

Standard Tricon System Products

Description	Model No.	See
Chassis Assemblies		
Main Chassis, High-Density Configuration, includes the Tricon printed manuals	8110	page 13, page 29
Expansion Chassis, High-Density Configuration	8111	page 13, page 29
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Remote Expansion Chassis, High-Density Configuration	8112	page 13, page 29
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Power Modules		
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24 VDC – 175-Watt Power Module	8311	page 32
230 VAC – 175-Watt Power Module	8312	page 32
Main Processor Modules		
3008 Main Processor, 16 megabytes DRAM	3008	page 33
Communication Hardware and Software		
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Safety Manager Module (SMM), Honeywell UCN Interface	4409	page 36
Network Communication Module (NCM), Ethernet (802.3) ports	4329, 4329G	page 37
Advanced Communication Module (ACM), Foxboro I/A Series Nodebus Interface	4609	page 38
Hiway Interface Module (HIM), Honeywell Data Hiway Interface	4509	page 39
Triconex DDE Server Software	Contact Invensys	page 69
Network Accessory Kit (Ethernet thin cable, connectors and terminators)	7600-3	n/a
Remote Extender Modules		
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Interface Modules		
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HART Analog Output Interface Module with 2071H HART Multiplexer	2870H	page 54
HART Multiplexer	2071H	page 54
TriStation 1131 and Diagnostic Software		
TriStation 1131 v4.x Software License with printed manuals	Contact Invensys	page 71
Enhanced Diagnostic Monitor v2.x	Contact Invensys	page 72

Enhanced Intelligent Communication Module

The Model 4119A Enhanced Intelligent Communication Module (EICM) allows the Tricon controller to communicate with Modbus masters and slaves, the TriStation 1131 software, and printers.

For Modbus connections, the EICM user can select the RS-232 point-to-point interface for one master and one slave, or the RS-485 interface for one master and up to 32 slaves. The RS-485 network trunk can be one or two twisted-pair wires up to a maximum of 4,000 feet (1,200 meters).

Each EICM contains four serial ports and one parallel port which can operate concurrently. Each serial port can be configured as a Modbus master with up to seven Modbus masters per Tricon chassis. A single Tricon system supports a maximum of two EICMs, which must reside in one logical slot. (The hot-spare feature is not available for the EICM, though you can replace a faulty EICM while the controller is online.) Each serial port is uniquely addressed and supports either the

Modbus or TriStation interface. Modbus communication can be performed in either RTU or ASCII mode. The parallel port provides a Centronics interface to a printer.

Each EICM supports an aggregate data rate of 57.6 kilobits per second (for all four serial ports).

Programs for the Tricon controller use variable names as identifiers but Modbus devices use numeric addresses called *aliases*. Therefore an alias must be assigned to each Tricon variable name that will be read by or written to a Modbus device. An alias is a five-digit number which represents the Modbus message type and the address of the variable in the Tricon controller. An alias number is assigned in the TriStation 1131 software.

Any standard Modbus device can communicate with the Tricon controller through the EICM, provided that aliases are assigned to the Tricon variables. Alias numbers must also be used when host computers access the Tricon controller through other communication modules, such as the NCM. See “Communication Capabilities” on page 67 for more information.

EICM Specifications

Model Number	4119A, Isolated
Serial ports	4 ports RS-232, RS-422 or RS-485
Parallel ports	1, Centronics, isolated
Port isolation	500 VDC
Protocol	TriStation, Modbus
Modbus functions supported	01 — Read Coil Status 02 — Read Input Status 03 — Read Holding Registers 04 — Read Input Registers 05 — Modify Coil Status 06 — Modify Register Content 07 — Read Exception Status 08 — Loopback Diagnostic Test 15 — Force Multiple Coils 16 — Preset Multiple Registers
Communication speed	1200, 2400, 9600, or 19,200 Baud
Diagnostic Indicators	Pass, FaULT, Active TX (Transmit) — 1 per port RX (Receive) — 1 per port

