly. It is the smallest controller in its class.

The best thing about it is that you only need **one robot controller type for all robot models**. In other words, if you have a 4- or 6-axis robot, the controller is practically the same. Due to its modular design, maintenance and adjustment activities can be done easily and quickly.

The RC8 is defined by being:

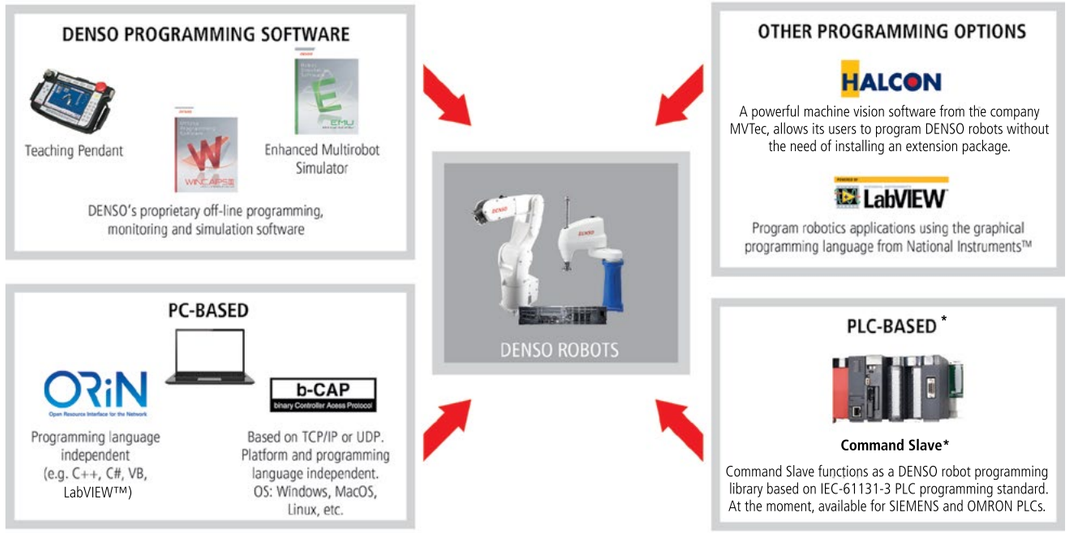
- **COMPACT.** Advanced functionality in a small body. The compact controller helps to save space.
- **USER-FRIENDLY.** Improved functionality coupled with an intiutive interface. User-friendliness is a top priority.
- **EMPLOYABLE WORLDWIDE.** Conforms to safety requirements for industrial robots. Can be deployed anywhere in the world.
- **FLEXIBLE.** Allows for connecting to and controlling a range of devices. Supports flexible customization.



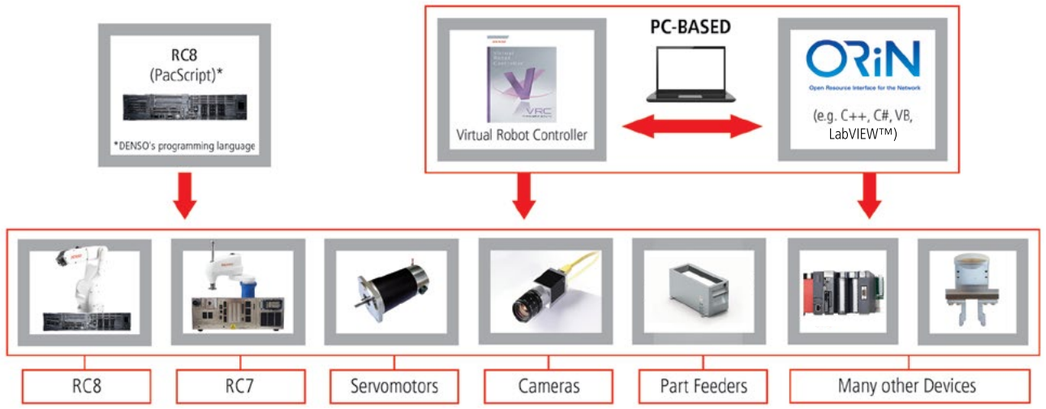
PROGRAMMING OPTIONS

The adaptable choice of ways that you can input instructions into DENSO robots includes the following:

Programming DENSO Robots ...



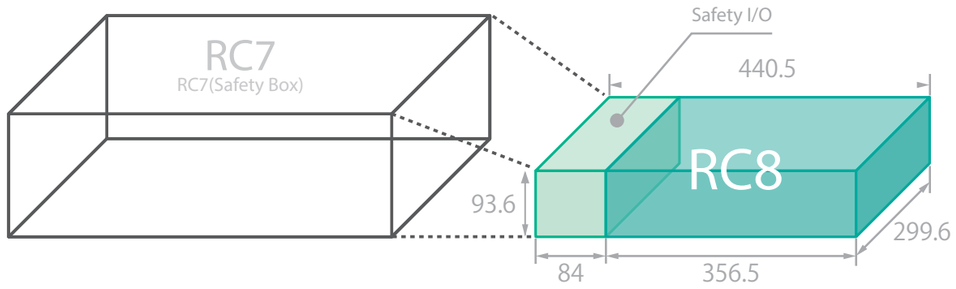
... and Peripheral Devices



NI LabVIEW™ Software is trademark of National Instruments™ HALCON and MVTec are registered trademarks
*Command Slave will be soon avaliable for Beckhoff and Rockwell.

Compact size greatly improves freedom of layout: install anywhere

- **SMALL FOOTPRINT.** The size of an A3 paper sheet
- **60% SIZE REDUCTION.** Compared to the RC7 controller
- **LIGHT WEIGHT.** Only 12 Kg

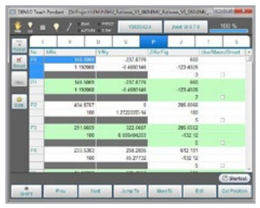


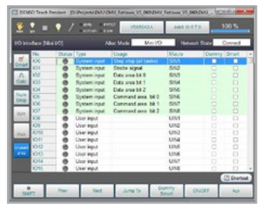
Advanced functions and usability. Improved ease of use

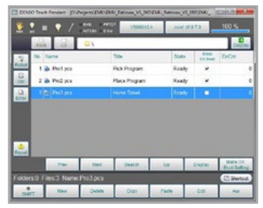
Improved GUI (Graphical User Interface) for increased efficiency

- **EASY TO USE.** Comprehensive menu structure and improved usability
- **REDUCE TIME.** Improved GUI and functions reduce time required to operate a robot
- **ARM 3D VIEW.** Teaching pendant equipped with the Arm 3D View. Possible to check the robot motion on the display
- **SIMILARITY.** Very similar menu hierarchy and screen elements as in the RC7 controller

Arm 3D view


Variables window


I/O window


Program window

Extensible. Around 80% of the worldwide networks are supported

With the RC8 it is possible to connect to multiple devices and applications since it is already equipped with the Open Network (ORiN).

Standards

- ISO 10218-1: 2011 / CE / UL
- PLe / SIL3 (Safety I/O)

TÜVRheinland®
Precisely Right.

Networks supported

Field bus

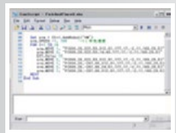
CC-Link · PROFIBUS · DeviceNet

Industrial EtherNet

EtherNet/IP · EtherCAT · PROFINET

Control and connect to many devices

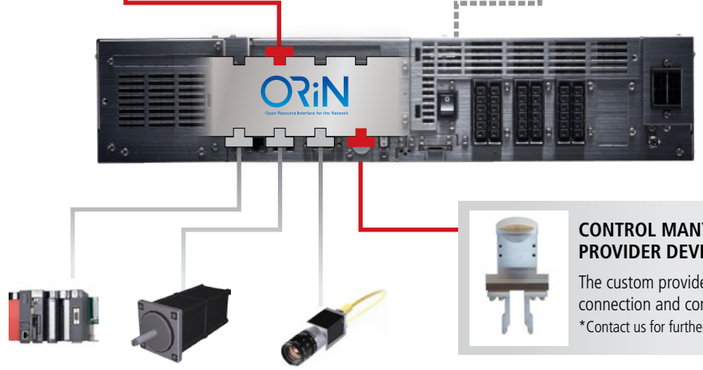
CONTROL EXTERNAL DEVICES WITHOUT USING PLC


PacScript

You can access your provider from PacScript to create a control program to allow control from RC8 if a provider that supports external devices is available.

EASY-TO-USE TP CONTROL PANEL

Use WINCAPS III to customize the multi-functional teaching pendant easily.



CONTROL MANY DEVICES WITH PROVIDER DEVELOPMENT

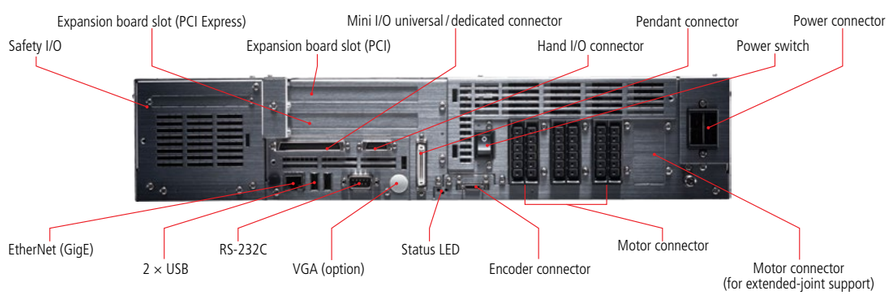
The custom provider allows additional connection and control over different products.
*Contact us for further information about development.

DENSO

Specifications

Term			Unit	Specifications							
Applicable robots				VP -5243/6242	VS -050/060	VS -068/087	VS -6556/6577	VM -6083/60B1	HS -45***	HM -4*****	XR -43***
Power	Power supply		KVA	1.00 (*1)	1.15	2.78	1.80	3.30	1.80	2.45	1.85
	Input voltage range			Three-phase, 200 VAC –15% to 240 VAC +10% (100 V specification also available for the VP series)							
				Single-phase, 230 VAC –10% to 240 VAC +10% (*1)				—	Single-phase, 230 VAC –10% to 240 VAC +10%		
	Power supply frequency		Hz	50 / 60							
Power cable			m	5							
Controllable axes				5 / 6	6				4		
Control method				PTP, CP 3-dimensional linear, 3-dimensional arc (PTP control only for additional axes)							
Drive method				All axes all digital AC servo							
Language used				DENSO Robotics language (PacScript)							
Memory capacity				User area Variable area : 1.75 MB (32,766 points equivalent), file area : 400 MB (5,000 steps × 256 files)							
Teaching system				1) Remote teaching 2) Numerical entry (MDI) 3) Direct teaching (HS series and HM series only)							
External signal (I/O, etc.)	Universal / dedicated I/O	Mini I/O		Input : User open 8 points + system fix 14 points (the safety I/O less version has system fix 13 points) (*2) Output : User open 8 points + system fix 16 points (the safety I/O less version has system fix 12 points)							
		Hand I/O		Input : User open 8 points / Output : User open 8 points							
	Parallel I/O boards (option)			Bus : PCI Input : User open 40 points / Output : User open 48 points							
	DeviceNet master board			Input: 1,024 points / Output 1,024 points							
	DeviceNet slave board (option)			Bus : PCI Express Input : 256 points / Output : 256 points							
	CC-Link remote device board (option)			Bus : PCI Express Input : 128 points / Output : 128 points Remote registers Input : 256 points / Output : 256 points							
	PROFIBUS slave board (option)			Bus : PCI Express Input : 256 points / Output : 256 points							
	EtherNet / IP adapter board (option)			Bus : PCI Express Input : 4,032 points / Output : 4,032 points							
	PROFINET IO board			Input : 8,192 points / Output 8,192 points							
	EtherCAT-compliant board (*4)			Input : 2,048 points / Output 2,048 points							
External communication				RS-232C : 1 line, EtherNet : 1 line (GbE : Gigabit EtherNet), USB : 2 lines, VGA : 1 line (option)							
Expansion slot				• PCI 1 slot • PCI Express 1 slot							
Self diagnosis function				Overrun, servo error, memory error, input error, short circuit detection (user wiring part), etc.							
Environmental condition (in motion)				Temperature : 0 to 40 degree C, Humidity : 90% RH or less (no condensation allowed)							
Safety category				Standard specification Category 4, PL = e (ISO 13849-1 : 2006) (*2)							
Protect grade				IP20							
Weight			kg	Standard approx. 12 (*3)							

*1: Power for the 100 VAC specification is "Single-phase 100 VAC –5% to 110 VAC +10% 50/60 Hz, 1 kVA."
*2: If the built-in safety I/O is not necessary for the standard specification, please specify a safety-I/O-less specification.
*3: Does not include the supplied cables.
*4: RC8 does not support LRW. For RC8, use LRD/LWR.

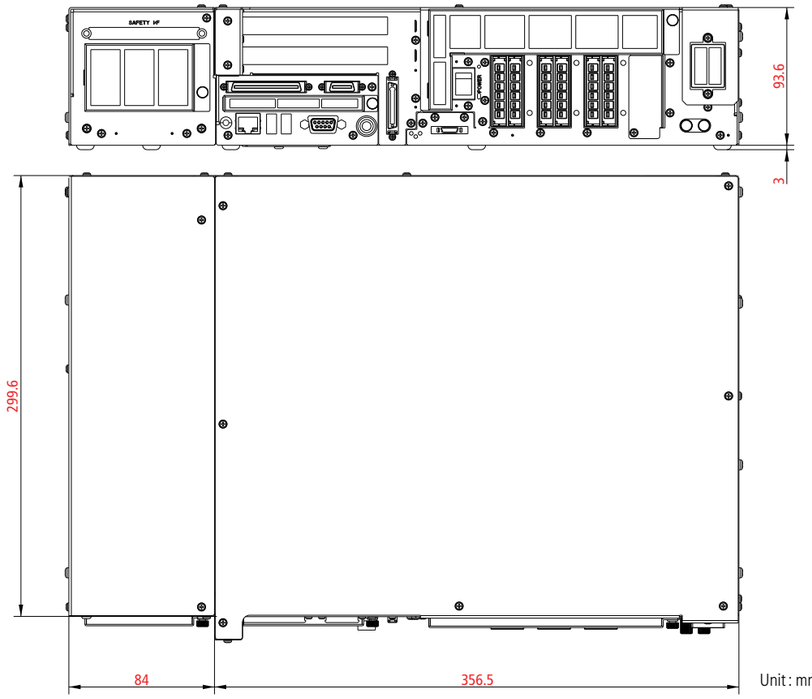
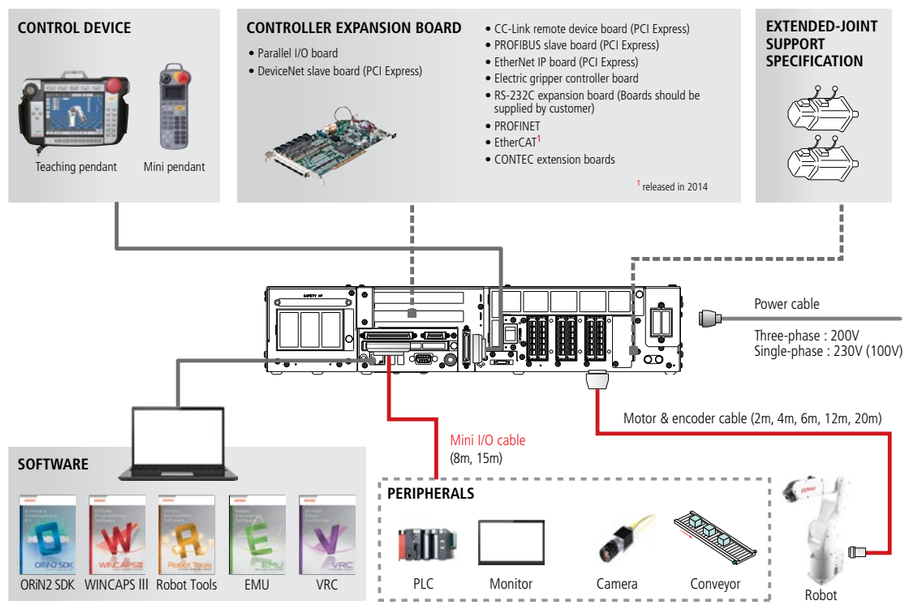


Legend

RC8 - □□□□ - NNN □ - □□ - NNN

- Controller name
- Robot type format:
  - VMA0: VM series
  - VSA3: VS-050 / 060
  - VSA4: VS-068 / 087
  - VSA0: VS-6556 / 6577
  - VPA0: VP-5243 / 6242
  - HSA0: HS series
  - HMA0: HM series
  - XRA0: XR series
- I/O type:
  - M: Negative common (NPN)
  - P: Positive common (PNP)
- Compliant standard:
  - NI: Standard specification (safety I/O, safety category 4 / PLe)
  - NN: Safety I/O less specification (safety I/O less, no safety category)

External dimensions



System configuration diagram