

FACTORY AUTOMATION

Programmable Automation Controllers

MELSEC MX Controller

MX-R model

MXR300-16	16 axes
MXR300-32	32 axes
MXR300-64	64 axes
MXR500-128	128 axes
MXR500-256	256 axes



MX-F model

MXF100-8-N32	8 axes
MXF100-8-P32	8 axes
MXF100-16-N32	16 axes
MXF100-16-P32	16 axes



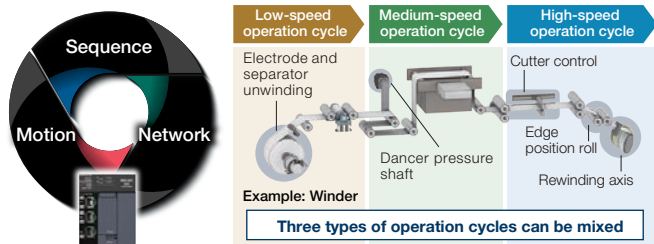
Four MX controller features that empower users

Enhanced productivity

MX-R MX-F

Optimizing control performance of entire system

The MX Controller comes standard with a high-performance multi-core MPU that integrates sequence, motion, and network control, enabling motion control of up to 256 axes*1.



Supports mixing three types of operation cycles, enabling high-speed control even for multiple axes.

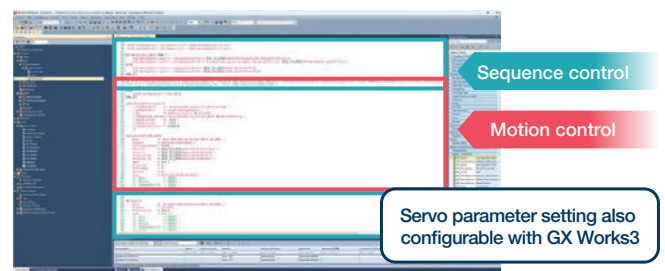
*1: The MX-F model supports up to 16 axes.

Streamlined program development

MX-R MX-F

Enhanced engineering efficiency through tool integration

GX Works3 enables centralized management of sequence and motion programming.

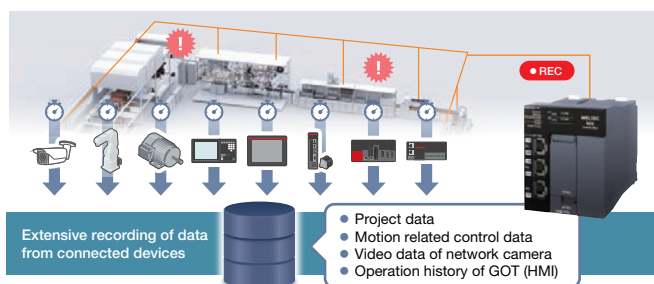


Compliant with IEC 61131-3 and PLCopen® Motion Control FB, enabling collaborative development with overseas sites and reducing training costs.

Reduced on-site downtime

Future support MX-R MX-F

Recording function + AI-powered data flow analysis



The MX Controller records system operations during abnormalities without stopping production lines, uses AI to track device relationships, and enables efficient debugging issues through data flow analysis.

Enhanced security

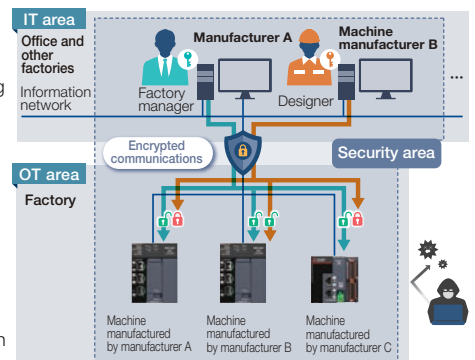
Future support*2 MX-R MX-F

Compliant with IEC 62443-4-2

The MX Controller complies with the international security standard for protecting control systems from cyberattacks.

User authentication function

Access and operation permissions can be assigned to individual user, enabling role-based segregation of asset management.



*2: IEC 62443-4-2 will be supported in the future.



MX-F model

Unrivaled cost performance

Compact yet powerful, featuring large memory capacity and high-speed processing.

Program capacity Equivalent to 200 k steps or more	Data memory 15 MB	Device/label memory 8 MB	LD instruction execution time 1.25 ns
Three times the FX5U CPU module	Three times the FX5U CPU module	70 times the FX5U CPU module	34 ns for the FX5U CPU module

Flexible system configuration with a large number of I/O points

1

2

3

Up to **512** I/O points

Up to **30** remote I/O stations

1 MELSEC MX Controller MX-F model

2 I/O module for MX-F model

3 Extension module for MELSEC iQ-F Series

CC-Link IE TSN

Number of I/O points	Up to 512
Network extension (32-point remote I/O modules x 30 stations)	Up to 960

Expandable up to **1472** I/O points in total

Remote I/O module

Built-in multi-axis motion control

Motion stations

Standard stations

Up to **16** axes

Up to **30** stations

Up to **46** axes drive system configuration

CC-Link IE TSN

Servo amplifier (drive unit) and others

Built-in pulse-train positioning
Up to **4** axes

*EtherNet/IP™ will be supported in the future.

Extensive built-in interfaces

USB Type-C port

USB (Type-C) included as standard for programming interface

Spring clamp terminal block

Easy wiring with no special tools needed

SD memory card slot

Data logging function

Two Ethernet ports

Two ports for CC-Link IE TSN and Ethernet

Seamless connection to IT system

IT system

Cloud

On-premises

Host computer

Information model

Client

Server

Client

Server

OPC UA

*The MX-R model supports OPC UA server functions.

Production line

CPU module manufactured by manufacturer A

CPU module manufactured by manufacturer B

Information model

MITSUBISHI ELECTRIC CORPORATION
Please contact your nearest Mitsubishi Electric representative for more information.

Safety Warning
To ensure proper use of the products in this document, please be sure to read the instruction manual prior to use.

Registration
EtherNet/IP and DeviceNet are trademarks of ODVA (ODVA, Inc.).
OPC UA and OPC CERTIFIED logo are registered trademarks of OPC Foundation.
PLCopen is a registered trademark of the association PLCopen.
All other company names and product names mentioned in this document are either registered trademarks or trademarks of their respective companies.
In some cases, trademark symbols such as "TM" or "®" are not specified in this document.