

NX1P Technical Highlights

EtherNet/IP™

Open industrial Ethernet network

- Interface with HMI
- Peer-to-Peer controller communication
- Interface with Sysmac Studio
- Information network (host application)



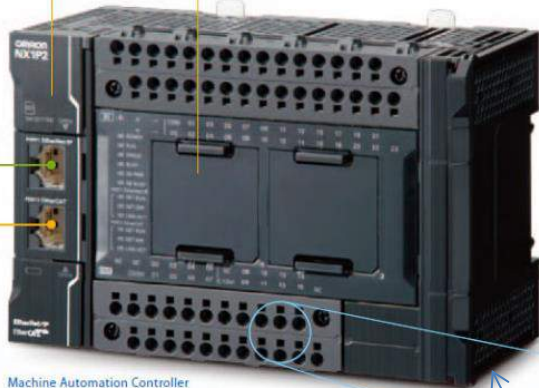
SD memory card

- Back up, restore, and verify data in the controller



Option board

- Add serial communications or analog control without increasing the size
- RS-232, RS-422A/485 (Modbus-RTU: 32 nodes max.)
 - Analog I/O



Machine Automation Controller
NX1P

EtherCAT™

The fast machine network for a wide range of field and motion devices.

Battery-free NX1P and 1S

The NX1P requires no battery to retain user program, set values, and variables during power interruption in the built-in memory. The 1S AC Servo System comes with a battery-free absolute encoder. They reduce machine maintenance.

Built in EtherCAT Port

Maximum number of slaves	16
Maximum process data	Input: 1,434 bytes
size per slave	Output: 1,434 bytes
Communications cycle	2,000 μs to 8,000 μs in 250-μs increments
Sync jitter	1 μs max.

Built-in EtherNet/IP Port

Maximum number of connections	32
Number of tags per connection	8
Maximum number of tags	256
Maximum data size per connection	600 bytes

NX I/O Options

DC Input	4,8,16 and 32 input points
AC Input	4 input points
DC Output	2,4,8,16 and 32 output points
Relay Output	2 or 8 output points
Mixed I/O	16 digital in / 16 digital out
Analog In	2,4 and 8 input points
Analog Output	2 and 4 output points
Thermocouple	2 and 4 point input points
RTD	2 and 4 point input points
Heater Burnout	4 input points
I/O Link	4 I/O Link points
Load Cell	1 input point
Incremental Encoder	1 and 2 input point
SSI Encoder	1 and 2 input point
Pulse Output	1,2 and 4 output points
Serial Comms	1 and 2 ports
Safety CPU	256 or 1024 safety points
Safety Inputs	4 and 8 input points
Safety Outputs	2 and 4 output points
I/O Power Modules	Segregation of power on the I/O Bus

NX1P Features

- ✓ Programmed with Sysmac Studio
- ✓ Full solution automation controller for I/O, Safety, Vision, Motion and Robotics
- ✓ Maximum of 8 NX I/O slices on the CPU Unit.
- ✓ Additional I/O available with NX Coupler (up to 808 I/O points max)
- ✓ Compatible with NX-Safety System using NX Coupler and EtherCAT
- ✓ FTP Server/ Client
- ✓ Real Time Clock
- ✓ Built-in simulation with Sysmac Studio
- ✓ Advanced motion control for Synchronization, Interpolation and Electronic Camming.
- ✓ CAM editor for easy programming of complex motion profiles
- ✓ Network Safety available with 1S Servo System.
- ✓ Predictive maintenance when using IO Link.
- ✓ Fully compliant with open standard IEC 61131-3 and Japanese standard JIS B3503 (tag based programming)
- ✓ Supports Ladder, Structured Text and Function Block programming with a rich instruction set
- ✓ Advanced security function with 32 digit security password

NX1P Product Offering

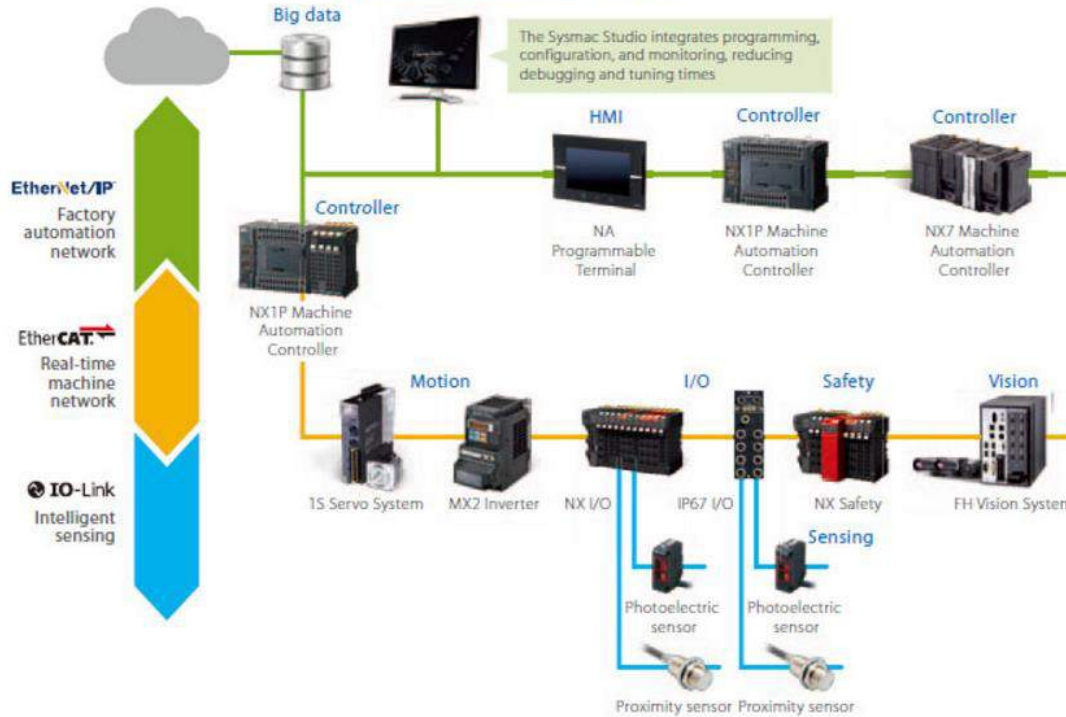
Model	Total I/O Points	Inputs	Outputs	Maximum axes count	Coordinated Motion	Point to Point
NX1P2-1140DT	40	24	16 NPN	8 axes	4 axes	4 axes
NX1P2-1140DT1			16 PNP			
NX1P2-1040DT	40	24	16 NPN	6 axes	2 axes	4 axes
NX1P2-1040DT1			16 PNP			
NX1P2-9024DT	24	14	10 NPN	4 axes	0 axes	4 axes
NX1P2-9024DT1			10 PNP			

Option Boards

Serial Comm	Serial Comm	Serial Comm
One RS-232C port	One RS-422A/485 port	One RS-232C port
		NX1W-CIF01
		NX1W-CIF11 or NX1W-CIF12
Analog I/O	2 Analog In 0-10 VDC or 4-20 mA	NX1W-ADB21
	2 Analog Output 0-10 VDC	NX1W-DAB21V
	2 Analog In / 2 Analog Out	NX1W-MAB221

NX1P Technical Highlights

Sysmac Automation Platform



Customers for the NX1P

- Customers looking to use “Networked Motion”– Take out Steppers/Inverters
- OEM/Machine Builders w/ Scalable offerings (2/4 axis machines)
- Customers Using both NJs and CJs -> Now full Sysmac Solution at lower end
- Customers looking to switch from Micrologix 1400/1500 and Compact Logix 5370 L1/L2

NX1P Advantages

- ✓ Built in Motion (no add on modules)
- ✓ 2ms Control Cycle ARM processor
- ✓ IO Link Master on NX Bus
- ✓ 4 axes of motion on base model

- ✓ Single Suite software/NX Bus
- ✓ Small form factor with Slice IO expansion on NX bus
- ✓ 808 IO pts

- ✓ Integrated Safety through NX controller

- ✓ Motion, Vision, Safety, Logic & Robotics

- ✓ Built in EIP (32 connections), Built in ECAT (16 nodes)

Predictive maintenance using IO-Link

You can start predictive maintenance with visualization of the status of a small-sized machine. IO-Link functionality can be added to existing machines.

