

4329

Network Communication Module

Triconex 4329 is a Network Communication Module for Tricon controllers. It provides dual-port Ethernet connectivity for peer, time-synchronization, and host-system data exchange.

PRODUCT SNAPSHOT

BRAND

Triconex

FAMILY

Tricon Ethernet communication

PART

4329

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PRODUCT OVERVIEW

Triconex 4329 is a Network Communication Module for Tricon controllers. It provides dual-port Ethernet connectivity for peer, time-synchronization, and host-system data exchange.

1 Connects Tricon controllers and external hosts over 10 Mbit/s IEEE 802.3 Ethernet

2 Separates safety-network peer traffic on NET 1 from host applications on NET 2

3 Carries TSAA data for TriStation, SOE, OPC, DDE, and user applications

4 Supports time synchronization among interconnected Tricon systems

SYSTEM COMPONENTS

Tricon logical communication slot

RG58 50-ohm thin Ethernet segment

TSAA-capable host application

peer Tricon controllers or time master

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Triconex 4119A	Enhanced Intelligent Communication Module	Open product page
Triconex 4210	Remote Extender Module Set	Open product page
Triconex 3008	Main Processor Module	Open product page

TECHNICAL DATA

PARAMETER	VALUE
Module models	4329; 4329G
Ethernet standard	IEEE 802.3
Ethernet speed	10 Mbit/s
BNC Ethernet ports	2
Thin coaxial cable	RG58; 50 Ohm
External transceiver ports	2 x 15-pin D
Serial port	1 x RS-232 compatible
Port isolation	500 VDC

PARAMETER	VALUE
Protocol	TSAA over TCP/UDP/IP/802.3
Typical RG58 distance	607 ft (185 m)
Extended distance	2.5 mi (4000 m) with repeaters and standard cable
Modules per logical slot	2 independent NCMS
NET 1 function	Peer-to-Peer and Time Synchronization
NET 2 function	TriStation, SOE, OPC, DDE, and host applications
Indicators	PASS; FAULT; ACTIVE; TX/RX per port

TECHNICAL NOTE

Identify NET 1 and NET 2 services, save alias and host settings, verify coax termination and segment length, then restore communication while monitoring port-specific TX/RX status.

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Tricon peer-to-peer safety data network

Connects Tricon controllers and external hosts over 10 Mbit/s IEEE 802.3 Ethernet

TriStation and SOE host connectivity

Separates safety-network peer traffic on NET 1 from host applications on NET 2

OPC or DDE process-data integration

Carries TSAA data for TriStation, SOE, OPC, DDE, and user applications

Multi-controller time synchronization

Supports time synchronization among interconnected Tricon systems

PRODUCT PRECAUTIONS

- 1 Verify 4329 and its logical-slot assignment before disconnecting the network.
- 2 Label NET 1, NET 2, both BNC connectors, and any external transceiver cables.
- 3 Maintain RG58 50-ohm cabling and the approved coaxial termination topology.
- 4 Preserve the distinction between peer/time traffic on NET 1 and host traffic on NET 2.
- 5 Export TSAA host addresses, aliases, and synchronization settings before replacement.
- 6 Treat two NCMs in one logical slot as independent modules, not a hot-spare pair.
- 7 Check PASS, FAULT, ACTIVE, and each TX/RX indicator after link restoration.
- 8 Verify peer data, controller time, and each external host application before release.

ENGINEER FAQ

Q1 Can 4329 be substituted for a similar Triconex model without a configuration review?

No. Confirm the exact model, companion hardware, signal execution, system version, and approved configuration before any substitution.

Q2 What evidence should be retained after independent dual-NCM installation testing on 4329?

Retain the full 4329 identity, as-left connections or settings, final diagnostics, measured functional-test result, and authorization to return the affected process function to service.

Q3 Which installed hardware must be matched before fitting 4329?

Match 4329 to Tricon logical communication slot and RG58 50-ohm thin Ethernet segment, then confirm the complete physical marking and assigned Tricon Ethernet communication position.

Q4 How should an engineer verify NET 1 versus NET 2 service separation for 4329?

Use the approved connection drawing and the model-specific values in Tricon Systems Technical Product Guide; preserve the as-found terminal, connector, polarity, shield, and channel identity.

Q5 What check is required for RG58 50-ohm segment verification when commissioning 4329?

Apply a controlled signal or command within the documented range and compare the field result, controller indication, and product diagnostics before normal operation.

Q6 Which installation error is most important to prevent on 4329?

Do not interchange 4329 with an adjacent execution or alter its matched Tricon logical communication slot; the exact electrical, channel, and connector arrangement must be retained.

Q7 How is TSAA host and alias mapping handled during a 4329 replacement?

Record the installed state first, isolate the associated process function, reproduce only the approved model-specific arrangement, and verify it before energization.

Q8 Which diagnostics should be reviewed after installing 4329?

Review the applicable point, module, power, communication, or load indicators for 4329, then confirm the intended role: connects tricon controllers and external hosts over 10 mbit/s ieee 802.3 ethernet.