Enhanced Intelligent Communication Module

The Model 4119A Enhanced Intelligent Communication Module (EICM) allows the Tricon to communicate with Modbus masters and slaves, TriStation 1131, 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 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. An alias number is assigned in TriStation 1131.

Any standard Modbus device can communicate with the Tricon through the EICM, provided that aliases are assigned to the Tricon variables. Alias numbers must also be used when host computers access the Tricon through other communication modules, such as the NCM. See 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