Yokogawa AIP512

Technical Reference

Yokogawa AIP512 is a RIO bus coupler assembly for the remote-I/O communication path of a legacy CENTUM field control unit.

PRODUCT ROLE AND VERIFIED FEATURES

Feature 1

Couples the field control unit to a Remote I/O bus.

Feature 2

Supports the documented legacy CENTUM remote-I/O architecture.

Feature 3

Works with the assigned RIO bus connector unit and cabling.

Feature 4

Keeps RIO bus hardware distinct from the V-Net coupler position.

VERIFIED DATA SNAPSHOT

Bus role	RIO bus coupling
Assembly type	Remote I/O bus coupler
System scope	Legacy CENTUM field control
Connection purpose	Field control unit to remote I/O
Companion hardware	RIO bus connector unit
Product role	RIO Bus Coupler Assembly

SYSTEM RELATIONSHIP

Field device → **Product interface** → **System channel** → **Verified response**

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Technical profile

Verified technical values for the complete product string are arranged below for selection and engineering review.

Bus role	RIO bus coupling
Assembly type	Remote I/O bus coupler
System scope	Legacy CENTUM field control
Connection purpose	Field control unit to remote I/O
Companion hardware	RIO bus connector unit

SELECTION ANCHORS

- Couples the field control unit to a Remote I/O bus.
- Supports the documented legacy CENTUM remote-I/O architecture.
- Works with the assigned RIO bus connector unit and cabling.
- Keeps RIO bus hardware distinct from the V-Net coupler position.

IMPORTANT NOTICE	Use the values as one matched configuration. Do not substitute a nearby ordering code without a separate check.

CONFIGURATION CONTROL

Configuration identity	Yokogawa AIP512
Technical boundary	Apply only the functions and interfaces shown for this product or its identified system family.
Selection control	Match the complete ordering string and installed interfaces before purchase or installation.

ADDITIONAL ENGINEERING CHECKS

How should remote nodes be restored after installing Yokogawa AIP512?	Energize according to the approved sequence and verify each node returns with its recorded address and I/O status.
What proves Yokogawa AIP512 is communicating correctly?	Stable RIO diagnostics, online remote nodes and verified process I/O values demonstrate correct operation.

System role and architecture

Field device → Product interface → System channel → Verified response

APPLICATION POINTS

Remote I/O communication

Links the control station to distributed I/O hardware.

RIO bus restoration

Replaces a failed coupler after cable and node faults are excluded.

Field control unit service

Maintains the documented RIO bus card position.

Legacy system migration survey

Captures RIO topology before a controller or I/O modernization project.

INTEGRATION RECORD

Identity	Record the complete marking and installed position.
Mechanical interface	Confirm mounting, support, clearance and connector engagement.
Electrical interface	Confirm signal path, shield, common and receiving-channel assignment.
Configuration	Retain the controlled channel settings and acceptance criteria.
Functional evidence	Record the expected static value, dynamic response and system status.

AIP512 should be matched to the documented system position, companion hardware and retained project configuration before the channel or station is returned to control.

ENGINEERING REVIEW QUESTIONS

Which control network uses Yokogawa AIP512?	AIP512 is a coupler assembly for the legacy Remote I/O bus.
What does Yokogawa AIP512 connect inside a CENTUM station?	It connects field-control processing to the documented remote-I/O communication path.
Why must Yokogawa AIP512 not be treated as an AIP502 coupler?	AIP512 serves the RIO bus, while AIP502 serves the V-Net control-network connection.
Which companion hardware should be recorded with Yokogawa AIP512?	Record the installed RIO bus connector unit, cable routes and all remote nodes on the segment.

Engineering checks and acceptance

PRODUCT PRECAUTIONS

01	Verify AIP512 against the installed RIO bus position.
02	Record both RIO cable routes and every remote node served.
03	Identify the companion connector unit before disconnection.
04	Isolate controller and bus power under the approved procedure.
05	Inspect bus contacts and cable shields without altering topology.
06	Reinstall the coupler in its keyed position.
07	Bring remote nodes online one segment at a time.
08	Confirm RIO communication, node diagnostics and process I/O before release.

RELEASE EVIDENCE

Exact identity	Product marking and intended system position agree.
Interface condition	Mounting, connectors, terminals and cable routing are secure.
Signal response	The expected static and dynamic behavior has been observed.
Protection state	Channel status, alarms and controlled bypass state are restored.

IMPORTANT NOTICE	Confirm the complete AIP512 marking, assigned system position and mating interfaces before installation.

APPLICATION BOUNDARIES

Remote I/O communication	Links the control station to distributed I/O hardware.
RIO bus restoration	Replaces a failed coupler after cable and node faults are excluded.
Field control unit service	Maintains the documented RIO bus card position.
Legacy system migration survey	Captures RIO topology before a controller or I/O modernization project.

Technical questions and related models

MODEL-SPECIFIC QUESTIONS

Which control network uses Yokogawa AIP512?	AIP512 is a coupler assembly for the legacy Remote I/O bus.
What does Yokogawa AIP512 connect inside a CENTUM station?	It connects field-control processing to the documented remote-I/O communication path.
Why must Yokogawa AIP512 not be treated as an AIP502 coupler?	AIP512 serves the RIO bus, while AIP502 serves the V-Net control-network connection.
Which companion hardware should be recorded with Yokogawa AIP512?	Record the installed RIO bus connector unit, cable routes and all remote nodes on the segment.
How should the RIO topology be preserved before replacing Yokogawa AIP512?	Label both bus directions and capture the order, addresses and status of every connected remote node.
What contact condition matters when inspecting Yokogawa AIP512?	Check coupler and connector-unit contacts for alignment, retention, oxidation and damage.

RELATED MODELS ON APTERPOWER

Yokogawa NFCP501-W15 S2	Related product reference. Review the complete ordering string before selection.
Yokogawa CP451-10 S2	Related product reference. Compare the required interface and system position.
Yokogawa EB401-50 S1	Related product reference. Confirm the execution independently for the intended task.

CONFIGURATION AND SELECTION RECORD

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