

## Motion Module

Compatible with CC-Link IE TSN

### RD78G4

Up to 4-axis control, 1 slot

### RD78G8

Up to 8-axis control, 1 slot

### RD78G16

Up to 16-axis control, 1 slot

### RD78G32

Up to 32-axis control, 1 slot

### RD78G64

Up to 64-axis control, 1 slot

### RD78GHV

Up to 128-axis control, 2 slots

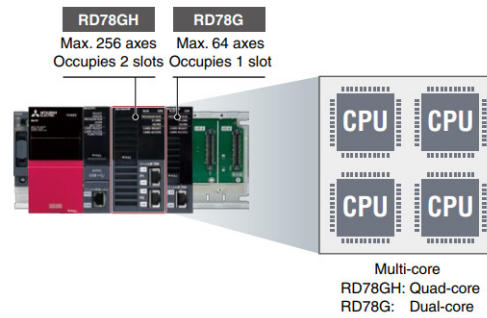
### RD78GHW

Up to 256-axis control, 2 slots

Motion modules allow the use of multiple control functions for both single and multiple axes, such as synchronization, cam, speed, and torque control using PLCopen® Motion Control function blocks. An advanced motion control system realized by mixing servo amplifiers and I/O modules on one network.

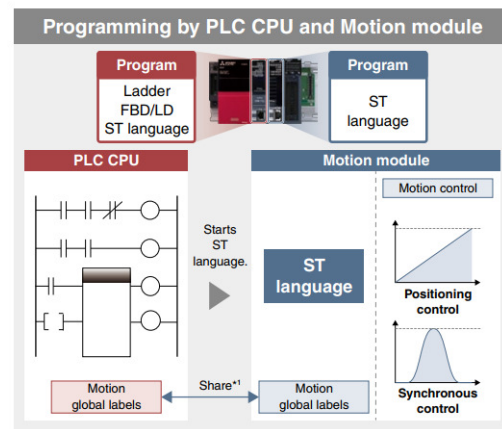
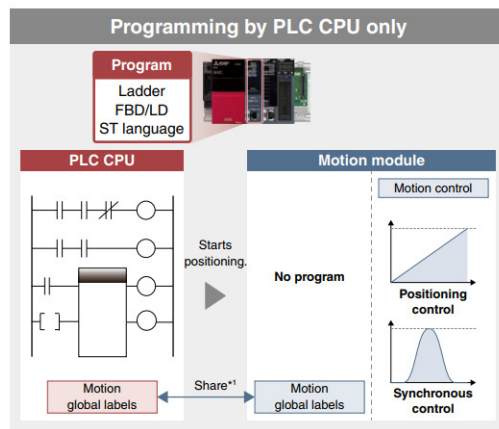
### Motion modules for high-performance operations

The motion module is equipped with either quad-core (4 cores) or dual-core processors. The motion module is programmed using ST language, allowing the control load to be separated from the programmable controller CPU. High performance can be maintained, even when control axes are increased.



### Motion control utilizing easier programming

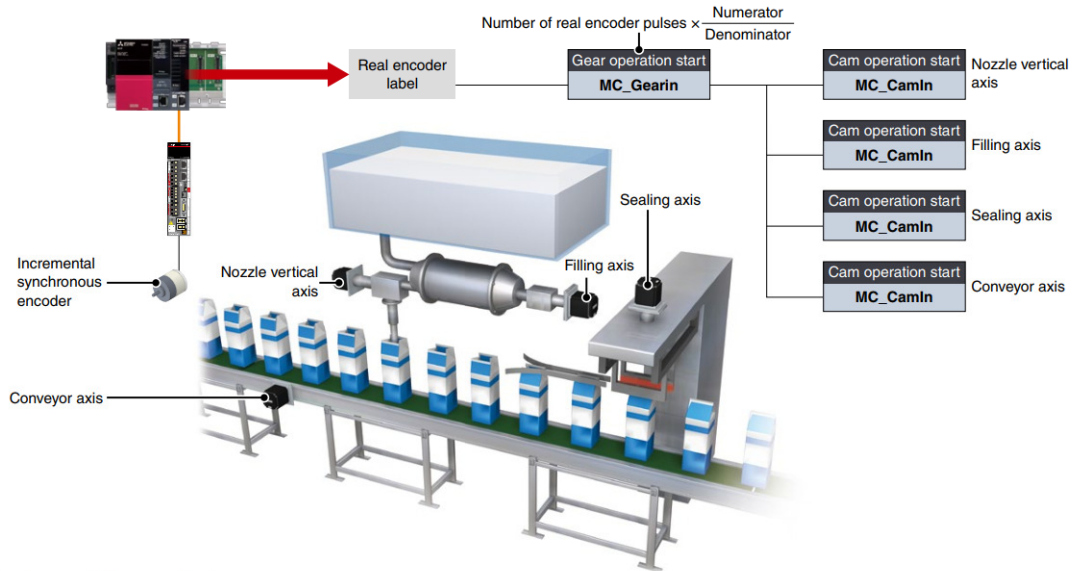
The motion control program can be programmed with ladder, FBD or ST language using GX Works3. Upload the created program either to the programmable controller CPU, motion module or both. Each module has different features based on its usage requirements.



\*1. Supported in the future.

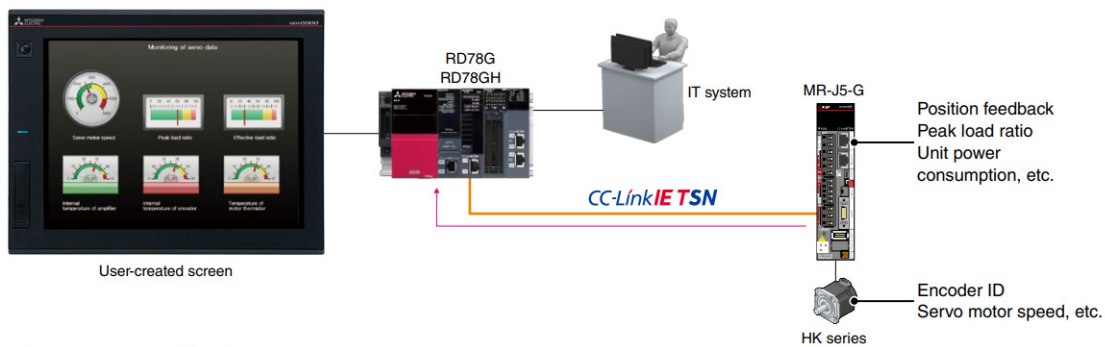
### Synchronous Encoder

Synchronous control can be set easily by setting the synchronous encoder to "Real encoder axis" and creating a program using function blocks. The number of command pulses can be adjusted using the function block (MC\_GearIn) or via the parameters.



### Monitoring of Servo Data

Substantial monitoring of servo amplifiers can be achieved by the extensive data acquired via CC-Link IE TSN, and transferred to the IT system or displayed on any GOT (HMI) within the control network. Monitored data can be changed during operation.



### Motion module specifications

Item	RD78G4	RD78G8	RD78G16	RD78G32	RD78G64	RD78GHV	RD78GHW
Max. number of control axes	4	8	16	32	64	128	256
Min. operation cycle*1 (μs)	62.5	62.5	62.5	62.5	62.5	31.25	31.25
Program capacity (built-in ROM) (byte)	16M	16M	16M	16M	16M	64M	64M
Servo amplifier connection							
Servo amplifier	MR-J5-G	MR-J5-G	MR-J5-G	MR-J5-G	MR-J5-G	MR-J5-G	MR-J5-G
CC-Link IE TSN	●	●	●	●	●	●	●
Distance between stations (m)	100	100	100	100	100	100	100
Interpolation function							
Linear interpolation (axis)	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4
Circular interpolation (axis)	2	2	2	2	2	2	2
Control method							
Positioning control	●	●	●	●	●	●	●
Speed control	●	●	●	●	●	●	●
Torque control	●	●	●	●	●	●	●
Synchronous control	●	●	●	●	●	●	●
Acceleration/deceleration process							
Trapezoidal acceleration/deceleration	●	●	●	●	●	●	●
Jerk acceleration/deceleration	●	●	●	●	●	●	●
Function							
Absolute positioning system	●	●	●	●	●	●	●
Touch probe	●	●	●	●	●	●	●
Firmware update*2	●	●	●	●	●	●	●

\*1. The operation cycle varies depending on the number of control axes and models.

\*2. For more information, please refer to the relevant product manual.