4210

Primary Single-Mode Fiber Remote Extender Module

Triconex 4210 is the primary single-mode fiber Remote Extender Module used in a 4210-3 set. It extends the triplicated I/O bus to remote Tricon chassis locations.

PRODUCT SNAPSHOT

BRAND	**FAMILY**
Triconex	Tricon remote I/O extension
PART	**ORIGIN / HS**
4210	USA / 8537101190

APTER POWER SALES TEAM

WHATSAPP / PHONE
+86 180 3023 5313

EMAIL
sales13@apterpower.com

WEBSITE
www.apterpower.com

PRODUCT OVERVIEW

Triconex 4210 is the primary single-mode fiber Remote Extender Module used in a 4210-3 set. It extends the triplicated I/O bus to remote Tricon chassis locations.

1. Extends the triplicated Tricon I/O bus from the primary chassis to remote sites
2. Repeats three isolated channels through single-mode fiber-optic links
3. Supports three remote locations from one primary RXM set
4. Provides ground-loop isolation and high immunity to electrical interference

SYSTEM COMPONENTS

- three-module 4210-3 primary set
- matching remote single-mode RXM set
- ST-connector single-mode fiber pairs
- remote Tricon I/O chassis

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Triconex 4119A	Enhanced Intelligent Communication Module	**Open product page**
Triconex 4329	Network Communication Module	**Open product page**
Triconex 3008	Main Processor Module	**Open product page**

TECHNICAL DATA

PARAMETER	VALUE
Official set designation	4210-3
Chassis location	Primary
Cable type	Single-mode fiber
Communication rate	375 kbit/s
Cable length limit	7.5 mi (12 km)

PARAMETER	VALUE
Remote sites supported	3
Connectors per remote site	6
Modem ports	Fiber optic with ST connectors
Set quantity	3 identical modules
Indicators	PASS; FAIL; ACTIVE; TX; RX1; RX2; RX3

TECHNICAL NOTE

Treat 4210 as one channel of the three-module primary set, match every transmit/receive fiber to the corresponding remote channel, and verify RX1-RX3 plus TX diagnostics end to end.

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Remote shutdown I/O building connection

Extends the triplicated Tricon I/O bus from the primary chassis to remote sites

Long-distance process-unit I/O extension

Repeats three isolated channels through single-mode fiber-optic links

Ground-isolated fiber link between cabinets

Supports three remote locations from one primary RXM set

High-EMI remote Tricon chassis integration

Provides ground-loop isolation and high immunity to electrical interference

PRODUCT PRECAUTIONS

1. Verify 4210 and its channel position within the 4210-3 primary set.
2. Place the remote I/O path and dependent safety functions in the approved maintenance state.
3. Label every transmit and receive fiber before removing an ST connector.
4. Use single-mode fiber and preserve the engineered optical link budget and route.
5. Clean and inspect ST end faces with approved fiber practices.
6. Maintain channel A/B/C correspondence across all six fibers for each remote site.
7. Check PASS, FAIL, ACTIVE, TX, and RX1-RX3 indications after restoration.
8. Exercise remote input and output paths before returning the site to service.

ENGINEER FAQ

Q1 Can 4210 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 RX1/RX2/RX3 diagnostic validation testing on 4210?

Retain the full 4210 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 4210?

Match 4210 to three-module 4210-3 primary set and matching remote single-mode RXM set, then confirm the complete physical marking and assigned Tricon remote I/O extension position.

Q4 How should an engineer verify 4210-3 three-module primary set for 4210?

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 single-mode ST fiber routing when commissioning 4210?

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 4210?

Do not interchange 4210 with an adjacent execution or alter its matched three-module 4210-3 primary set; the exact electrical, channel, and connector arrangement must be retained.

Q7 How is three-remote-site channel mapping handled during a 4210 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 4210?

Review the applicable point, module, power, communication, or load indicators for 4210, then confirm the intended role: extends the triplicated tricon i/o bus from the primary chassis to remote sites.

SOURCE Tricon Systems Technical Product Guide | 9791007-013

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