

Siemens 6ES7151-8AB01-0AB0

01 Product function and selected configuration

Technical specification summary

Technical item	Specification
CPU family	SIMATIC DP IM151-8 PN/DP CPU
Work memory	192 KB
PROFINET interface	Integrated IO Controller
Ethernet ports	3 × RJ45
Memory-card interface	Plug-in Micro Memory Card
Maximum MMC capacity	8 MB
Rated supply	24 V DC
Permissible supply range	20.4 to 28.8 V DC
Reverse-polarity protection	Yes
Stored-energy time	5 ms
Typical bit execution time	0.06 μs
Programming	STEP 7 V5.5 or TIA Portal V11

Exact product role

Siemens 6ES7151-8AB01-0AB0 brings distributed ET 200S I/O and CPU execution together, using its PROFINET controller interface to coordinate the local station and networked devices.

Key characteristics

01

Provides 192 KB of integrated work memory.

02

Includes three RJ45 PROFINET ports and IO-Controller functionality.

03

Uses a plug-in Micro Memory Card with capacity up to 8 MB.

04

Supports configuration with STEP 7 V5.5 or TIA Portal V11.

Important notice

Restore the approved MMC and hardware project, then verify PROFINET device assignment, local I/O access and program execution before returning control.



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02 Technical data in context

Configured values

Parameter	Value or condition
CPU family	SIMATIC DP IM151-8 PN/DP CPU
Work memory	192 KB
PROFINET interface	Integrated IO Controller
Ethernet ports	3 × RJ45
Memory-card interface	Plug-in Micro Memory Card
Maximum MMC capacity	8 MB

How to use the data

The CPU, MMC contents, network identity and distributed I/O assignment form one controlled configuration. Preserve all four before changing the interface module. Use the retained hardware project and MMC as the configuration baseline. A powered CPU with link indications is not sufficient acceptance without I/O and program-response tests.

Interface map

Interface	Function	Verification point
CPU family	SIMATIC DP IM151-8 PN/DP CPU	Confirm the installed cpu family agrees with this exact configuration.
Work memory	192 KB	Confirm the installed work memory agrees with this exact configuration.
PROFINET interface	Integrated IO Controller	Confirm the installed profinet interface agrees with this exact configuration.
Ethernet ports	3 × RJ45	Confirm the installed ethernet ports agrees with this exact configuration.



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03 Applications, precautions and test logic

Common applications

Distributed control

Execute local automation logic close to the ET 200S I/O station.

PROFINET IO coordination

Control configured network devices through the integrated interface.

Compact machine automation

Combine CPU processing and modular ET 200S I/O in one station.

Retrofit configuration retention

Restore an established MMC-based program and network identity.

Commissioning logic

- 01** Confirm Siemens 6ES7151-8AB01-0AB0.
- 02** Verify the applicable supply or isolated wiring condition.
- 03** Restore the approved project, module pairing or terminal assignment.
- 04** Apply a controlled input, command or communication change.

Product precautions

- 01**
Record the complete CPU and firmware identity before replacement.
- 02**
Back up the MMC and engineering project before isolation.
- 03**
Record all three RJ45 connections and PROFINET device names.
- 04**
Verify the 24 V DC supply remains within the permissible range.

Controlled release

Preserve the MMC, network identity and ET 200S hardware configuration when servicing Siemens 6ES7151-8AB01-0AB0.



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04 Exact-model questions

Questions 1–4

- How much work memory is integrated in Siemens 6ES7151-8AB01-0AB0?**

The CPU provides 192 KB of work memory for program execution and runtime data.
- Why does Siemens 6ES7151-8AB01-0AB0 need a Micro Memory Card?**

It operates without a battery and uses the plug-in MMC to retain the required program and configuration; supported capacity extends to 8 MB.
- What network hardware is built into Siemens 6ES7151-8AB01-0AB0?**

Its integrated PROFINET IO-Controller interface provides three RJ45 ports for the configured Industrial Ethernet topology.
- Which supply range is valid for Siemens 6ES7151-8AB01-0AB0?**

The rated input is 24 V DC with a permissible operating range from 20.4 to 28.8 V DC.

Diagnostic guide

Observed condition	Investigation
No expected response	Trace the source, connection and configured destination before replacing hardware.
Wrong value or state	Compare the exact technical selection, channel identity and retained project data.
Intermittent behavior	Inspect seating, terminal security, signal reference and environmental condition.

Question boundary

The questions are written for this full model string and its stated technical role.



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05 Acceptance and related products

Functional acceptance

Test	Action	Expected result
Fault response	Introduce only the approved diagnostic or interruption test.	The configured status and safe response are visible.
Release	Remove test states and compare the final condition with the baseline.	Normal operation is stable and recorded.

Related Siemens products

Siemens 6ES5420-4UA12

Siemens 6ES5312-5CA11

Siemens 6ES5301-3AB13

Siemens 6ES5300-3AB11

Questions 5–8

What does the 5 ms stored-energy time mean for Siemens 6ES7151-8AB01-0AB0?

A short supply interruption within the specified stored-energy interval can be bridged; longer events must be handled by the controlled power and restart design.

How fast is bit processing in Siemens 6ES7151-8AB01-0AB0?

The typical bit-operation execution time is 0.06 µs under the stated CPU performance data.

Which engineering software supports Siemens 6ES7151-8AB01-0AB0?

The specified engineering environment is STEP 7 V5.5 or TIA Portal V11, subject to the retained project and installed support packages.

What must be tested after installing Siemens 6ES7151-8AB01-0AB0?

Verify the 24 V DC supply, MMC recognition, CPU start-up, PROFINET device names, three-port communication, local ET 200S I/O access and program outputs.

Final criterion

Release the product only after the physical path, logical configuration and diagnostic response agree with the approved machine record.

