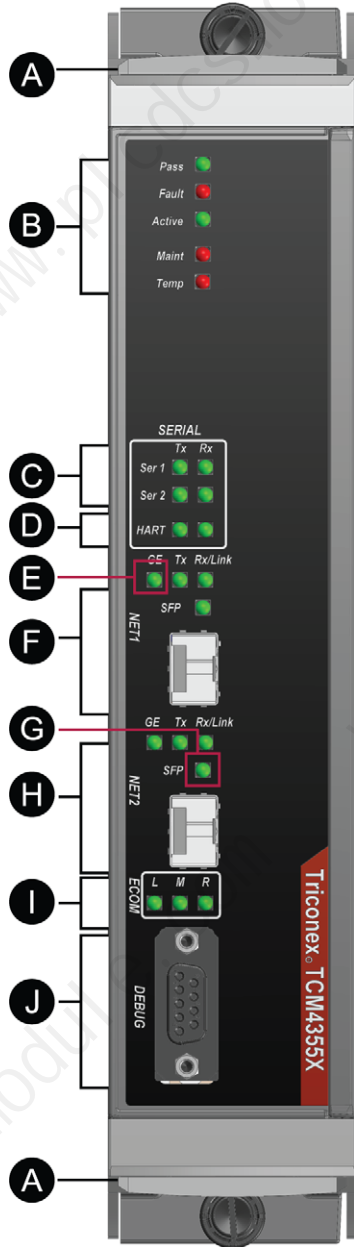


## 4355X Tricon CX Communication Module (TCM)

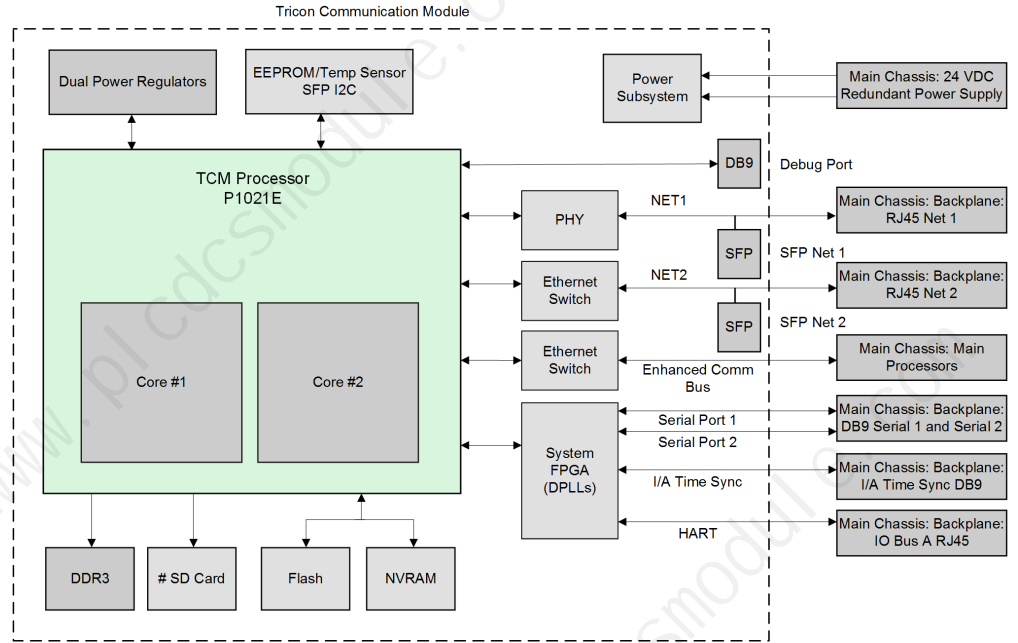
The Model 4355X Tricon CX Communication Module can be used in Model 8120X Main Chassis.

**Figure 7 - Model 4355X TCM Front Panel**



A	Module Ejectors	F	NET 1 Status and SFP Port
B	Module Status	G	Small Form Factor Pluggable (SFP) is installed
C	Serial Ports Status	H	NET 2 Status and SFP Port
D	HART LEDs	I	Enhanced Communication Bus Status
E	Gigabit Ethernet Link	J	Debug port for Schneider Electric use

### 4355X TCM Architecture



## 4355X TCM Specifications

**Table 18 - TCM 4355X Specifications**

Feature	Specification	
Serial ports	2, galvanically isolated RS-232/RS-485 interfaces, DB-9 connectors	
For diagread diagnostic analysis	1, galvanically isolated RS-232 interface, 9-pin connector	
Speed	Up to 115.2 Kbps per port, aggregate data rate of 230.4 Kbps	
Port isolation	500 VDC	
Communication module network interfaces: <sup>(a)</sup>		
Protocol	2, 100Base-TX/1000Base-T Ethernet (Copper Networks) 2, 1000Base-X/100Base-FX (SFP interface)	
Communication protocols	TriStation, Modbus Client, Modbus Server, Modbus TCP/IP, TSAA (with support for IP Multicast), Peer-to-Peer, Triconex Time Synchronization, External HART DTM, HART-IP, SNTP, and Jet Direct (network printing)	
Modbus functions supported	01—Read Coil Status	06—Modify Register Content
	02—Read Input Status	07—Read Exception Status
	03—Read Holding Registers	08—Loopback Diagnostic Test
	04—Read Input Registers	15—Force Multiple Coils
	05—Modify Coil Status	16—Preset Multiple Registers
Status indicators:		
Module status	Pass, Fault, Active, Maint, Temp	
Serial port activity <sup>(b)</sup>	Tx (Transmit)—1 per port	
	Rx (Receive)—1 per port	
Network port activity	GE (Gigabit Ethernet)—1 per network port	
	Tx (Transmit)—1 per network port	
	Rx\Link—1 per network port	
	SFP—1 per network port	
ECOM bus activity	L, M, R	
HART	HART v7 compatible HART pass through: Name string "Triconex TCM 4355X", device type code 0x1416	

**Table 18 - TCM 4355X Specifications (Continued)**

Feature	Specification
Logic power	<19 watts

(a) Copper and fiber communication ports cannot be used at the same time.

(b) The Rx status indicators will blink on all TCMs if there is any HART communication. If HART is enabled on both TCMs in a logical slot, the Tx status indicators on both TCMs will periodically blink.

## Protocols and Standards Supported on the 4355X TCM

**Table 19 - TCM Protocols/Standards**

Protocol or Standard	Network Ports	Serial Ports
TriStation <sup>(a)</sup>	NET 1, NET 2	Port 2
TriStation via Secure Sockets Layer (SSL) <sup>(b)</sup>	NET 1, NET 2	Port 2
TSAA (UDP/IP)	NET 1, NET 2	— <sup>(c)</sup>
TSAA with IP Multicast (UDP/IP)	NET 1, NET 2	—
Peer-to-Peer (UDP/IP)	NET 1, NET 2	—
Embedded OPC Server (OPC Data Access and OPC Alarms and Events)	—	—
Modbus Server (ASCII or RTU)	—	Any port
Modbus Client (RTU)	—	Any port
Modbus Client or Server (TCP)	NET 1, NET 2	—
Triconex Time Synchronization via DLC	NET 1	—
Triconex Time Synchronization via UDP/IP	NET 1, NET 2	—
SNTP Triconex Time Synchronization	NET 1, NET 2	—
Network Printing using Jet Direct	NET 1, NET 2	—
External HART DTM	NET 1, NET 2	—

(a) The TCM allows three simultaneous connections to NET 1 and NET 2. For example, it is possible to have two connections to NET 1 and one connection to NET 2.

(b) See the *TriStation 1131 Developer's Guide* for detailed guidelines on secure communication.

(c) — means the protocol or standard is not supported on these ports.

HART protocols can be enabled only for a TCM installed in the Left COM1 slot (COM1-L).

A TCM with HART enabled supports a maximum of two HART-IP client connections and one device type manager (DTM) connection.

When developing a TSAA program, limit the length of frames to 1996 bytes. If the amount of data in a single message is more than 1996 bytes but less than 2000 bytes, a response code 8, Message was too big, is returned. If the amount of data in a single message exceeds 2000 bytes, the message is dropped silently—no response code is sent.

## Network Interface Media with the 4355X TCM

Network ports (NET 1 and NET 2) on the Model 4355X TCM are 100BASE-TX and 1000BASE-T (copper) or 100BASE-FX and 1000BASE-X (fiber) connectors. However, the ports support fiber optic media by use of small form factor pluggables (SFPs). For information about configuring TCM network ports, see the *TriStation 1131 Developer's Guide*.

Note that you must separately purchase SFPs. For more information about SFP requirements, see *Small Form-Factor Pluggable (SFP) Requirements*, page 19. For a list of tested and validated SFPs, see *Application Note 48, Triconex Safety System Boundary*, which is available on the Global Customer Support (GCS) center website at <https://pasupport.schneider-electric.com> (registration required).