

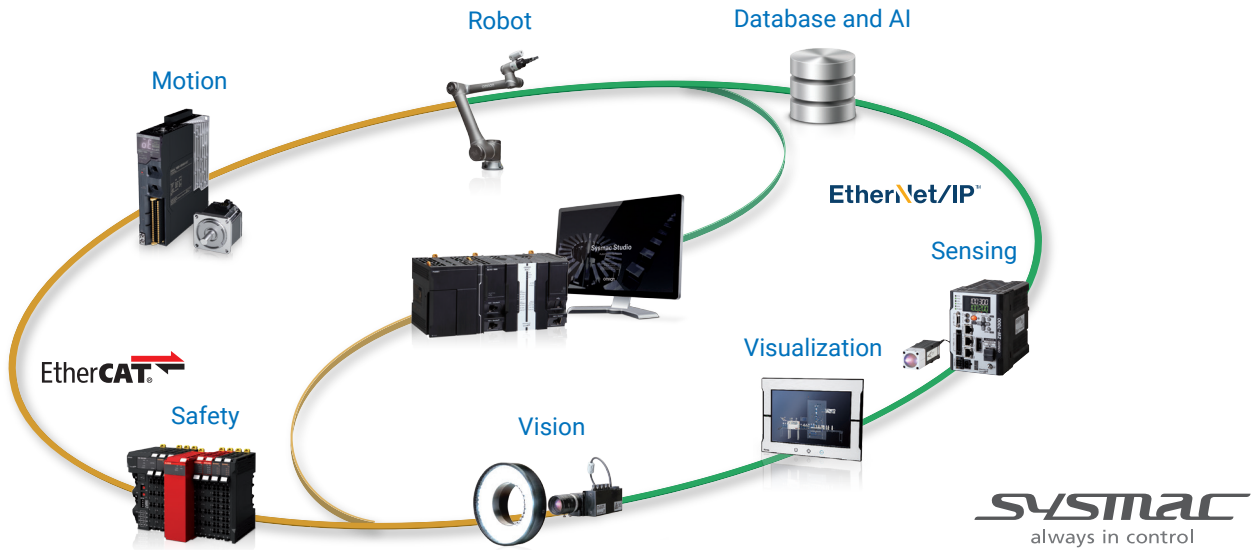
Unify the Factory Floor with Confidence

Deploy data first automation through the Sysmac Platform.



- Gather more process data by connecting multi-vendor control systems.
- Deploy industry proven IIoT solutions to quickly gather data efficiency.
- Create OT friendly solutions with IT benefits with off-the-shelf software tools.
- Visualize key process in real time to take action

Get More Data from Current Machines Without Compromising Production Schedules



The Sysmac Automation Platform

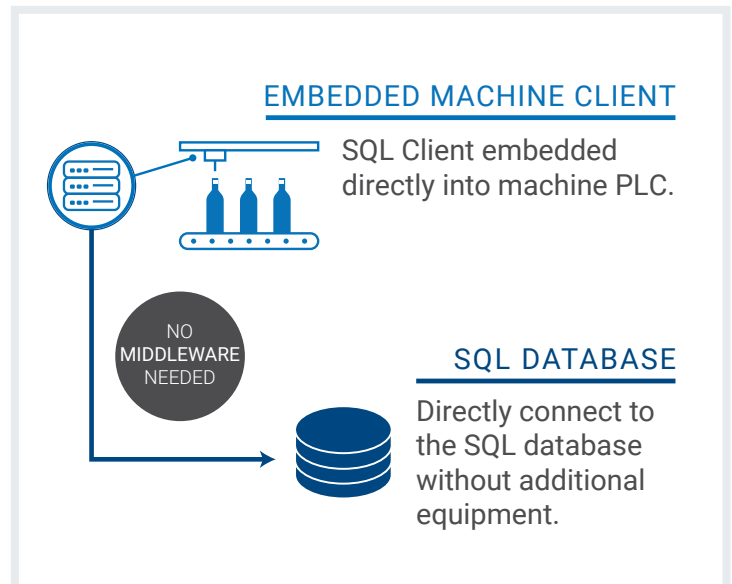
Holistic IIoT focuses on how data should move from production line to decision enabling visualization. Sysmac uses global industrial protocols as originally designed to maximize performance while gathering data efficiently, non-intrusively, to decrease hidden costs.

Sysmac Controllers share data without middleware through:

1. Embedded SQL Client
2. Embedded OPC UA Server
3. Standard Sysmac Studio MQTT Function Blocks

Embedded SQL Client

SQL (Structured Query Language) is the ANSI standard language for relational database management systems. Sysmac controllers with an embedded SQL Client option let users connect directly to a SQL database from the controller without the need for middleware or PCs on the plant floor. Built in function blocks make it easy to send and receive data from the controller. Real-time data access to time series data provides a strong foundation for analytics and traceability applications. Reliability is ensured with data spooling within the CPU.



Securely Send Data to Central Locations

to Visualize Process Insight and Take Action

OPC UA: Embedded OPC UA Server

OPC UA is an open industrial communication protocol that enables secure and reliable data exchange between machines as well as to other platforms such as Windows, Linux, or Android. OMRON PLC's with embedded OPC UA servers eliminate the need for a gateway and let you connect directly to the host systems and select the variables you want to share.



Standard Sysmac Studio MQTT Function Blocks

MQTT (Message Queuing Telemetry Transport) is a simple and lightweight messaging protocol that uses a publish/subscribe model and has become an IIoT standard for machine-to-machine communications. The protocol is lightweight and designed for low-bandwidth, high-latency and unreliable networks. Devices use MQTT to publish data that other devices can subscribe to. If communications drop out, the service continues once communications are restored without resulting in errors or lost data. MQTT servers can be in the cloud or used with local servers.

We've made it easy for you to take advantage of MQTT technology using simple function blocks to publish and subscribe to data to an existing MQTT broker.

By writing a simple line of code, OMRON makes it easy to connect to an MQTT broker directly from the PLC.¹

STEP
01 
WRITE CODE

Write a line of code for your Omron PLC as part of the MQTT System.



STEP
02 
CONNECT

Directly connect to the MQTT Broker from the PLC. No need for additional equipment or software.

¹: Server can be local or remote (i.e. cloud service)

Part Numbers

Family	Part Number	Program Capacity	Motion Axes	OPC UA Client	SQL Server	MQTT†
NX1P2 	NX1P2-9024DT	1.5 MB	4 PTP, 0 Coordinated			†
	NX1P2-9024DT1	1.5 MB	4 PTP, 0 Coordinated			†
	NX1P2-1040DT	1.5 MB	4 PTP, 2 Coordinated			†
	NX1P2-1040DT1	1.5 MB	4 PTP, 2 Coordinated			†
	NX1P2-1140DT	1.5 MB	4 PTP, 4 Coordinated			†
	NX1P2-1140DT1	1.5 MB	4 PTP, 4 Coordinated			†
NX102 	NX102-9000	5 MB	4 PTP, 0 Coordinated	✓		†
	NX102-9020	5 MB	4 PTP, 0 Coordinated	✓	✓	†
	NX102-1000	5 MB	4 PTP, 2 Coordinated	✓		†
	NX102-1020	5 MB	4 PTP, 2 Coordinated	✓	✓	†
	NX102-1100	5 MB	4 PTP, 4 Coordinated	✓		†
	NX102-1120	5 MB	4 PTP, 4 Coordinated	✓	✓	†
	NX102-1200	5 MB	4 PTP, 8 Coordinated	✓		†
	NX102-1220	5 MB	4 PTP, 8 Coordinated	✓	✓	†
NX502 	NX502-1300	80 MB	16 Coordinated	✓	✓	†
	NX502-1400	80 MB	32 Coordinated	✓	✓	†
	NX502-1500	80 MB	64 Coordinated	✓	✓	†
	NX502-1600	80 MB	128 Axes	✓	✓	†
	NX502-1700	80 MB	256 Axes	✓	✓	†

†. Denotes TLS functionality for MQTTs with secure sockets

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