

# NJ-series Machine Automation Controller SECS/GEM CPU Unit

NJ501-1340



HSMS  
communications

```

S7,F1 Process Program Load Inquire (PPI)
L,2
  1. <PPID>
  2. <LENGTH>
S7,F2 Process Program Load Grant (PPG)
<PPGNT>
S7,F23 Formatted Process Program Send (FPS)
L,4
  1. <PPID>
  2. <MDLN>
  3. <SOFTREV>
  4. L,c (c=Number of Process Commands)
    1. L,2
      1. <CCODE>
      2. L,p (p=Number of Parameters)
        1. <PPARM1>
        .
        p. <PPARMp>
    2. L,2
    .
    c. L,2
S7,F24 Formatted Process Program Acknowledge (FPA)
<ACKC7>
  
```



NJ-series Machine Automation Controller with built-in semiconductor industry standard SECS/GEM communications functionality

# Cost-effective

The SECS/GEM CPU Unit integrates machine control and host communications, reducing time, cost, and complexity to establish SECS/GEM communications.

### Simple connection

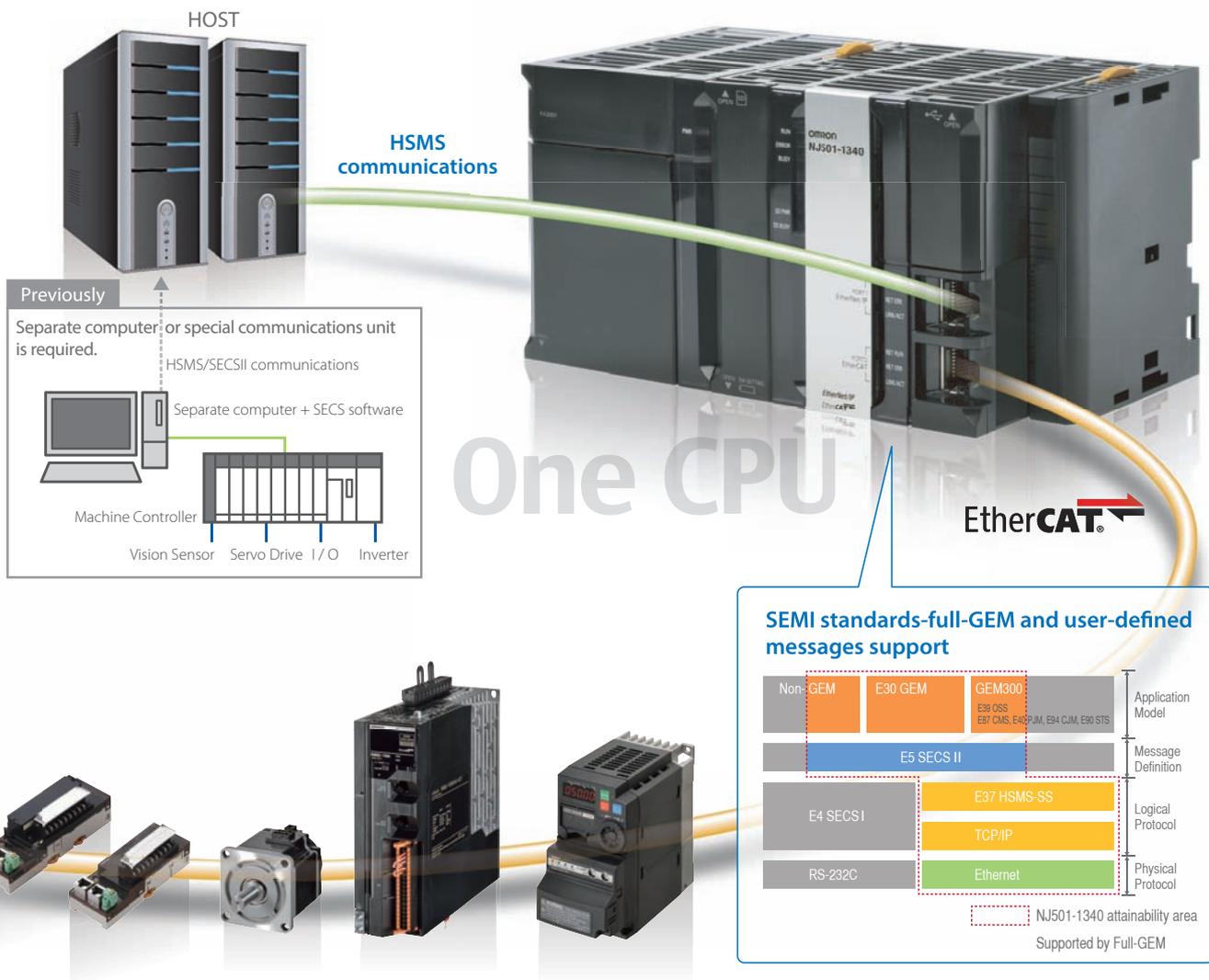
No separate computer, special communications Unit or software required

### Save space in equipment

Direct connection of CPU Unit to host

### No annual support contract

Reducing the running costs



# Easy Design

User-friendly SECS/GEM Configurator facilitates project design.

## Programming with variables

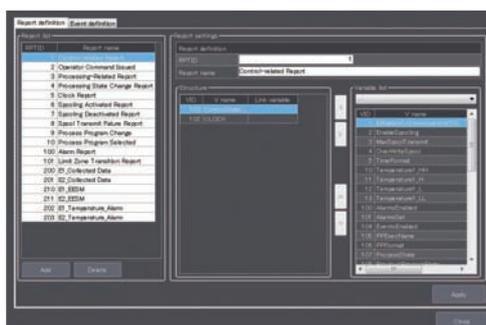
No need to specify memory addresses

## One CPU Unit

No communications between separate computer and machine controller required

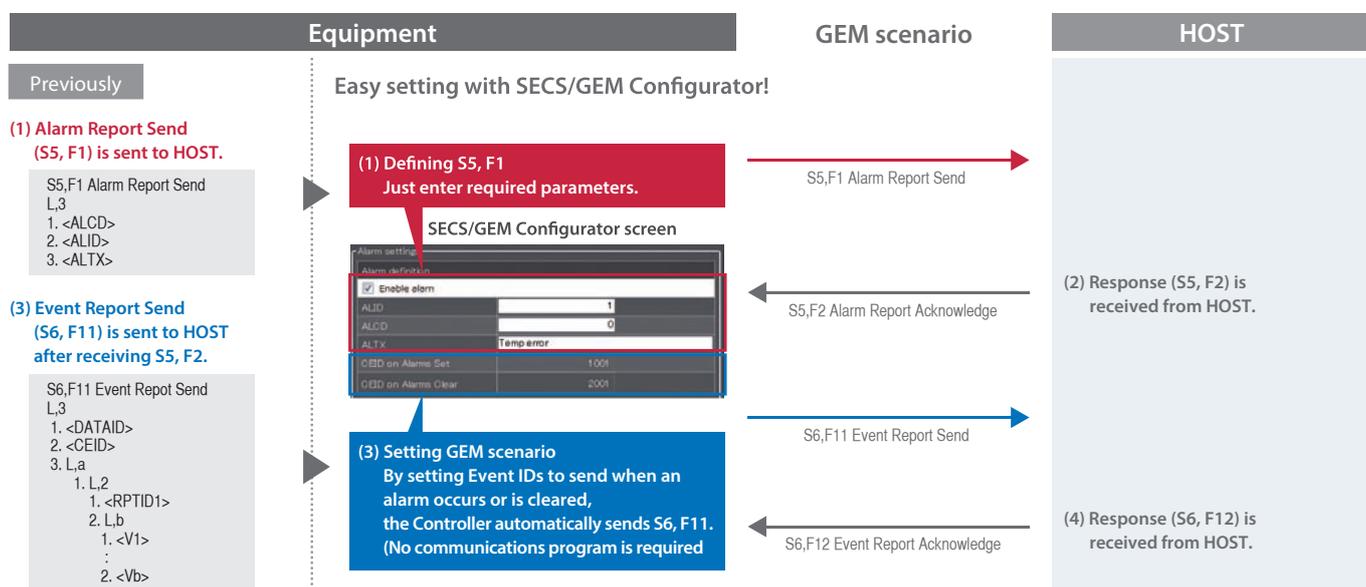
## Quick SECS/GEM setting

Easy setting with SECS/GEM Configurator



SECS/GEM Configurator screen

## SECS/GEM Setting Example (Alarm Report)



# NJ501-1340

## Ordering Information

### International Standards

- The standards are abbreviated as follows: UC1: cULus, N: NK, L: Lloyd, CE: EU Directives, and KC: KC Registration. (Class I Division 2 Products for Hazardous Locations), CU: cUL, N: NK, L: Lloyd, CE: EU Directives, RCM: Regulatory Compliance Mark and KC: KC Registration.
- Contact your OMRON representative for further details and applicable conditions for these standards.

### NJ-series CPU Unit

Product Name	Specifications				Current consumption (A)		Model	Standards
	I/O capacity/ Maximum number of configuration Units (Expansion Racks)	Program capacity	Memory capacity for variables	Number of motion axes	5 VDC	24 VDC		
<b>NJ501 SECS/GEM CPU Unit</b> 	2560 points/40 Units (3 Expansion Racks)	20 MB	2 MB: Retained during power interruptions 4 MB: Not retained during power interruptions	16	1.90	---	<b>NJ501-1340</b>	UC1, N, L, CE, RCM, KC

### Automation Software Sysmac Studio

The Sysmac Studio is the software that provides an integrated environment for setting, programming, debugging and maintenance of machine automation controllers including the NJ/NX-series CPU Units, NY-series Industrial PC, EtherCAT Slave, and the HMI.

For details, refer to your local OMRON website and *Sysmac Studio Catalog* (Cat. No. P138).

### SECS/GEM Configurator

Please purchase the required number of SECS/GEM Configurator licenses and a Sysmac Studio Standard Edition DVD the first time you purchase the SECS/GEM Configurator.

The Sysmac Studio Standard Edition DVD includes the SECS/GEM Configurator. The license does not include the DVD.

Product Name	Specifications	Current consumption (A)		Model	Standards
		Number of licenses	Media		
<b>SECS/GEM Configurator Ver.1.□□</b>	The SECS/GEM Configurator is the software to make HSMS, SECSII and GEM settings for NJ501 SECS/GEM CPU Units.  The SECS/GEM Configurator runs on the following OS. Windows XP (Service Pack3 or higher, 32-bit edition), Windows Vista (32-bit edition), or Windows 7 (32-bit or 64-bit edition)  The software is included in the Sysmac Studio Standard Edition DVD.	1 license	---	<b>WS02-GCTL1</b>	---

### CPU Unit Accessories

The following accessories are provided with a CPU Unit.

Item	Specification
<b>Battery</b>	CJ1W-BAT01
<b>End Cover</b>	CJ1W-TER01 (Needs to be attached to the right of the CPU Rack.)
<b>End Plate</b>	PFP-M (2 pieces)
<b>SD Memory Card (Flash Memory)</b>	HMC-SD492

For details, refer to the data sheet of the Machine Automation Controller NJ-Series (Cat. No. P140).

# Terms and Conditions Agreement

## **Read and understand this catalog.**

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

## **Warranties.**

- (a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.
- (b) Limitations. OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See <http://www.omron.com/global/> or contact your Omron representative for published information.

## **Limitation on Liability: Etc.**

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

## **Suitability of Use.**

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

## **Programmable Products.**

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

## **Performance Data.**

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

## **Change in Specifications.**

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

## **Errors and Omissions.**

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

Sysmac is a trademark or registered trademark of OMRON Corporation in Japan and other countries for OMRON factory automation products.  
SEMI® is a trademark or registered trademark of Semiconductor Equipment and Materials International in the United States and other countries.  
Windows is a registered trademark of Microsoft Corporation in the United States and other countries.  
EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.  
EtherNet/IP™ and DeviceNet™ are the trademarks of ODVA.

Other company names and product names in this document are the trademarks or registered trademarks of their respective companies.

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

## **OMRON Corporation Industrial Automation Company**

**Kyoto, JAPAN**

**Contact : [www.ia.omron.com](http://www.ia.omron.com)**

### **Regional Headquarters**

#### **OMRON EUROPE B.V.**

Wegalaan 67-69, 2132 JD Hoofddorp  
The Netherlands  
Tel: (31) 2356-81-300 Fax: (31) 2356-81-388

#### **OMRON ELECTRONICS LLC**

2895 Greenspoint Parkway, Suite 200  
Hoffman Estates, IL 60169 U.S.A.  
Tel: (1) 847-843-7900 Fax: (1) 847-843-7787

#### **OMRON ASIA PACIFIC PTE. LTD.**

438B Alexandra Road, #08-01/02 Alexandra  
Technopark, Singapore 119968  
Tel: (65) 6835-3011 Fax: (65) 6835-3011

#### **OMRON (CHINA) CO., LTD.**

Room 2211, Bank of China Tower,  
200 Yin Cheng Zhong Road,  
PuDong New Area, Shanghai, 200120, China  
Tel: (86) 21-6023-0333 Fax: (86) 21-5037-2388

**Authorized Distributor:**

©OMRON Corporation 2014-2024 All Rights Reserved.  
In the interest of product improvement,  
specifications are subject to change without notice.

**CSM\_8\_4**

**Cat. No. P086-E1-13** 1224 (1014)