

FACTORY AUTOMATION

Programmable Automation Controllers MELSEC MX Controller

MX-F model (Support EtherCAT)
MXF100-□-□-EC

New
EtherCAT-compatible models
are now available in the MX-F lineup

MELSEC MX Controller
MX-F model (Support EtherCAT)

EtherCAT®

- ▶ The MX-F lineup now includes EtherCAT-compatible models, enabling more flexible network configurations.

Built-in networks	Model
- CC-Link IE TSN - OPC UA - General-purpose Ethernet	MXF100-8-N32 (8 axes, sink output)
	MXF100-8-P32 (8 axes, source output)
	MXF100-16-N32 (16 axes, sink output)
	MXF100-16-P32 (16 axes, source output)
- EtherCAT - OPC UA - General-purpose Ethernet	MXF100-8-N32-EC (8 axes, sink output) NEW
	MXF100-16-N32-EC (16 axes, sink output) NEW

Source output
type is coming soon



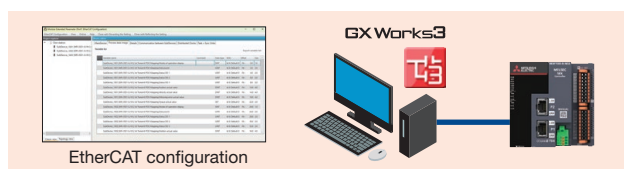
With the intelligent function module, additional networks such as CC-Link, EtherNet/IP, and MQTT can be added.

Motion Control via EtherCAT

The MELSEC MX Controller MX-F model (Support EtherCAT) is a controller that connects to an EtherCAT network to achieve data communication with EtherCAT-compatible devices. Synchronized motion control is enabled using EtherCAT communication.

Streamlined Engineering

Like the CC-Link IE TSN-compatible MX-F model, both sequence and motion control can be developed in a single tool, streamlining workflows and reducing engineering time. Furthermore, the EtherCAT configuration settings can be used to easily connect to a SubDevice.

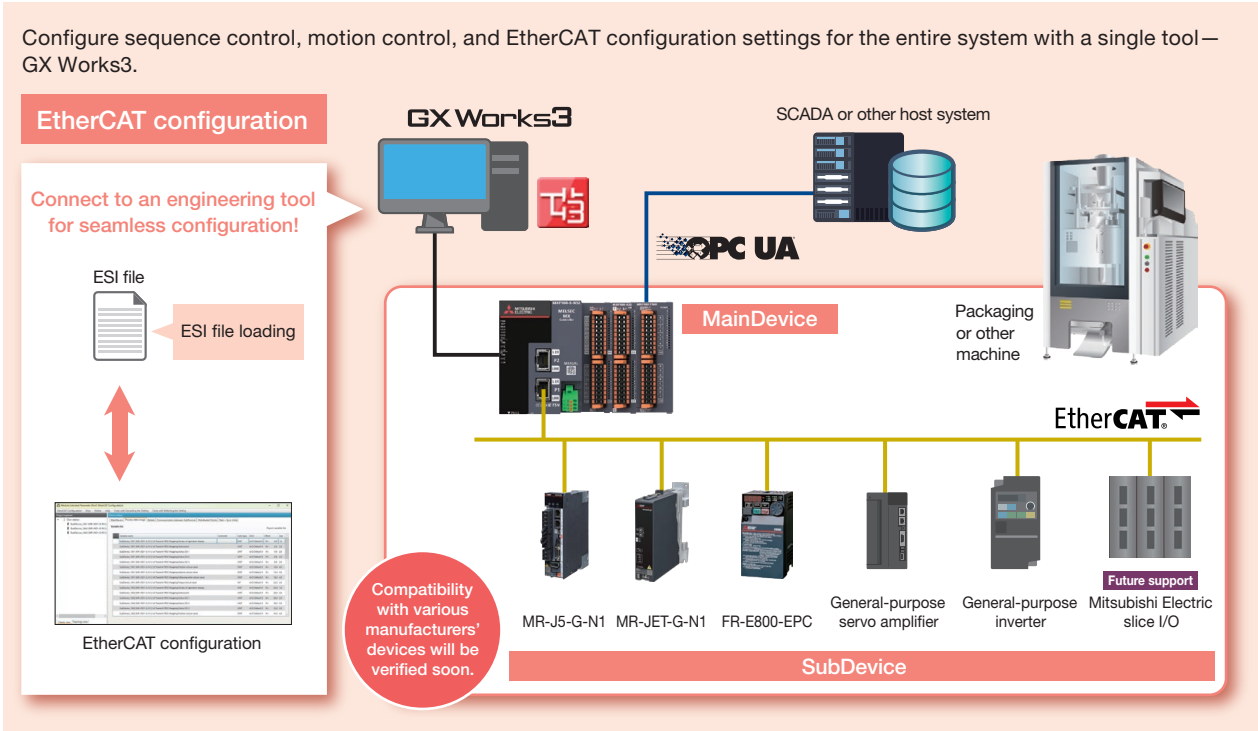


Network (EtherCAT) specifications			
EtherCAT communication specifications			CAN application protocol over EtherCAT (CoE)
Transmission speed			100 Mbps
Minimum synchronization cycle			250 μs
Maximum number of connectable stations per network			72 stations
Network topology			Line topology, star topology
Overall cable distance	Line connection		7100 m (when 72 stations are connected)
	Other		Depends on system configuration
Maximum station-to-station distance			100 m
PDO (process data communications)	Maximum number of link points per network	Input	8192 points (8192 words)
		Output	8192 points (8192 words)
	Maximum number of link points per station	Input	8192 points (8192 words)
		Output	8192 points (8192 words)
SDO (mailbox communications)	Size	Input	400 words
		Output	400 words
	Functions		SDO upload, SDO download
Communication method			Full duplex

Programmable Automation Controllers

MELSEC MX Controller

System Configuration example



Verified Compatible Models

Manufacturer	Type	Series name	Model name
Mitsubishi Electric	Servo amplifier	MELSERVO-J5 Series	MR-J5-G-N1
		MELSERVO-JET Series	MR-JET-G-N1
	Inverter	FREQROL-E Series	FR-E800-EPC
LEISAI	Stepper motor amplifier	DM3C Series	DM3C522
MOONS'	Stepper motor amplifier	SSDC-ECX Series	SSDC06-ECX-H
CKD Nikki Denso	Servo amplifier	VPH Series	NCR-HD2101A-A-000
Oriental Motor	Stepper driver	αSTEP Series	AZD-KRED
IAI	Controller	R-unit Series	RCON-GW-EC RCON-GW-ECM
CKD	Controller	ECMG Series	ECMG-CNNA30-ECDNN
SMC	Controller	JXD1-M□ Series	JXD1-MGW-EC
Beckhoff	Remote I/O	—	EK1100
WAGO	Remote I/O	—	750-354

⚠ Safety Warning

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

Product Specifications (For other specifications, please refer to the manual.)

Item		Specifications
Rated voltage		24 V DC (+20%, -15%)
Transmission specifications	Interface	P1 (EtherCAT port): RJ45 connector
		P2 (Ethernet port): RJ45 connector
Number of occupied I/O points	Input	Input terminals: 16 points
	Output	Output terminals: 16 points
Supported standards		CE (EMC, RoHS), UL/cUL, KC
External dimensions W × H × D (mm)		91 × 90 × 105
Weight		0.45 kg

Product List

Model	Specifications
MXF100-8-N32-EC	MX-F model (Support EtherCAT) 8 axes, sink output
MXF100-16-N32-EC	MX-F model (Support EtherCAT) 16 axes, sink output

Applicable Software Package

Software	Applicability
GX Works3	Ver. 1.125F or later

Trademarks and Registered Trademarks

- EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.
- OPC UA logo and OPC CERTIFIED logo are registered trademarks of OPC Foundation.
- All other company names and product names mentioned herein are trademarks or registered trademarks of their respective owners.
- Trademark symbols such as "TM" and "®" might be omitted in this document.

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE: TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
www.MitsubishiElectric.com