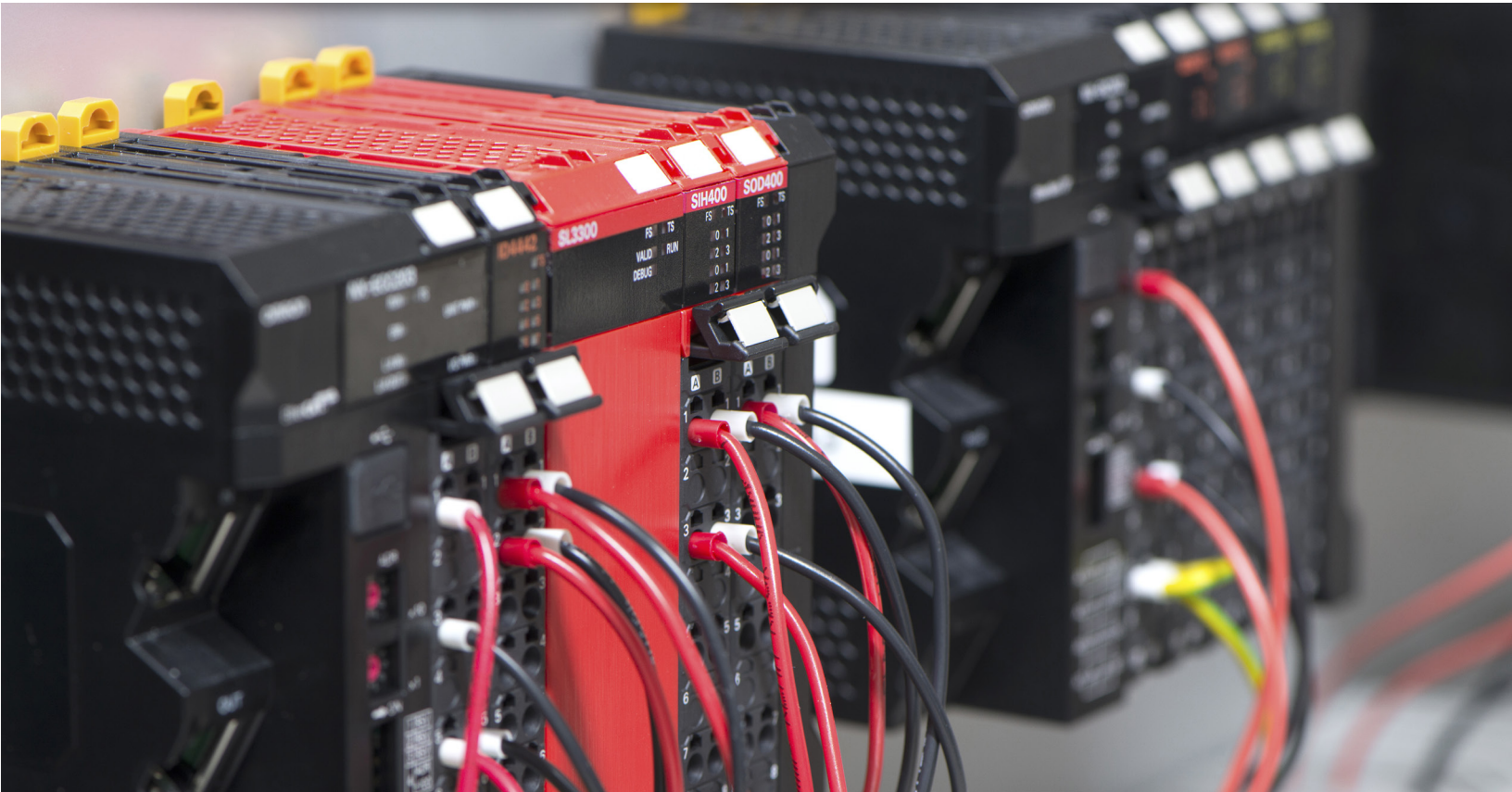


# Safety Controller Solutions



- Easy integration
- Scalable configurations
- Quick diagnostics

# Safety Controller Line

Our safety controller portfolio offers a powerful and robust path to help to develop a safety system that meets all your functional requirements and is able to reach the **highest level of functional safety**, PL<sub>E</sub>, according to EN/ISO 13849-1 and SIL3 according to IEC 61508.

The **G9SP** is a compact safety controller ideal for small to mid-size machine, with a friendly programming environment including embedded simulation and monitoring tools, that makes program development and troubleshooting easy and accessible.

The NX-Safety controllers offer two series **NX-SL3** and NX-SL5, both offering easy integration, quick diagnostic, and different option to develop scalable safety systems and support flexible manufacturing strategies.

The NX-SL3 offers a cost-effective safety controller with a modular design making it easy to adapt to a variety of machine types and sizes. For systems requiring remote I/O, the NX-SL3 can be combined with an EtherCAT coupler to enable Functional Safety over EtherCAT(FSoE), making the project seamless to operate and maintain.

The **NX-SL5** series offers scalable safety solutions and supports CIP Safety over Ethernet/IP, FSoE, or both simultaneously to meet the most exhausting functional safety requirements. Advanced tools like the EDS tool to add third-party devices over cip safety, data logging, and easy access to check safety signatures, make it easy to manage a safety system on your factory floor.

## NX-SL5 Series

- Ideal for machine-to-machine safety and large-scale systems
- Supports CIP Safety over EtherNet/IP and FSoE
- Up to 2032 safety I/O points
- Up to 254 safety connections (NXSL57)
- Enhanced diagnostic tools
- Safety and standard digital/analog slices can be combined

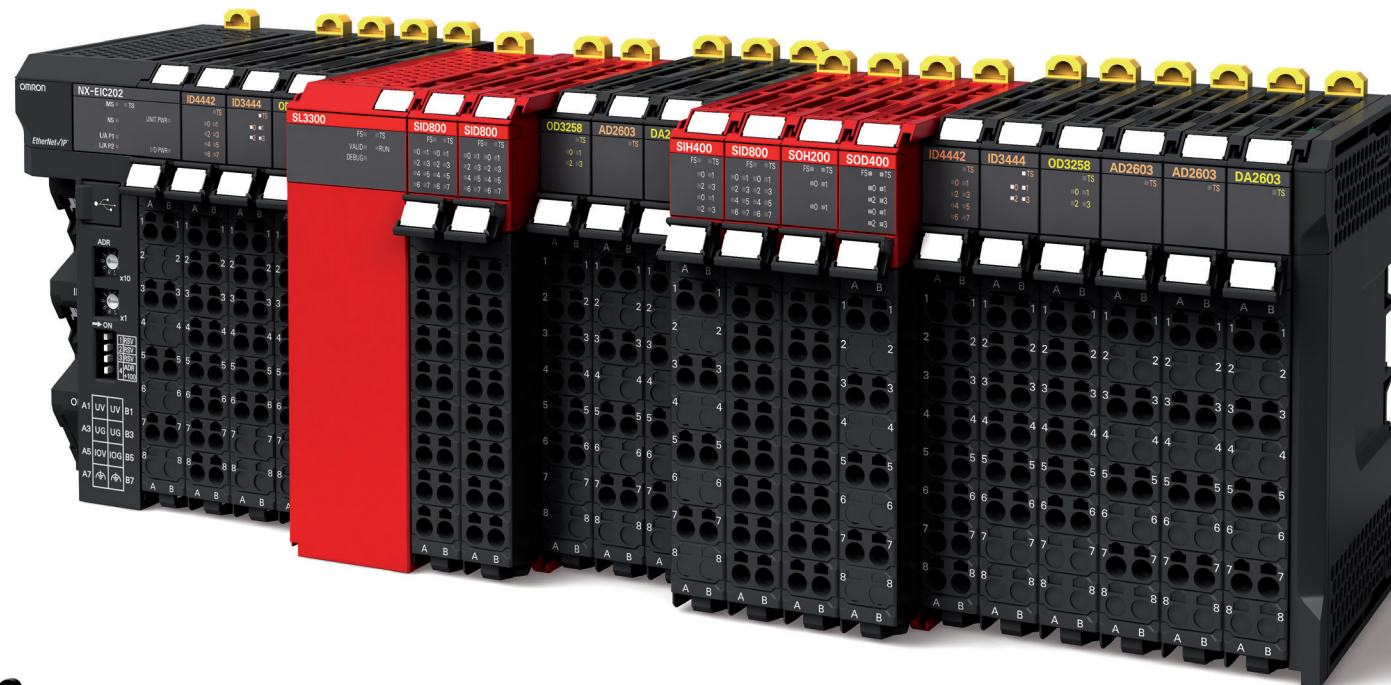


EtherNet/IP CIP Safety Safety over EtherCAT

EtherNet/IP EtherCAT

## Modular Safety

- Ideal for add-on safety solution when combined with Ethernet/IP coupler (NX-EIC202)
- Up to 256 safety I/O signals when using EtherNet/IP coupler
- Up to 1024 safety I/O signals when using NXSL35 series with EtherCAT couplers or NJ/NX-series
- CPU Units \*
- Safety and standard digital/analog slices can be combined



NX Safety stand-alone

## Safety Relay

- Compact safety relay for small applications
- Slim design and push-in terminals



G9SE



G9SP

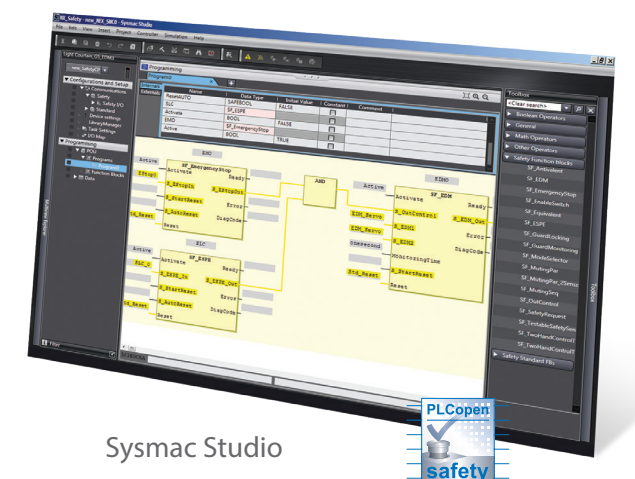
## Compact Safety

- Clear diagnostics and monitoring via Ethernet or serial connection
- Expansion I/O units for hardwired diagnostics or standard signals

## Sysmac Studio

Take the advantage of the power of Sysmac Studio when using NX safety controllers. Sysmac Studio is a true integrated development environment (IDE) that provides one environment to set up, program, debug, and maintain standard and safety controls. Built-in tools simplify safety solution configuration, programming, simulation, and integration.

Sysmac Studio software tools comply with IEC 61131-3 and use PLCopen safety function blocks.



Sysmac Studio



# Safety Controller Selection Table

Safety Controller	Communication Unit	Safety Network	Safety I/O Max	Program Capacity	Programming Environment
G9SP	CP1W-CIF01* CP1W-CIF41*2	No	28	128 function blocks max	G9SP Configurator
NX-SL3300	NX-EIC202*3	No	256	512kb	Sysmac Studio *6
	NX-ECC202 NJ/NX-Series CPU Units*4	FSoE			
NX-SL3500	NX-ECC202 NJ/NX-Series CPU Units*4	FSoE	1024	2048kb	
NX-SL5500	NX-CSG320	CIP Safety	1024	2MB	
	NX102*5	CIP Safety FSoE			
NX-SL5700	NX-CSG320 NX102*5	CIP Safety	2032	4MB	
	NX102*5	CIP Safety FSoE			

\* Optional EtherNet board for non-safe communication

\*2 Optional RS-232C board

\*3 EtherNet/IP Coupler for non-safe communication

\*4 These Units cannot be mounted to Machine Automation Controllers with NX1P CPU Units. Mount and use an EtherCAT Coupler Unit instead.

\*5 NX1P2 CPU Units cannot be connected.

\*6 Sysmac Studio License type compatible are: Sysmac Studio Standard, Lite and Safety versions. All version licenses are ordered separately.



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## Authorized Distributor:

### Controllers and I/O

Machine Automation Controllers (MAC) | Motion Controllers  
Programmable Logic Controllers (PLC) | Temperature Controllers | Remote I/O

### Robotics

Industrial Robots | Mobile Robots

### Operator Interfaces

Human Machine Interface (HMI)

### Motion and Drives

Machine Automation Controllers (MAC) | Motion Controllers | Servo Systems  
Frequency Inverters

### Vision, Measurement and Identification

Vision Sensors and Systems | Measurement Sensors | Auto Identification Systems

### Sensing

Photoelectric Sensors | Fiber-Optic Sensors | Proximity Sensors  
Rotary Encoders | Ultrasonic Sensors

### Safety

Safety Light Curtains | Safety Laser Scanners | Programmable Safety Systems  
Safety Mats and Edges | Safety Door Switches | Emergency Stop Devices  
Safety Switches and Operator Controls | Safety Monitoring/Force-guided Relays

### Control Components

Power Supplies | Timers | Counters | Programmable Relays  
Digital Panel Meters | Monitoring Products

### Switches and Relays

Limit Switches | Pushbutton Switches | Electromechanical Relays  
Solid State Relays

### Software

Programming and Configuration | Runtime