

SYSMAC CS/CJ-series

Programmable Controllers

CS1W-FLN22 CS-series FL-net Unit

CJ1W-FLN22 CJ-series FL-net Unit

100Base-TX-compatible CS/CJ-series FL-net Unit Easily Enables High-speed Communications with Multi-vendor Controllers

Compact, 90-mm-high, CJ-series PLCs function as interfaces with computerized numeric controllers (CNCs), robots, and non-OMRON PLCs, contributing to smaller panels.

Functions as Interface with Various Networks

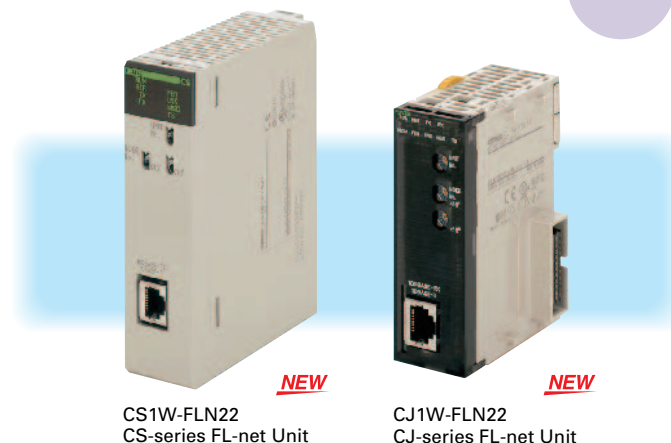
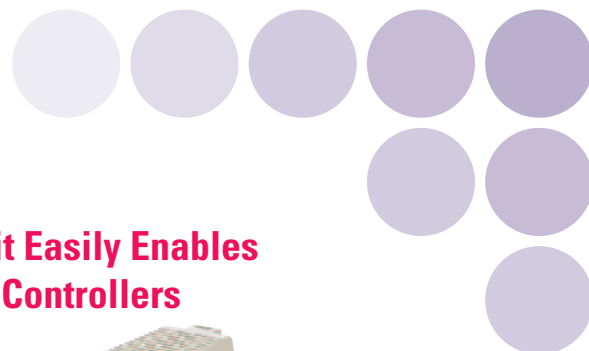
The CS/CJ Series is compatible with upper-layer Ethernet, OMRON's PLC Controller Link communications protocol, and DeviceNet fieldbus systems, enabling interfacing with each of these networks.

Supports Baud Rate of 100 Mbps

A baud rate of 100 Mbps is supported. The baud rate can be automatically selected or a fixed baud rate of 10 Mbps can be set.

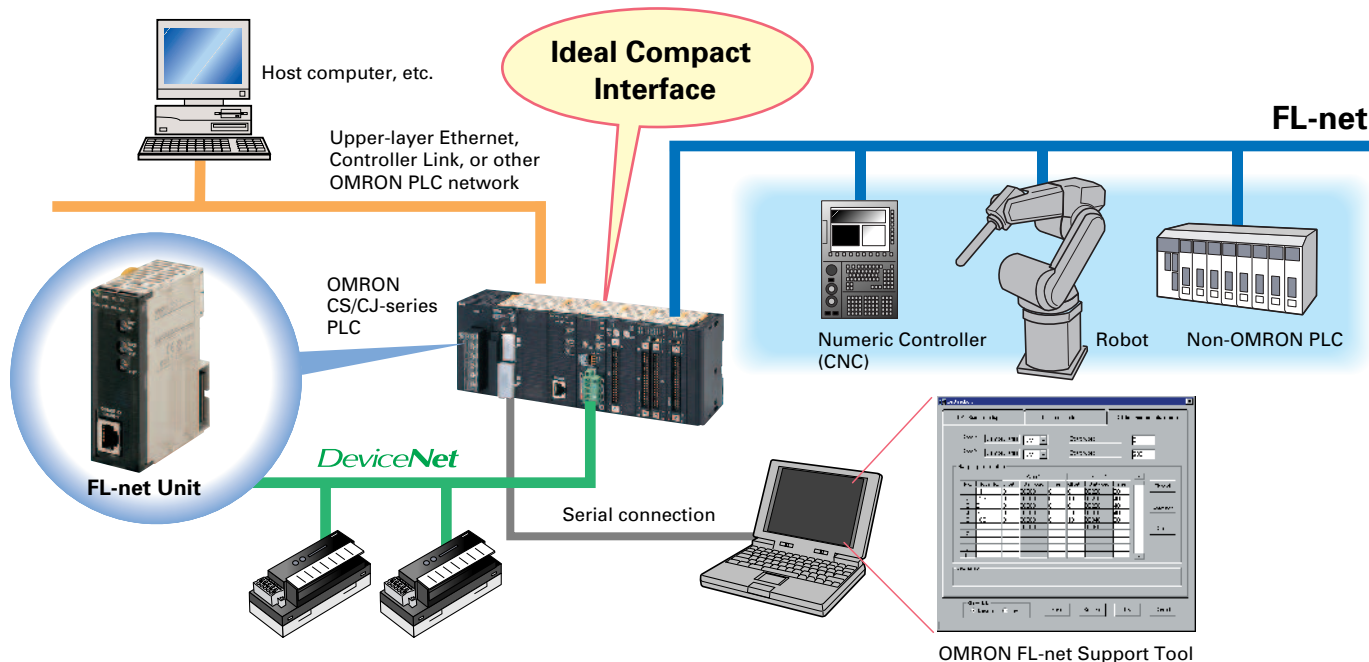
Specify the Order of Data Link Data

The order of link data bytes can be specified for each node according to the needs of the connected device, eliminating the need for upper/lower byte conversion (SWAP) processing in the ladder program.



Supports Simple Backup Function

The setting data (such as the FA Link table) stored in the FL-net Unit can be backed up to the Memory Card in the CPU Unit, making Unit replacement easy.



What is FL-net?

FL-net is an open FA network that was standardized by the Special Committee for Network Promotion organized by the Japan Electrical Manufacturer's Association (JEMA). FL-net is based on Ethernet and enables interconnection of programmable controllers (PLCs) and other FA devices by different manufacturers. FL-net has the following features.

● Ethernet-based FA network.

- Defines a new Ethernet-based FA Link protocol.
- Uses Ethernet's standard UDP/IP communications protocol.
- Cables, hubs, and other networking components are readily available.

● Supports cyclic and message transmissions.

- Interlocks between devices, production instructions, and production results collection can all be implemented on the same network.

● Uses token passing without a master.

- Prevents data collision and ensures transmission within a fixed period of time.
- Nodes can be automatically added to or removed from the network.
- Communications are maintained between all nodes that are capable of communicating even if a power interruption occurs, or a fault occurs in network devices or cables.

■ FL-net Unit Specifications

Model number		CS1W-FLN22	CJ1W-FLN22
Type		100Base-TX (10Base-T is also possible.)	
Applicable PLCs		CS-series PLCs	CJ-series PLCs
Unit classification		CPU Bus Unit	
Mounting location		CPU Rack or Expansion Rack	
Number of Units that can be mounted		4 max. (including Expansion Racks)	
Transfer specifications		Media access method	CSMA/CD
		CSMA/CD	Baseband
		Transmission paths	Star
		Baud rate	100 Mbps (100Base-TX) 10 Mbps (10Base-T)
		Transmission media	Unshielded twisted-pair (UTP) cable Categories: 5, 5e Shielded twisted-pair (UTP) cable Categories: 100 Ω at 5, 5e
		Transmission distance	100 m (distance between hub and node)
		Number of cascade connections	2 4
Communications	Cyclic transmission	•Data link capacity: 8 KB max (512 words) + 8,192 words •Maximum size per node: 8 KB max (512 words) + 8,192 words (Note: Earlier CJ1W-FLN01/02/12 versions were restricted to a maximum of 7,677 words.) •Maximum number of data links: 128 •The byte order for data transfer between the Common Memory and CPU Unit's Data Link Area can be selected for each node, according to the needs of the data link-compatible device. (Note: Earlier CJ1W-FLN01/02/12 versions supported a specifying only the order of data allocated data between the Common Memory and Data Link Area, but the direction can now be reversed.)	
	Message communications	Supported messages (client function): Read word block, write word block, send transparent message frame (send/read), vendor message (FINS message)Supported instructions: SEND(090)/RECV(098)/CMND(490) (executes sends between OMRON PLCs) or CMND(490) (executes sends between OMRON and non-OMRON PLCs)	

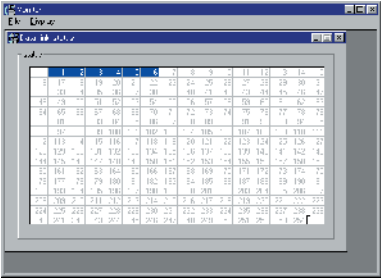
FL-net Support Tool (Ver. 1.60 or higher) is required to make the FL-net settings. Contact your OMRON sales representative for details on purchasing FL-net Support Tool.

■ FL-net Support Tool Specifications

OS	Windows XP, 2000, NT 4.0, Me, 98, or 95
Connection to PLC	Serial connection to CPU Unit's peripheral port or RS-232C port (serial communications mode: Peripheral Bus) Connection cables for IBM PC/AT or compatible: Peripheral port: CS1W-CN226/626 RS-232C port: XW2Z-200S/500S-CV
Function	FL-net Unit initial settings, data link settings, monitor function (Unit status, network status, node status, data link status, participating node status, message sequence status, FA Link network status) With version 1.6 or higher, FL-net Unit settings of other nodes on the FL-net can be made and monitoring of FL-net Units can be performed.

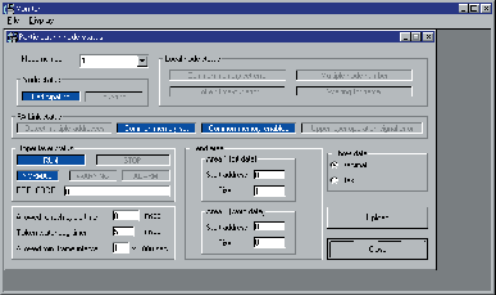
Data Link Status

Displays the data link status of other nodes participating in the FL-net network.



Participating node status

Displays the status of other nodes participating in the FL-net network.



■ Ordering Information

Unit name	Applicable PLC Series	Model number
FL-net Unit	CS Series	CS1W-FLN22
	CJ Series	CJ1W-FLN22

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

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