

# EtherCAT N-Smart Series Library



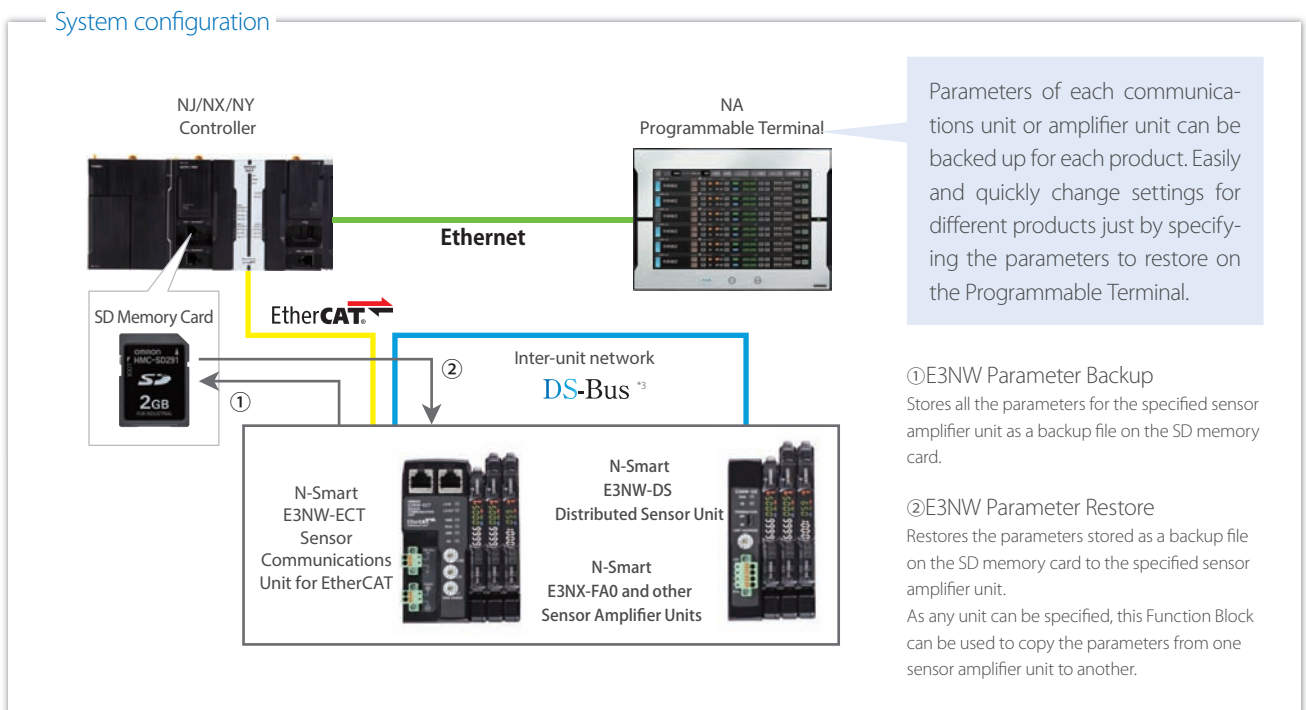
✓ Reduce sensor setting and replacement work at setup, changeover, maintenance, and operation times.

- Issue 1** It takes time to set up many sensors.
- Issue 2** Operation rates are low because it takes time to change sensor settings.
- Issue 3** When a sensor is replaced, time is needed to change settings and setting errors may occur.

## EtherCAT N-Smart Series Library offers solution!

The Parameter Backup Function Block backs up the parameters for each sensor communications unit\*<sup>1</sup> or sensor amplifier unit\*<sup>2</sup> individually (upload settings from the unit), and the Parameter Restore Function Block restores them individually (download settings to the unit), without connecting to a PC.

You can easily change settings for sensor communications units and sensor amplifier units.



\*1. The Backup and Restore functions of the NJ/NX CPU Unit and the NY IPC Machine Controller can back up and restore the parameters for all the E3NW-ECT Sensor Communication Units at once. The addition of this library allows you to back up and restore the parameters for each node individually.

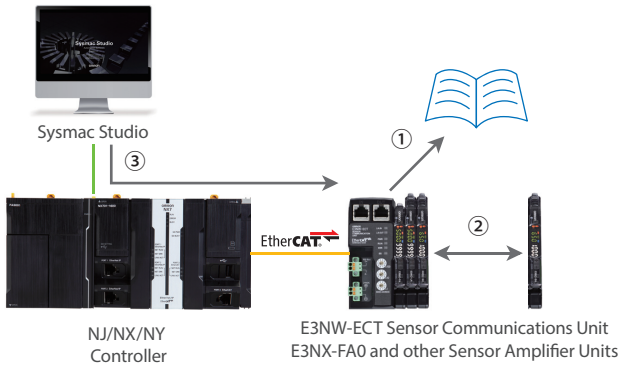
\*2. This library can be used to back up and restore parameters for each sensor amplifier unit individually, which is not possible with the Backup and Restore functions of the NJ/NX CPU Unit and the NY IPC Machine Controller.

\*3. The DS-Bus is an Omron inter-unit network communications protocol that connects the E3NW-ECT Sensor Communications Unit and E3NW-DS Distributed Sensor Units.

## Downloading settings when replacing a sensor amplifier unit

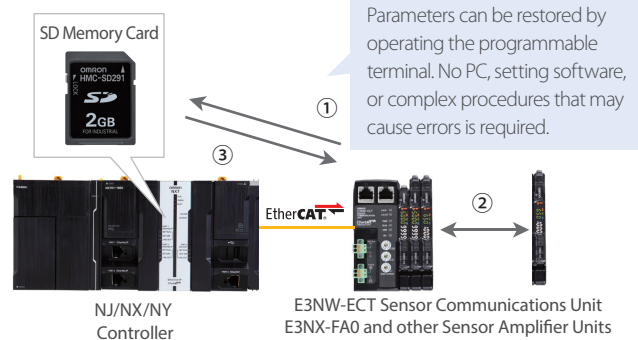
### From

- ① Manually record parameters to make a procedure manual
- ② Replace a sensor amplifier unit
- ③ Set parameters manually according to the procedure manual



### To

- ① Store parameters on an SD memory card
- ② Replace a sensor amplifier unit
- ③ Restore the parameters stored on the SD memory card



## Compatible Models

Name	Model	Version
Machine Automation Controller NJ/NX CPU Unit	NX701-1□□□/NJ101-□□□□	Version 1.10 or later
	NJ501-□□□□/NJ301-□□□□	Version 1.01 or later
	NX1P2-□□□□□□(1)	Version 1.13 or later
	NX102-□□□□	Version 1.30 or later
Industrial PC Platform NY IPC Machine Controller	NY5□□-1	Version 1.12 or later
	NY5□□-5	Version 1.18 or later
Automation Software Sysmac Studio	SYSMAC-SE2□□□	Version 1.14 or higher
Sensor Communications Unit (EtherCAT)	E3NW-ECT	Version 1.03 or later (The E3NX-CA0 is supported for Ver.1.06 or later.)
Distributed Sensor Unit	E3NW-DS	—
Smart Laser Amplifier Unit	E3NC-LA0	—
Smart Laser Amplifier Unit (CMOS type)	E3NC-SA0	—
Smart Fiber Amplifier Unit	E3NX-FA0	—
Color Fiber Amplifier Unit	E3NX-CA0	—
Contact-Type Smart Amplifier Unit	E9NC-TA0	—
SD Memory Card	HMC-SD□□□	—

## Function Block (FB) Specifications

Name	FB name	Description
E3NW Parameter Backup	Backup_E3NW	Backs up the parameters for the sensor amplifier unit that is connected to an E3NW-ECT Sensor Communications Unit or E3NW-DS Distributed Sensor Unit and stores them on the SD memory card inserted into the controller.
E3NW Parameter Restore	Restore_E3NW	Restores the backup data on the SD memory card to the sensor amplifier unit that is connected to an E3NW-ECT Sensor Communications Unit or E3NW-DS Distributed Sensor Unit.

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Note: Do not use this document to operate the Unit.

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