

## Reduce the Work Required to Create Data Communications Protocols for General-purpose Devices

- Application software to create protocols (communications sequences) between SYSMAC CS/CJ/CP/NSJ-series or C200HX/HG/HE Serial Communications Boards/Units and general-purpose external devices.

**Note:** The CX-Protocol is included in the CX-One FA Integrated Tool Package.



## Feature

---

- Create protocols for general-purpose devices connected to PLC Boards or Units via RS-232C or RS-485A/422.
- Transfer the protocols to PLC Boards and Units.
- Repeat steps or branch/end steps according to response contents.

## Ordering Information

Product name	Specifications	Specifications		Model
		Number of Licenses	Media	
<b>FA Integrated Tool Package CX-One Ver.4.</b> □	<p>The CX-One is a package that integrates the Support Software for OMRON PLCs and components.</p> <p>Windows XP (Service Pack 3 or higher, 32-bit version) / Windows Vista (32-bit/64-bit version) / Windows 7 (32-bit/64-bit version) / Windows 8 (32-bit/64-bit version) / Windows 8.1 (32-bit/64-bit version) / Windows 10 (32-bit/64-bit version)</p> <p>CX-One Ver.4.□ includes CX-Protocol Ver.1.□. For details, refer to the CX-One Catalog (Cat.No.R134).</p>	1 license *	DVD	<b>CXONE-AL01D-V4</b>

\* Multi licenses (3, 10, 30, or 50 licenses) and DVD media without licenses are also available for the CX-One.

## Product Configuration

Setup disk : (DVD) DVD 1 piece in the case  
 Guidance : A4 size, English / Japanese  
 Product Registration Guide, Japanese  
 User license agreement / User registration card, English / Japanese

## Main Function

Category	Function
<b>Create/edit protocol</b>	Creates/Edits protocol data
<b>Transfer protocol</b>	Transfer protocol data
	Compare protocol data
<b>Communication port</b>	Edits communication port setting data for serial communication unit/board
	Transfer/verify communication port setting data for serial communication unit/board
<b>Trace</b>	Displays data that was sent or received on a communications port.
<b>Display Error</b>	Displays current errors in the PLC or displays the error log.
<b>Print</b>	Prints protocol data/trace data
<b>Monitor I/O memory</b>	Display I/O memory
	Edit I/O memory
	Monitor I/O memory
	Transfer/verify I/O memory data
<b>Supported communications control methods</b>	Transmission mode: Half-duplex or full-duplex
	Synchronization mode: Start-stop synchronization
	Transmission control method: Contention mode (point-to-point connections) Polling selecting mode (Point-to-multi-point connections) Modem control mode
	Flow control mode: Software flow: Xon/Xoff flow control Hardware flow: RTS/CTS flow control Delimiter control
	Transmission error control modes: LRC, LRC2,*1 CRC-CCITT, CRC-16*1, *2, SUM,*1, *2 SUM1,*1 SUM2*1, *2
	Message format: Header + Address + Length + Data + Error Check Code + Terminator, Header + Address + Length + Data + Terminator + Error Check Code,*1, *2 etc.

\*1. Only CS/CJ series are supported.

\*2. Only C200HW-COM□□ is supported.

## System Requirements

The system requirements are the same as those for the CX-One. (The CX-Protocol is included in the CX-One.)  
For details, refer to the FA Integrated Tool Package CX-One Datasheet.

## Applicable Units

The CX-Protocol can be used for Serial Communications Units that support protocol macros.

## Applicable Models

### PLC

Series	Unit
CS	CS1H-CPU63/64/65/66/67 (-V1) CS1G-CPU42/43/44/45 (-V1) CS1H-CPU63H/64H/65H/66H/67H CS1G-CPU42H/43H/44H/45H CS1D-CPU65H/67H/67HA/68HA CS1D-CPU42S/44S/65S/67S/44SA/67SA
CJ	CJ1M-CPU11/12/13/21/22/23 CJ1G-CPU44/45 CJ1H-CPU65H/66H/67H/64H-R/65H-R/66H-R/67H-R CJ1G-CPU42H/43H/44H/45H CJ2H-CPU64-EIP/65-EIP/66-EIP/67-EIP/68-EIP CJ2H-CPU64/65/66/67/68 CJ2M-CPU11/12/13/14/15/31/32/33/34/35
CP	CP1H-XA40DR-A/XA40DT-D/XA40DT1-D /X40DR-A/X40DT-D/X40DT1-D /Y20DT-D
NSJ	NSJ5-□-G5D NSJ8-□-G5D NSJ10-□-G5D NSJ12-□-G5D NSJ5-□-M3D NSJ8-□-M3D
SYSMAC $\alpha$	C200HX-CPU34/44/54/64 C200HG-CPU33/43/53/63 C200HE-CPU32/42 C200HX-CPU34-Z/CPU44-Z/CPU54-Z/CPU64-Z/CPU65-Z/CPU85-Z C200HG-CPU33-Z/CPU43-Z/CPU53-Z/CPU63-Z C200HE-CPU32-Z/CPU42-Z
CQM1H	CQM1H-CPU11/21/51/61

### Communication Boards/Units

Series	Serial Communication I/O Unit
CS	CS1W-SCU21(-V1)/SCU31-V1/SCB21(-V1)/SCB41(-V1)
CJ	CJ1W-SCU21(-V1)/SCU31-V1/SCU41(-V1)
SYSMAC $\alpha$	C200HW-COM04(-V1)/COM05(-V1)/COM06(-V1)
CQM1H	CQM1H-SCB41

**Note:** Including models whose production were discontinued.

## Related Manuals

Cat.No.	Model	Manual name	Contents
W344	CXONE-AL□□D-V4	CX-Protocol Operation Manual	Describes the use of the CX-Protocol to create protocol macros as communications sequences to communicate with external devices. Refer to this manual when using the CX-Protocol to create protocol macros for user serial communications or when customizing standard system protocol macros.
W469	CXONE-AL□□D-V4	CX-One Set up Manual	Installation and overview of CX-One FA Integrated Tool Package

## 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.