Foxboro CP40

Complete Product Information

Foxboro CP40 provides higher processor speed and memory capacity for I/A Series control, data acquisition and alarm processing.

WHAT THIS PRODUCT DOES

Foxboro CP40 is a control processor 40 for control execution, alarms and I/O data. It operates with the assigned CP40 enclosure, Nodebus and Fieldbus architecture and provides one high-performance processor or an optional parallel pair.

Product characteristic 1

Provides one high-performance processor or an optional parallel pair for its control processor 40 function.

Product characteristic 2

Handles control execution, alarms and I/O data through the documented Foxboro system path.

Product characteristic 3

Works with the assigned CP40 enclosure, Nodebus and Fieldbus architecture.

Product characteristic 4

Existing CP-family stations can be upgraded to CP40 capability under the documented system plan.

PRODUCT-PAGE TECHNICAL SNAPSHOT

Processor family	High-end CP10/CP30/CP40 control station
Performance	Faster processor for increased block processing
Capacity	Larger memory for additional control blocks
Reliability	Optional fault-tolerant dual-module operation

IMPORTANT NOTICE

Use CP40 only with the assigned CP40 enclosure, Nodebus and Fieldbus architecture; verify every interface and the controlled project configuration before energizing or pressurizing the subsystem.

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Features and technical data

TECHNICAL DATA SHOWN ON THE PRODUCT PAGE

Processor family	High-end CP10/CP30/CP40 control station
Performance	Faster processor for increased block processing
Capacity	Larger memory for additional control blocks
Reliability	Optional fault-tolerant dual-module operation
Fieldbus	Local, twinaxial or fiber-optic configurations

FEATURE INTERPRETATION

Product identity

Provides one high-performance processor or an optional parallel pair for its control processor 40 function.

System role

Handles control execution, alarms and I/O data through the documented Foxboro system path.

Service context

Works with the assigned CP40 enclosure, Nodebus and Fieldbus architecture.

Return-to-service focus

Existing CP-family stations can be upgraded to CP40 capability under the documented system plan.

SIGNAL OR CONTROL PATH

Fieldbus I/O → **Foxboro processor** → **Control execution** → **Nodebus services**

The control processor 40 belongs in the controlled Foxboro architecture and works with the assigned CP40 enclosure, Nodebus and Fieldbus architecture. Its mating hardware, wiring, database configuration and final response must be checked together before release.

PRODUCT-PAGE TECHNICAL QUESTIONS

Why is Foxboro CP40 different from CP30?	CP40 adds a faster processor and larger memory capacity for greater block-processing demand.
What I/O sources can CP40 supervise?	It coordinates supported Fieldbus Modules, Fieldbus Cluster I/O and migration-integrator I/O.
How is CP40 fault tolerance implemented?	Two single-width modules run in parallel with separate Nodebus and Fieldbus connections.

Common applications

The application groups below reproduce the model-specific uses presented on the product page and connect each use to a practical verification point.

System maintenance

Restores the documented control processor 40 function in an existing Foxboro control system.

Signal-path service

Supports controlled testing of control execution, alarms and I/O data at the assigned system position.

Planned replacement

Provides an exact-identity replacement path after the assigned CP40 enclosure, Nodebus and Fieldbus architecture has been verified.

Commissioning

Allows the responsible engineer to prove configuration, diagnostics and response for one high-performance processor or an optional parallel pair.

APPLICATION VERIFICATION MAP

System maintenance	Confirm the documented system position and the required operating function.
Signal-path service	Compare the restored connection or control path with the approved record.
Planned replacement	Check the physical interface and the retained configuration before startup.
Commissioning	Record diagnostics and the final controlled response before release.

INFORMATION CARRIED INTO THE WORK RECORD

Identity record

Complete marking and assigned system position.

Connection record

Connector, conductor and interface arrangement as found.

Configuration record

Controlled settings, application data and option state.

Acceptance record

Observed status, response and release decision.

IMPORTANT NOTICE

Use the complete product identifier for every application review; a related product link is not evidence of interchangeability.

APPLICATION QUESTIONS

How is CP40 fault tolerance implemented?	Two single-width modules run in parallel with separate Nodebus and Fieldbus connections.
Which bus arrangements are described for CP40?	Local, twinaxial-extended and fiber-optic Fieldbus configurations are documented.
What do the power-up self-checks verify?	They sequentially test processor functional elements and report progress with front indicators.

Product precautions and questions

EIGHT MODEL-SPECIFIC PRECAUTIONS

01	Match the complete CP40 marking to the work order and installed position before removal.
02	Confirm the assigned CP40 enclosure, Nodebus and Fieldbus architecture before disconnecting any interface.
03	Keep control execution, alarms and I/O data within the documented electrical or pneumatic range.
04	Record terminal designations, polarity, common, shield and cable routing before disconnection.
05	Inspect mounting, connector keying, terminal condition and retention hardware before installation.
06	Restore the controlled database, range, alarm, filter and fail-state settings before energization.
07	Review local indicators and controller diagnostics during the controlled startup sequence.
08	Prove the intended response across one high-performance processor or an optional parallel pair and record the acceptance result before release.

FREQUENTLY ASKED TECHNICAL QUESTIONS

Why is Foxboro CP40 different from CP30?	CP40 adds a faster processor and larger memory capacity for greater block-processing demand.
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How is CP40 fault tolerance implemented?	Two single-width modules run in parallel with separate Nodebus and Fieldbus connections.
Which bus arrangements are described for CP40?	Local, twinaxial-extended and fiber-optic Fieldbus configurations are documented.

IMPORTANT NOTICE	Use CP40 only with the assigned CP40 enclosure, Nodebus and Fieldbus architecture; verify every interface and the controlled project configuration before energizing or pressurizing the subsystem.

RELEASE CHECKLIST

Identity accepted	The complete product marking and assigned system position agree.
Interfaces accepted	Connections, retention and controlled configuration match the recorded condition.
Response accepted	Diagnostics and the intended technical response have been documented.

FAQ, source record and related models

ADDITIONAL TECHNICAL QUESTIONS

What do the power-up self-checks verify?	They sequentially test processor functional elements and report progress with front indicators.
How should a CP-family upgrade be controlled?	Verify enclosure, software, control-block capacity, network loading and all I/O interfaces before conversion.
What must be checked after installing CP40?	Confirm Nodebus and Fieldbus communication, processor status, alarms and the configured control-block scan.
How is this record kept separate from Yokogawa CP401-10 S1?	Use the exact Foxboro CP40 identity and the Invensys/Foxboro processor documentation; CP401-10 S1 is a different manufacturer and product.

MANUFACTURER EVIDENCE RECORD

Manufacturer source	Invensys, I/A Series Hardware Control Processor 40, PSS 21H-1B3 B3.
Evidence boundary	Technical statements are limited to the identified product or applicable manufacturer family.
Selection control	Use the complete ordering string and verify the installed system before purchase or installation.

RELATED MODELS ON APTERPOWER

Westinghouse 1C31238H01	Related product reference. Review the complete ordering string before selection.
Westinghouse 5X00106G01	Related product reference. Compare the required interface and system position.
Westinghouse 5X00119G01	Related product reference. Confirm the execution independently for the intended task.

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