

3008

Main Processor Module

Triconex 3008 is a main processor module for Tricon v9.6 and later systems. Three modules execute and vote the control program while coordinating I/O, communication, diagnostics, and event timing.

PRODUCT SNAPSHOT

BRAND

Triconex

FAMILY

Tricon v9.6 and later controller

PART

3008

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PRODUCT OVERVIEW

Triconex 3008 is a main processor module for Tricon v9.6 and later systems. Three modules execute and vote the control program while coordinating I/O, communication, diagnostics, and event timing.

1 Executes the user-written control program independently in one of three processor channels

2 Communicates with the triplicated I/O subsystem and exchanges data across TriBus

3 Votes input information and preserves controller operation during diagnosed channel faults

4 Time-stamps designated sequence-of-events variable transitions

SYSTEM COMPONENTS

Tricon main chassis

two additional 3008 main processors

triplicated I/O bus

TriStation application and SOE configuration

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Triconex 3504E	High-Density Digital Input Module	Open product page
Triconex 4210	Remote Extender Module Set	Open product page
Triconex 4119A	Enhanced Intelligent Communication Module	Open product page

TECHNICAL DATA

PARAMETER	VALUE
Processor	Motorola MPC860; 32 bit; 50 MHz
Main memory	16 MB DRAM; non-battery-backed
Retentive memory	32 KB SRAM; battery-backed
Program storage	6 MB Flash PROM
TriBus rate	25 Mbit/s
TriBus protection	32-bit CRC

PARAMETER	VALUE
TriBus transfer	32-bit DMA; fully isolated
I/O bus processor	Motorola MPC860; 32 bit; 50 MHz
Communication bus processor	Motorola MPC860; 32 bit; 50 MHz
Processors per main chassis	3
Supported system	Tricon v9.6 and later
Indicators	PASS; FAULT; ACTIVE; MAINT1; MAINT2; COM TX/RX; I/O TX/RX

TECHNICAL NOTE

Maintain three matched 3008 processors in the main chassis, preserve the approved TriStation application and SOE blocks, and verify TriBus, I/O-bus, memory, and channel diagnostics after service.

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Emergency shutdown logic execution

Executes the user-written control program independently in one of three processor channels

Burner-management sequence control

Communicates with the triplicated I/O subsystem and exchanges data across TriBus

Triplicated process-safety controller processing

Votes input information and preserves controller operation during diagnosed channel faults

Sequence-of-events recording and diagnostics

Time-stamps designated sequence-of-events variable transitions

PRODUCT PRECAUTIONS

- 1 Verify 3008 and the Tricon v9.6-or-later controller revision before replacement.
- 2 Place the safety application and controlled process in the approved maintenance state.
- 3 Record processor position, active state, maintenance indicators, and application revision.
- 4 Use ESD controls and inspect the keyed main-chassis connector before insertion.
- 5 Do not mix processor types or transfer memory specifications from another MP generation.
- 6 Confirm all three 3008 modules synchronize and report consistent TriBus communication.
- 7 Review fixed-memory, SRAM, I/O-processor, clock, and communication diagnostics.
- 8 Validate control execution and sequence-of-events time stamps before full service.

ENGINEER FAQ

Q1 Which installed hardware must be matched before fitting 3008?

Match 3008 to Tricon main chassis and two additional 3008 main processors, then confirm the complete physical marking and assigned Tricon v9.6 and later controller position.

Q3 What check is required for TriBus 25 Mbit/s diagnostics when commissioning 3008?

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

Q5 How is battery-backed SRAM and flash roles handled during a 3008 replacement?

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

Q7 Can 3008 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 How should an engineer verify three-processor main-chassis matching for 3008?

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.

Q4 Which installation error is most important to prevent on 3008?

Do not interchange 3008 with an adjacent execution or alter its matched Tricon main chassis; the exact electrical, channel, and connector arrangement must be retained.

Q6 Which diagnostics should be reviewed after installing 3008?

Review the applicable point, module, power, communication, or load indicators for 3008, then confirm the intended role: executes the user-written control program independently in one of three processor channels.

Q8 What evidence should be retained after SOE time-base validation testing on 3008?

Retain the full 3008 identity, as-left connections or settings, final diagnostics, measured functional-test result, and authorization to return the affected process function to service.