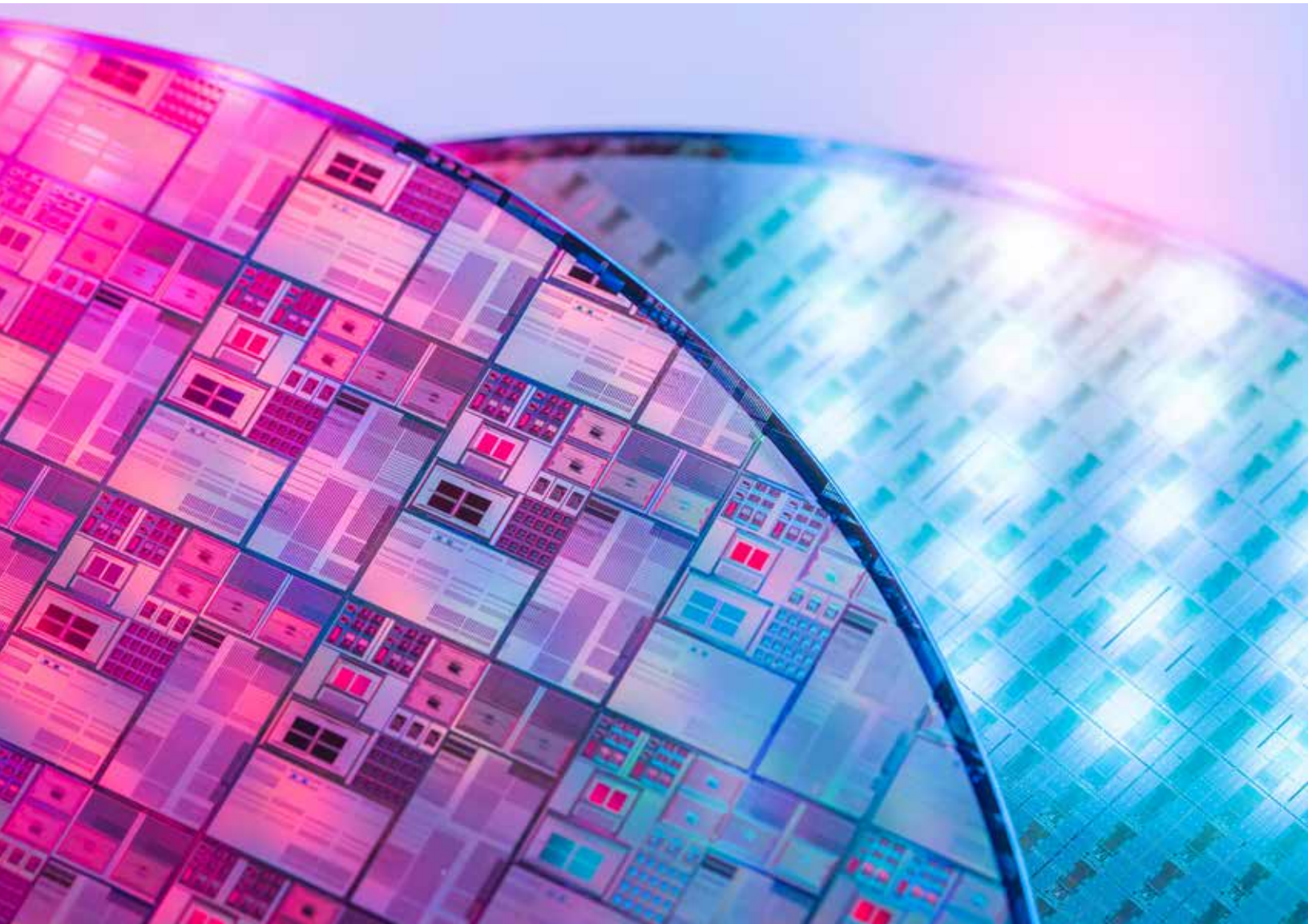


SECS/GEM compliant NJ Series products



- Ensure true interoperability across semiconductor and electronics manufacturing equipment
- Leverage Sysmac's One Controller, One Connection, and One Network for quicker installation
- Take advantage of solutions that require no middleware when paired with the NJ501-1340

What is SECS/GEM, and why is it important?

SECS is an acronym for “Semiconductor Equipment Communication Standard,” while GEM refers to the “Generic Model for Communications and Control of Manufacturing Equipment.” These standards define messages, state machines, and scenarios to enable factory software to control and monitor manufacturing equipment.

Manufacturers utilizing SEMI SECS/GEM standards can decrease manufacturing costs, increase reliability and productivity, and access global markets. Common applications within the semiconductor industry include:

- Packaging
- Test operations
- LED manufacturing
- Surface-mount technology (SMT)

OMRON SECS/GEM compliant NJ Series products achieve SECS-II communication within Sysmac Studio Software. OMRON SECS/GEM-compliant NJ Series products achieve SECS-II communication within the Sysmac One Controller, One Connection, One Software architecture. When paired with SECS/GEM Configurator Sysmac Studio software package, the NJ501-1340 controllers do not require middleware or a separate computer. Reducing installation time with quick SECS/GEM setting and removing SECS/GEM-compliant automation complexity.

NJ Series products go one step further by efficiently monitoring over SEC-II HSMS via Ethernet as well as controlling EtherCAT® motion and temperature monitoring within Sysmac Studio.

NJ501-1340 Compliant Standards

Standard Number	Standard Name
E37-0303	High-speed SECS Message Services (HSMS) Generic Services
E37.1-0702	High-speed SECS Message Services Single-session Mode (HSMS-SS or HSMS-SSS)
E5-0707	SEMI Equipment Communications Standard 2 Message Content (SECS-II)
E30-0307	Generic Model for Communications and Control of Manufacturing Equipment (GEM) ¹

1. E42 recipes, large process programs, and E139 recipes are not supported.

Suggested Part Number

Part Number	Motion Axes	Program Capacity	I/O Capacity	SECS/GEM Communication	Built-in network ports	Control cycle (EtherCAT® Refresh Speed)
NJ501-1340	16	20 MB	2,560 points/40 Units (3 Expansion Racks)	Yes	EtherCAT (x1) EtherNet/IP (x1)	0.5ms

Power Supply Units

One Power Supply Unit is required for each rack

Product Name	Power Supply Voltage	Output Current		Output capacity	Options			Model
		5-VDC output capacity	24-VDC output capacity	Total power consumption	24-VDC service power supply	RUN output	Maintenance forecast monitor	
AC Power Supply Unit	100 to 240 VAC	6.0 A	1.0 A	30 W	No	Yes	No	NJ-PA3001
DC Power Supply Unit	24 VDC							NJ-PD3001

NOTES:

Power supply units for the CJ-Series cannot be used as a power supply for a CPU rack of the NJ system or as a power supply for an expansion rack.

To ensure uninterrupted power supply, OMRON S8BA power supplies may be used.

SECS/GEM Configurator Software

Product Name	Specifications			Model
		Number of licenses	Media	
SECS/GEM Configurator Ver. 1.□□	The SECS/GEM Configurator is the software to make HSMS, SECSII and GEM settings for NJ501 SECS/GEM CPU Units. The Software is included in the Sysmac Studio Standard Edition DVD.	1 license	—	WS02-GCTL1

NOTE: Sysmac Studio Standard required to operate SECS/GEM Configurator license.

OMRON AUTOMATION AMERICAS HEADQUARTERS • Chicago, IL USA • 847.843.7900 • 800.556.6766 • automation.omron.com

OMRON CANADA, INC. • HEAD OFFICE

Toronto, ON, Canada • 416.286.6465 • 866.986.6766 • automation.omron.com

OMRON ELECTRONICS DE MEXICO • HEAD OFFICE

Ciudad de México • 52.55.5901.4300 • 01.800.386.6766 • mela@omron.com

OMRON ELECTRONICS DE MEXICO • SALES OFFICE

San Pedro Garza García, N.L. • 81.12.53.7392 • 01.800.386.6766 • mela@omron.com

OMRON ELECTRONICS DE MEXICO • SALES OFFICE

Eugenio Garza Sada, León, Gto • 01.800.386.6766 • mela@omron.com

OMRON ELETRÔNICA DO BRASIL LTDA • HEAD OFFICE

São Paulo, SP, Brasil • 55 11 5171-8920 • automation.omron.com

OMRON ARGENTINA • SALES OFFICE

Buenos Aires, Argentina • +54.11.4521.8630 • +54.11.4523.8483
mela@omron.com

OTHER OMRON LATIN AMERICA SALES

+54.11.4521.8630 • +54.11.4523.8483 • mela@omron.com

Authorized Distributor:

Controllers & 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 & Drives

- Machine Automation Controllers (MAC) • Motion Controllers • Servo Systems
- Frequency Inverters

Vision, Measurement & Identification

- Vision Sensors & 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 & Operator Controls • Safety Monitoring/Force-guided Relays

Control Components

- Power Supplies • Timers • Counters • Programmable Relays
- Digital Panel Meters • Monitoring Products

Switches & Relays

- Limit Switches • Pushbutton Switches • Electromechanical Relays
- Solid State Relays

Software

- Programming & Configuration • Runtime