SANYO DENKI Develops *SANMOTION C* Motion Controller That Can Control 7-Axis Articulated Robots

SANYO DENKI CO., LTD. has developed and launched a high-performance, compact *SANMOTION C* S500 series motion controller.
It can control the motion of a variety of robots, contributing to the in-house robot motion planning for your system.

Features

1. Abundant Robot Control Functions

This motion controller can control industry-leading[1] 15 robot configurations, including complex 7-axis articulated robots.
Functions such as trajectory control and interpolated operation can be done with ease, contributing to the in-house robot motion planning.

2. Helps Make Systems IoT-ready

This motion controller can connect to a variety of open networks such as EtherCAT, Modbus TCP, and OPC UA.
It can contribute to making factories automated and IoT-ready by sharing information between devices in a network in real time.

3. Reduces Development Time

This motion controller can integrate robot control and machine control development environments into one.
This makes it possible to simulate the motion of the entire system in a single development environment, greatly reducing the maintenance and development time of machines.

4. Space-Saving of Equipment

The product volume has been reduced by approximately 60% compared to our current model.[2]
This allows it to be installed in a limited space, helping miniaturizing your system.

5. High-Speed Control of Multiple Axes

This motion controller can control a maximum of 64 motor axes with cycle time of up to 1 ms.

6. Control of Multiple Robots

This motion controller can control multiple robots simultaneously, allowing different types of robots, e.g. assembly and sorting robots, to be controlled with a single unit.

(1) Based on our own research as of November 30, 2021, conducted among digital I/O controllers that integrate sequence, motion, and robot control in one unit.
(2) Comparison with our existing *SANMOTION C* SMC263X and SMC265X.

Specifications

Model no.	SMC520	SMC507	SMC505
Communication ports	EtherCAT × 1 Ethernet × 2 USB 3.0 × 1 USB 2.0 × 1	EtherCAT × 1 Ethernet × 2 USB 3.0 × 1 RS-232C/RS-422/RS-485 × 1	
Communication cycle	1 ms or more	2 ms or more	4 ms or more
Max. number of controllable axes	64		
Max. number of controllable robots	4	2	1
Controllable robots	Cartesian robots, horizontal articulated (SCARA) robots, palletizing robots, parallel link robots		
	7-axis articulated robots, 6-axis articulated robots		—
Network protocols	EtherCAT, Modbus TCP, OPC UA, HTTP, MQTT, FINS, MC Protocol		
Dimensions (Width × height × depth)	161.2×124.2×94 mm	83.6×126.5×94.9 mm	
Mass	900 g	515 g	500 g

Applications

Robots, conveying machines, and semiconductor manufacturing equipment

Release Date

February 1, 2022

The information stated in this release is current as of November 30, 2021
"*SANMOTION*" is a trademark of SANYO DENKI CO., LTD.