ABB PM5670-2ETH 1SAP151000R0278

Engineering Installation, Diagnostic and Acceptance Guide

PM5670-2ETH 1SAP151000R0278 is an AC500 processor module with 160 MB memory, two Ethernet interfaces, serial communication and CAN. The R0278 revision is the limited/classic hardware generation and must be paired with its approved terminal base and compatible firmware project.

01 Job scope and identity

Complete model	PM5670-2ETH 1SAP151000R0278
Product type	AC500 Programmable Logic Controller CPU Module
Manufacturer	ABB
Technical source	ABB product record 1SAP151000R0278 and AC500 catalog 3ADR020077C0204 Rev F

Field decisions

1 Verify the delivered identity

Record the complete PM5670-2ETH 1SAP151000R0278 marking and the installed assembly before removal.

2 Preserve the decisive interface

Preserve the TB56xx-2ETH base, 24 Vdc supply, both Ethernet assignments, serial/CAN wiring and the revision-2 application archive.

3 Check the selected limits

160 MB memory with 0.002 microsecond minimum bit, word and floating-point instruction times

4 Prove the intended function

Power the processor on the verified terminal base, restore the approved project and prove both networks, serial/CAN interfaces and mapped I/O.

5 Retain the acceptance record

Record task cycle, link state, communication diagnostics and I/O proof.

Installation relationships

Revision control	Treat R0278 and R0378 as different hardware revisions even though ABB describes R0378 as feature-compatible.
Network record	Capture both MAC/IP roles and connected device names before exchange.
Acceptance record	Save firmware, project checksum, CPU status, task cycle and communication diagnostics.

Pre-work evidence

Verified field	Supply voltage: 24 Vdc
Verified field	Memory: 160 MB
Verified field	Minimum instruction time, bit: 0.002 microseconds
Verified field	Minimum instruction time, word: 0.002 microseconds
Verified field	Minimum instruction time, floating point: 0.002 microseconds
Verified field	Ethernet interfaces: 2
Verified field	Serial interface: RS-232/RS-485

02 Pre-installation readiness

Model-specific installation decisions

Exact identity

PM5670-2ETH 1SAP151000R0278 and every delivered revision or approval marking must be recorded before removal.

Installed system

ABB AC500 PM56xx-2ETH CPU companion components, channel assignment and approved machine reference must remain traceable.

Mechanical baseline

Record the as-found mounting datum, reach, lock position, target clearance, routing and connector support.

Electrical baseline

Record the applicable stopped-machine gap, bias, continuity or channel value together with test conditions.

As-left configuration

Document the final mechanical position, cable protection, connector condition and complete companion-component identities.

Functional release

Compare the final monitor indication and controlled operating response with the approved baseline before handover.

Installation precautions

Back up the project

Save the application, firmware, retain data and communication settings before removal.

Check the terminal base

Confirm TB56xx-2ETH identity and inspect its contacts before fitting the processor.

Control revision migration

Do not load an R0278 archive into R0378 without checking the ABB firmware migration requirements.

Restore network roles

Verify both Ethernet addresses and protocol assignments before reconnecting the plant network.

Verify serial polarity

Confirm RS-485 polarity, termination and CAN topology from the installed drawing.

Prove task timing

Compare CPU state, task execution and I/O response with the saved commissioning record.

Pre-installation release gates

Release gate	Back up the project: Save the application, firmware, retain data and communication settings before removal.
Release gate	Check the terminal base: Confirm TB56xx-2ETH identity and inspect its contacts before fitting the processor.
Release gate	Control revision migration: Do not load an R0278 archive into R0378 without checking the ABB firmware migration requirements.
Release gate	Restore network roles: Verify both Ethernet addresses and protocol assignments before reconnecting the plant network.
Release gate	Verify serial polarity: Confirm RS-485 polarity, termination and CAN topology from the installed drawing.
Release gate	Prove task timing: Compare CPU state, task execution and I/O response with the saved commissioning record.

03 Installation and commissioning

Controlled installation sequence

01 AC500 machine control	Execute the retained IEC control application with the recorded task timing and I/O mapping.
02 Dual-Ethernet controller node	Restore the two port roles, IP addresses and protocol settings from the commissioned project.
03 Serial and CAN integration	Match the installed RS-232/RS-485 and CAN wiring, baud rate and protocol allocation.
04 Revision-2 maintenance	Use R0278 where the approved installation and firmware record require the revision-2 processor.

Commissioning acceptance criteria

Acceptance point	Revision control: Treat R0278 and R0378 as different hardware revisions even though ABB describes R0378 as feature-compatible.
Acceptance point	Network record: Capture both MAC/IP roles and connected device names before exchange.
Acceptance point	Acceptance record: Save firmware, project checksum, CPU status, task cycle and communication diagnostics.

04 Diagnostics and escalation

What controller family contains PM5670-2ETH 1SAP151000R0278?	It is an ABB AC500 PM56xx-2ETH processor module.
How much memory is published for PM5670-2ETH 1SAP151000R0278?	ABB publishes 160 MB.
Which network interfaces are integrated in PM5670-2ETH 1SAP151000R0278?	Two Ethernet interfaces, RS-232/RS-485 and CAN are integrated.

Which terminal base is required for PM5670-2ETH 1SAP151000R0278?	Use the TB56xx-2ETH base identified for the PM56xx-2ETH hardware.

Additional diagnostic decisions

What lifecycle phase applies to PM5670-2ETH 1SAP151000R0278?	The R0278 revision-2 record is Limited / Classic.
What successor is listed for PM5670-2ETH 1SAP151000R0278?	ABB lists 1SAP151000R0378 revision 3 as feature-compatible, subject to firmware and project checks.
What must be backed up before replacing PM5670-2ETH 1SAP151000R0278?	Back up firmware, the application, retain data, network addresses and serial/CAN settings.
How should PM5670-2ETH 1SAP151000R0278 be accepted after installation?	Prove CPU state, task timing, both Ethernet links, serial/CAN communication and mapped I/O.

05 Handover and evidence package

Model-specific handover evidence

Source revision	Record the revision of ABB product record 1SAP151000R0278 and AC500 catalog 3ADR020077C0204 Rev F used for the review.
Applicability	Exact R0278 order identity and ABB-published PM5670-2ETH revision-2 processor, interface and lifecycle fields.
Installed evidence	Preserve the TB56xx-2ETH base, 24 Vdc supply, both Ethernet assignments, serial/CAN wiring and the revision-2 application archive.
Functional evidence	Power the processor on the verified terminal base, restore the approved project and prove both networks, serial/CAN interfaces and mapped I/O.

Model-specific application limits

Hardware evidence	Record order number, hardware revision and TB56xx-2ETH base identity.
Software evidence	Archive project, firmware, retain data and checksum.
Operational evidence	Record task cycle, link state, communication diagnostics and I/O proof.

Product-specific acceptance records

Selected engineering value	CAN interface: Integrated
Selected engineering value	Required terminal base: TB56xx-2ETH
Selected engineering value	Published product weight: 0.133 kg
Selected engineering value	Revision status: R0278 revision 2; Limited / Classic
Selected engineering value	Successor revision: 1SAP151000R0378 revision 3
Acceptance record	Revision control: Treat R0278 and R0378 as different hardware revisions even though ABB describes R0378 as feature-compatible.

Verified related product references

Related product	ABB PM511V16 3BSE011181R1
Related product	ABB BCU-12 3AUA0000110430
Related product	ABB ZINT-571 3AUA0000077333
Related product	ABB CI858K01 3BSE018135R1

Engineering contact

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