

slot. Each Tricon system supports a total of sixteen Modbus masters or slaves — this total includes network and serial ports. The hot-spare feature is not available for the TCM, though you can replace a faulty TCM while the controller is online.

This table describes TCM model and Tricon system version compatibility.

**Table 65 TCM Model and Tricon System Version Compatibility**

Tricon System Version	Compatible TCM Models
10.0	4351, 4352
10.1–10.2	4351A, 4352A
10.3 or later	4351B, 4352B, 4353, 4354

For additional information, see the *Communication Guide for Tricon v9–v10 Systems* and [Replacing TCMs on page 230](#).

## TCM Specifications

This table lists specifications for TCM models 4351, 4351A, 4351B, 4352, 4352A, 4352B, 4353, and 4354.

### CAUTION

Different TCM models cannot be mixed in the same logical slot. Additionally, models 4351A, 4351B, 4352A, 4352B, 4353, and 4354 TCMs cannot be installed into a system with 4351 or 4352 TCMs, even if they are installed in different chassis.

**Table 66 TCM Specifications**

Feature	Description										
Serial ports	4, RS-232/RS-485 ports, DB-9 connectors										
Network ports	2, 10/100BaseT Ethernet ports, RJ-45 connectors (models 4351, 4351A, 4351B, and 4353) 2, fiber-optic mode Ethernet ports, MT-RJ connectors with 62.5/125 um fiber cables (models 4352, 4352A, 4352B, and 4354)										
Port isolation	500 VDC										
Communication protocols	TriStation, Embedded OPC Server (models 4353 and 4354), Modbus, Modbus TCP, TCP/IP, SNTP, TSAA (with support for IP Multicast), Trimble GPS, Peer-to-Peer, Triconex Time Synchronization, Jet Direct (network printing)										
Modbus functions supported	<table> <tr> <td>01 — Read Coil Status</td><td>06 — Modify Register Content</td></tr> <tr> <td>02 — Read Input Status</td><td>07 — Read Exception Status</td></tr> <tr> <td>03 — Read Holding Registers</td><td>08 — Loopback Diagnostic Test</td></tr> <tr> <td>04 — Read Input Registers</td><td>15 — Force Multiple Coils</td></tr> <tr> <td>05 — Modify Coil Status</td><td>16 — Preset Multiple Registers</td></tr> </table>	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
01 — Read Coil Status	06 — Modify Register Content										
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03 — Read Holding Registers	08 — Loopback Diagnostic Test										
04 — Read Input Registers	15 — Force Multiple Coils										
05 — Modify Coil Status	16 — Preset Multiple Registers										

**Table 66** TCM Specifications *(continued)*

Feature	Description
Communication speed	Copper Ethernet ports: 10/100 Mbps (model 4353 only supports 100 Mbps connections) Fiber Ethernet ports: 100 Mbps Serial ports: up to 115.2 Kbps per port, aggregate data rate of 460.8 Kbps for all four ports
Status indicators	PASS, FAULT, ACTIVE, FIRM LINK – 1 per network port TX (Transmit) – 1 per port RX (Receive) – 1 per port
Logic power	< 10 watts

This table lists the protocols and standards supported on TCM ports for models 4351, 4351A, 4351B, 4352, 4352A, 4352B, 4353, and 4354.

**Table 67** TCM Protocols/Standards

Protocol or Standard	Network Ports (Models 4351 and 4352)	Network Ports (Models 4351A, 4351B, 4352A, and 4352B)	Network Ports (Models 4353 and 4354)	Serial Ports (All Models)
TriStation	NET 2	NET 1, NET 2	NET 1, NET 2	Port 4
TSAA (UDP/IP)	NET 2	NET 1, NET 2	NET 1	—
TSAA with IP Multicast (UDP/IP)	— <sup>1</sup>	NET 1, NET 2 (models 4351B and 4352B)	NET 1	—
Peer-to-Peer (UDP/IP)	NET 1	NET 1, NET 2	NET 1	—
Peer-to-Peer (DLC)	NET 1	NET 1	NET 1	—
Embedded OPC Server (OPC Data Access and OPC Alarms and Events)	—	—	NET 2	—
Modbus Slave (ASCII or RTU)	—	—	—	Any port
Modbus Master (RTU)	—	—	—	Any port
Modbus Master or Slave (TCP)	NET 2	NET 1, NET 2	NET 1	—
GPS Time Synchronization	—	—	—	Port 1
Triconex Time Synchronization via DLC	NET 1	NET 1	NET 1	—
Triconex Time Synchronization via UDP/IP	NET 1	NET 1, NET 2	NET 1	—

**Table 67** TCM Protocols/Standards (*continued*)

Protocol or Standard	Network Ports (Models 4351 and 4352)	Network Ports (Models 4351A, 4351B, 4352A, and 4352B)	Network Ports (Models 4353 and 4354)	Serial Ports (All Models)
SNTP Triconex Time Synchronization	NET 2	NET 1, NET 2	NET 1, NET 2	—
Network Printing using Jet Direct	NET 2	NET 1, NET 2	NET 1	—

1. — means the protocol or standard is not supported on these ports.

## Fiber-Optic Cables

If you are installing a TCM with fiber connectors (model 4352, 4352A, 4352B, or 4354), you will need to provide your own fiber-optic cables. You cannot purchase fiber-optic cables from Triconex.

The fiber cable you purchase should have these qualities:

- be a multimode 62.5/125 um cable
- have a maximum length of 1.24 miles (2 kilometers)
- comply with ANSI/TIA/EIA-568-B.3 standards