

CATEGORY SELECTION GUIDE

Multi Axis Real Time Motion Controller Category Selection Guide

Multi-axis real-time motion controllers execute trajectory planning, interpolation and synchronized-axis control while connecting servo drives and field I/O through industrial communication protocols for coordinated motion in robots, machine tools and automation equipment. Product Platform and SKU selection depends primarily on axis count, control cycle, protocols, I/O, expansion capability and programming environment.

CATEGORY SELECTION GUIDE

CATEGORY	CURRENT CATALOG	REVISION / ISSUE
Multi Axis Real Time Motion Controllers	2 Product Platforms / 3 SKUs	R01 2026-09-04

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01 | Category Scope and Objective

Item	Current category
Product catalog	2 Product Platforms / 3 SKUs
Suitable use	Multi-axis real-time motion control, synchronized interpolation and field I/O management in robots and automated equipment.

02 | Product Principle and Typical Applications

Product overview

Multi-axis real-time motion controllers execute trajectory planning, interpolation and synchronization while connecting drives and field I/O through industrial communication protocols.

Typical applications

Multi-axis synchronization and interpolation

Determine controller candidates from controlled-axis count, cycle time and motion functions.

Fieldbus and I/O management

Check interfaces from communication protocols, digital I/O, expansion capability and control-cabinet space.

03 | Selection Inputs

Prepare before selection

- Record synchronized axis count, cycle time and interpolation functions.
- Confirm communication protocols required by the controller, drives and supervisory system.
- Count digital I/O and expansion modules, and record memory and programming-environment requirements.
- Confirm installation space, supply, cooling and environmental conditions.

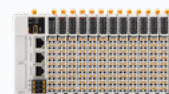
04 | Product Platform Catalog



Multi Axis Real Time Motion Controller Product Platform 01

This Product Platform contains 1 SKUs covering 16 axes multi-axis control capability. Start with axis count and control cycle, then confirm protocols, I/O, expansion and programming environment.

1 SKUs



Multi Axis Real Time Motion Controller Product Platform 02

This Product Platform contains 2 SKUs covering 8 to 32 axes multi-axis control capability. Start with axis count and control cycle, then confirm protocols, I/O, expansion and programming environment.

2 SKUs

05 | Product Platform and SKU Selection Path

- Build Product Platform candidates from controlled-axis count and cycle time.
- Check system connectivity and scale from protocols, I/O and expansion capability.
- Confirm engineering software conditions from programming environment, memory and motion functions.

04 Enter SKU refinement within the platform and verify the parameter combination for each SKU.

Selection note

The two Product Platforms overlap in axis count and interface capability. Use the platform for navigation, then confirm the final choice from the SKU parameter combination and system interfaces.

06 | Selection Parameters and SKU Refinement

Product Platform parameter span

Product Platform	SKUs	Controlled Axis Count	Control Cycle	Communication Protocol	Digital I/O	Expansion Capability	Programming Environment	Weight
Multi Axis Real Time Motion Controller Product Platform 01	1	16 axes	4 ms	EtherCAT; CoE; CANopen; Modbus RTU; TCP; UDP	16 digital inputs (NPN/PNP compatible); 16 PNP transistor outputs	1 MicroSD slot; 1 USB Host (Type-C); 1 USB OTG	IEC 61131-3; CODESYS	0.18 kg
Multi Axis Real Time Motion Controller Product Platform 02	2	8 to 32 axes	1 to 4 ms	EtherCAT; CANopen; Modbus RTU; Modbus TCP; TCP/IP	8 digital inputs (NPN/PNP compatible); 8 NPN transistor outputs / 8 digital inputs (NPN/PNP compatible); 8 PNP transistor outputs	2 EXP card slots; K-bus backplane supports up to 16 RP20 local expansion modules	IEC 61131-3; CODESYS	0.18 kg

SKU shortlist matrix

SKU	Product Platform	Controlled Axis Count	Control Cycle	Communication Protocol	Digital I/O	Expansion Capability	Weight
ES-MC-01-M001	Multi Axis Real Time Motion Controller Product Platform 01	16 axes	4 ms	EtherCAT; CoE; CANopen; Modbus RTU; TCP; UDP	16 digital inputs (NPN/PNP compatible); 16 PNP transistor outputs	1 MicroSD slot; 1 USB Host (Type-C); 1 USB OTG	0.18 kg
ES-MC-02-M001	Multi Axis Real Time Motion Controller Product Platform 02	8 to 32 axes	1 to 4 ms	EtherCAT; CANopen; Modbus RTU; Modbus TCP; TCP/IP	8 digital inputs (NPN/PNP compatible); 8 NPN transistor outputs	2 EXP card slots; K-bus backplane supports up to 16 RP20 local expansion modules	0.18 kg
ES-MC-02-M002	Multi Axis Real Time Motion Controller Product Platform 02	8 to 32 axes	1 to 4 ms	EtherCAT; CANopen; Modbus RTU; Modbus TCP; TCP/IP	8 digital inputs (NPN/PNP compatible); 8 PNP transistor outputs	2 EXP card slots; K-bus backplane supports up to 16 RP20 local expansion modules	0.18 kg

07 | Integration Checklist

Design inputs

- 01** Check protocols, cycle time and synchronization between controller and drives.
- 02** Check digital I/O electrical type, point count, terminals and expansion modules.
- 03** Check programming environment, memory, dimensions, supply and cooling.

08 | Engineering Use and Verification Notice

Engineering verification

- 01** Before design freeze, verify mechanical, electrical, communications and controlled engineering documents for the specific SKU.
- 02** Do not infer missing cycle, load or compatibility data from an SKU code or a single axis count.
- 03** Use the Datasheet and Dimensional & Integration Guide as the primary engineering verification documents.



Responsibility boundary

This guide organizes candidate scope. Final selection, interface confirmation and system responsibility remain subject to controlled engineering documents for the specific SKU and project verification.