Siemens 6AV6545-0CA10-0AX0

01 Color Touch Operator Panel / system role

Product function and operating context

Siemens 6AV6545-0CA10-0AX0 retains a local operator view of a serially connected controller while the project governs commands and alarm handling.

This TP270 execution uses a touch display and serial communication interfaces. It is not an Ethernet panel merely because another operator panel offers an RJ45 connection. Match the installed protocol and project device type before planning a replacement.

Integration checkpoints

- Local process operation
- Serial PLC visualization
- Alarm handling
- TP270 restoration

Operator interface	Project-defined screens and touch commands
Communication role	Serial controller connection
Maintenance focus	Project recovery and alarm chronology

The project organizes process values, alarms and operator permissions within the available configuration memory. Preserve source files and the compatible engineering environment so that recovery does not depend on an unverified binary backup alone.

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02 Technical operating envelope

Display	5.7-inch STN; 256 colors
Pixel resolution	320 x 240
User-data memory	2048 kbyte
Serial interfaces	2 RS232; 1 RS422; 1 RS485
USB interfaces	1
Removable memory	CompactFlash slot

Typical input power	15 W
Rated consumption	0.6 A
Touch technology	Analog resistive
Enclosure protection	IP65 front; IP20 rear
Clock backup	Optional 3.6 V battery

Use the exact hardware execution with the supported system configuration and installation conditions.

How should clock behavior on 6AV6545-0CA10-0AX0 be checked after an outage?

Confirm whether the optional backup battery is fitted and serviceable, then compare the restored clock with the intended time source. Alarm chronology must be checked independently of successful panel startup.

Why is the 6AV6545-0CA10-0AX0 front protection rating insufficient for cabinet assessment?

The front rating applies to the correctly installed panel and seal, while the rear has a different protection level. Inspect the mounting seal and cabinet environment together. The screen rating does not protect exposed rear connectors.

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03 System integration and applications

Local process operation

Present process tags and permitted operator entries.

Serial PLC visualization

Use the configured RS232, RS422 or RS485 connection.

Alarm handling

Display and acknowledge application-defined alarms.

TP270 restoration

Recover the retained project and verify runtime compatibility.

System and supply context

6AV6545-0CA10-0AX0 belongs to the SIMATIC HMI installation described by the technical reference. Connected equipment and accessories must be included explicitly in the configured assembly.

Application boundary

The following uses describe supported engineering roles; they do not establish interchangeability with another model or remove application-specific validation.

Why can restored screens on 6AV6545-0CA10-0AX0 still operate the wrong PLC data?

A valid project may contain the wrong connection address or tag mapping for the machine. Compare the configured station and test selected values against the controller online view before enabling operator commands.

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04 Engineering selection decisions

Can 6AV6545-0CA10-0AX0 use the Ethernet cable from a newer HMI?

This execution provides serial communication interfaces rather than an integrated Ethernet port. Confirm the actual controller link and supported driver. A newer panel with Ethernet needs a separately engineered migration; cable appearance does not establish compatibility.

What should be retained before changing the engineering software for 6AV6545-0CA10-0AX0?

Keep an unchanged project archive, the original runtime baseline and a tested recovery method. Project conversion can affect device support and functions. Validate alarms, recipes and communication after conversion rather than relying on a successful compile alone.

What separates a 6AV6545-0CA10-0AX0 touch fault from a disabled command?

Check touch alignment using a safe test object, then inspect permissions, interlocks and the command tag. An unavailable process action may be intentional application logic rather than a damaged touch surface.

What makes an alarm test on 6AV6545-0CA10-0AX0 technically complete?

Verify trigger, displayed text, acknowledgement and return-to-normal behavior against the PLC. Include timestamp consistency and the relevant operator permissions. Testing only that a message appears leaves its control-side acknowledgement path unproven.

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05 Configuration boundary and references

Lifecycle and support

Spare-part / replacement-part execution. The current repair and support terms require confirmation for the installed hardware revision.

Replacement assessment

Compare the complete 6AV6545-0CA10-0AX0 identity, installed connections and configuration before selecting a replacement. A battery-backed hardware clock can support consistent event timing when the optional backup arrangement is installed and healthy. Time synchronization, recipe contents and communication settings should be assessed separately from touchscreen operation.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains selection and system context. The separate installation guide covers preparation, connection, tests and handover; use it together with the applicable manufacturer instructions.

Technical basis

Siemens product data sheet, 6AV6545-0CA10-0AX0.

Related product navigation

- Siemens 6AV2124-0QC02-0AX0
- Siemens 6AV6542-0AG10-0AX0
- Siemens 6AV2124-0GC01-0AX0

Related products for separate application assessment; verify the platform and interface. No interchangeability is implied.

Product enquiries