

# CONTROLLER LINK



## HIGH SPEED CONTROL AND DATA COMMUNICATIONS AT 1/3 THE COST!

Introducing **Controller Link**, Omron's new low-cost peer-to-peer control network for C200HE/G/X and CV Series PLCs that provides the speed and data communications flexibility you need with the low per-node-cost you demand. **Controller Link** lets you upload and download programs and exchange time critical information between up to 32 Omron PLCs and supervisory or enterprise computers on the same high-speed network at a fraction of the cost of other network systems.

### Easy, Cost-effective Wiring with Twisted-Pair Cable

Controller Link networks are easily wired and maintained using a low-cost, high-reliability twisted pair cable instead of higher cost fiber-optic cable or coax. In addition, the PLC interface module and computer boards (ISA bus) feature built-in, switch selectable termination resistance, and have been dramatically reduced in price to offer the best value in factory automation networks available today.

### Messaging Service for High-Volume Data Transmission

Controller Link networks support high-volume data transfer quickly and easily with up to 2K bytes per message (including the FINS header), increasing throughput speed while reducing network traffic. This lets you transfer programs, recipes, control and production data more efficiently.

### Flexible Data Links for More Efficient Information Exchange

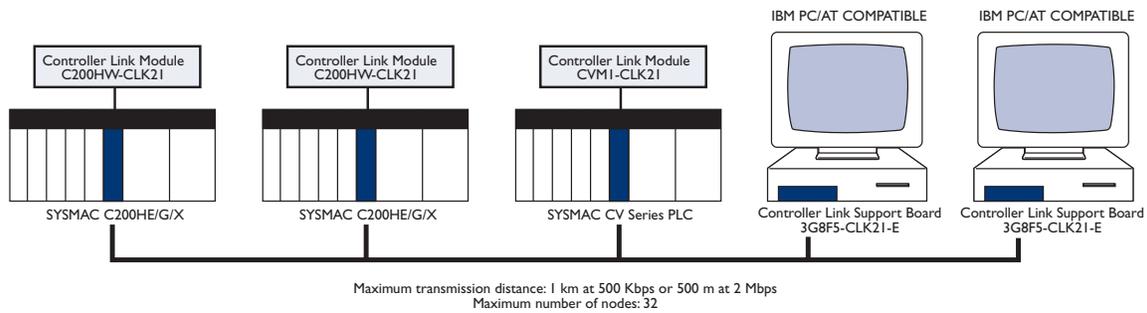
For added control management flexibility, Controller Link lets you specify data link parameters to meet your application needs. You can let the system automatically set the data link areas for you or specify them yourself with Omron's Controller Link Setup Software.

### Easy Connection to Other Omron Communication Networks

A Controller Link network may be integrated with other Controller Link networks or other Omron networks by connecting the masters on a single Omron CV Series PLC. Up to three network levels of routing are possible.

### Excellent Reliability and Improved Error Handling

Controller Link offer excellent reliability with features such as built-in self diagnostics, watchdog timer, polling node backup function and detailed error logging. The error log automatically records time and error details for later review. Should an error occur in the polling node, another node automatically assumes the polling node role to maintain system communication and overall reliability.



## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
C200HW-CLK21	C200HE/G/X Controller Link Module
CVM1-CLK21	CV-Series Controller Link Module
3G8F5-CLK21	Controller Link Support Board (ISA board w/ software support)
C200HW-ZW3AT2-E	Controller Link Support Software (for IBM PC/AT or compatible)
W309-E1-I	Operations manual for Controller Link PLC Module
W307-E1-I	Operations Manual for Controller Link Support Board (ISA board)
W308-E1-I	Operations Manual for Controller Link Support Software

## COMMUNICATIONS SPECIFICATIONS

ITEM	SPECIFICATION
Communication method	N : N token bus
Transmission method	Manchester encoding, baseband
Synchronization method	Flags (conforms to HDLC frames)
Transmission path type	Multi-drop (bus)
Baud rate and max. transmission distance	2 Mbps: 500 m 1 Mbps: 800 m 500 Kbps: 1 km
Transmission path	Specified shielded twisted-pair cable (two signal lines and one shield)
Node connection	PLCs: Terminal block Computers: Special connector (provided)
Max. number of nodes	32
Communications functions	Data links, message service
Data link capacity	Send words per node: 1,000 max.  Data link words (send/receive) per PLC (C200HX/HG/E or CV series PLC): 8,200 max Data link words (send/receive) per computer node (IBM PC/AT or compatible): 32,000 max Total data link words per network: 32,000 max.
Data link areas	Bit areas (IR,CIO,AR,SR,LR) Data memory (DM) and expansion data memory
Message length	2,012 bytes, max (including header)
RAS functions	Polling unit backup Self diagnostics (hardware check at startup) Internode test, broadcast test (via FINS command) Watchdog timer Error log
Error control	Manchester sign check CRC check

**OMRON®**

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