EPSON®

Epson® RC700E Controller

Built to Perform with Industrial-Rated Safety Features

High performance — powerful servo motion control for smooth motion, precise positioning and fast program execution times

Fast cycle times — intelligent servo drivers provide high acceleration, smooth motion and fast settling times to help maximize throughput with proprietary GYROPLUS® vibration reduction system

Ultimate ease of use — intuitive and feature-packed Epson RC+® development software helps create powerful solutions with a simple user interface, integrated debugger and 3D simulator

Flexible control structures — Epson RC+ is ideal for creating industrial robot solutions that are standalone with a GUI creation option, PC-based with API options such as LabVIEW, or PLC-controlled with remote fieldbus options, including Add-On Instructions (AOIs)

SafeSense™ technology — standard and advanced features can allow for increased productivity and worker safety while potentially minimizing machine footprint due to the reduction of physical barriers

Low total cost of ownership — includes Modbus TCP/IP, standard 24 inputs/16 outputs and Epson RC+ software with no recurring license fee; rich suite of safety features built into the RC700E controller

Expandable options — three available option slots for Extended I/O, Force Guide, Conveyor Tracking, Fieldbus Slave and Analog I/O; seamless software integration with API (.NET), Vision Guidance and IntelliFlex™ Parts Feeding

Compact and convenient — efficient form factor can be floor, wall or rack mounted; all connections plus lockout, backup port and message display are accessible on the front panel of controller

PC-based open architecture — allows development online or offline, with over 500 commands to optimize runtime, recovery and error handling; easily integrates with third-party hardware and software

Model Name	RC700E Controller		
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Robot Manipulator Control	Programming Language and Robot Control Software	Epson RC+ 7.0 (a multitasking robot OS)	
	Joint Control	Up to six (6) joint simultaneous control, software AC servo control	
	Speed Control	PTP Motion: Programming in the range of 1 to 100% CP Motion: Programmable (actual value to be manually entered)	
	Acceleration/Deceleration Control	PTP Motion: Programming in the range of 1 to 100% CP Motion: Programmable (actual value to be manually entered)	
	Number of Manipulators	1	
	PTP (Point-To-Point)/ CP (Continuous Path)	PTP (Point-to-Point) / CP (Continuous Path)	
Memory Capacity		Maximum Object Size: 8MB Point Data Area: 1,000 points (per file) Backup Variable Area: Max. 400KB (includes the memory area for the management table) Approx. 4,000 variables (depends on the size of array variables)	
External Input / Output Signals (Standard)	Standard I/O	Input: 24 Output: 16	Including 8 inputs, 8 outputs with remote function assigned; assignment change allowed
Communication Interface (Standard)	Ethernet	1 channel	
	USB	1 port	
Option Boards (Special Slot)	I/O	Inputs: 24 per board Outputs: 16 per board	Maximum of 3 boards allowed
	Analog I/O	1 or 4 channels	
	RS-232C	2 channels per board	Maximum of 2 boards allowed
	Fieldbus I/O Slave	1 channel per board, PROFINET, PROFIBUS-DP, DeviceNet, CC-Link, EtherNet/IP, EtherCAT	Maximum of 1 board allowed
	Pulse Generator[1]	4 axes/board	Maximum of 3 boards allowed
Option Boards (PCI or PCIe Slots)	Fieldbus I/O Master	1 channel per board, PROFIBUS-DP, DeviceNet, EtherNet/IP	Maximum of 1 board allowed
Safety Features	Safety Standards	TUV Certified to meet ISO 10218-1, UL 1740, CSA Z434, ISO 13849	
		Emergency Stop Switch, Safety Door Input, Low Power Mode, Dynamic Brake, Encoder Cable Disconnection Error Detection, Motor Overload Detection, Irregular Motor Torque (Out Of Control Manipulator) Detection, Motor Speed Error Detection, Positioning Overflow - Servo Error Detection, CPU Irregularity Detection, Memory Check-Sum Error Detection, Overheat Detection at the Motor Drive Module, Relay Welding Detection, Over-Voltage Detection, AC Power Supply Voltage Reduction Detection, Temperature Error Detection, Fan Error Detection	
	Integrated Safety Board	Safety Input: 5 dual signal inputs Safety Output: 3 dual signal outputs	Safe Torque Off (STO), Safety Stop (SS1), Emergency Stop, Enable, Soft Axis Limit, Safeguard (SG)/Safety Gate
	Optional Safety Functions	Safety Limited Speed (SLS), Safety Limited Position (SLP), Joint Angle Monitoring	
	Integrated Safety and Optional Safety Performance	Category 3, PLd[2]	
Power Source		AC 200 V to 240 V / Single phase 60/60 Hz	
Weight		26.45 lb / 12 kg	

Support

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Contact:

1 Using a manipulator with linear motion or additional axis. | **2** Reference Standards ISO 13849-1: 2015.

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