Siemens 6AV6545-0CC10-0AX0

COMPLETE PRODUCT INFORMATION / product-page technical edition

Siemens 6AV6545-0CC10-0AX0 is a SIMATIC TP270 10-inch touch operator panel for machine visualization, alarm handling and operator input through a 10.4-inch STN color display.

01 Product identity, role and verified data

Complete identity
6AV6545-0CC10-0AX0

Product role
10.4-inch STN Touch Operator Panel

Supported family
SIMATIC HMI TP 270

Lifecycle position
End Product Lifecycle; no direct replacement identified

Product introduction

Siemens 6AV6545-0CC10-0AX0 combines a 640 x 480 touch display, 2 MB configuration memory and serial PLC interfaces in the SIMATIC TP270 operator-panel architecture.

Operator path
Touch input, project screens and PLC tags form the machine command chain.

Interface allocation
IF1A and IF1B are alternative serial paths; use only the documented selection.

Service continuity
Preserve the panel project, communication settings and CF-card data before replacement.

Technical data

Product family	SIMATIC HMI TP 270
Display technology	STN color display
Screen diagonal	10.4 in
Color depth	256 colors
Display resolution	640 x 480 pixels
Operator input	Resistive touchscreen
Processor	32-bit RISC CPU
Operating system	Microsoft Windows CE
Configuration memory	2 MB
Rated supply	24 V DC
Supply range	20.4 to 28.8 V DC
Rated current	0.9 A

02 Interface, installation and engineering context

Typical power input	15 W
Engineering software	ProTool V6 SP3 or later; WinCC flexible Standard 2004 or later
Serial interfaces	2 x RS232; 1 x RS422; 1 x RS485
PLC interface selection	IF1A RS232 or IF1B RS422/485; not simultaneous
Removable storage	1 x CompactFlash card slot
USB interface	1 x USB; connected load max. 500 mA

Backlight MTBF	60,000 h at 25 deg C
Backup battery	Optional 3.6 V; minimum backup duration 3 years
Real-time clock	Hardware clock; battery-backed and synchronizable
Mounting panel thickness	2.5 to 6 mm
Permitted inclination	Up to +/-35 deg from vertical

Engineering overview

The TP270 10 presents 256 colors at 640 x 480 pixels on its 10.4-inch STN display. A 32-bit RISC processor running Windows CE executes the configured visualization project, alarm functions and touch-based operator actions.

The panel uses a 24 V DC supply and provides two RS232 paths together with RS422 and RS485 capability. IF1A and IF1B are alternative communication interfaces rather than simultaneous ports; the selected PLC, MPI or PROFIBUS connection must match the saved project and installed wiring.

Two megabytes of configuration memory and a CompactFlash slot support the installed project and service data. Before replacement, retain the ProTool or WinCC flexible project, communication settings, CF-card content and clock information, then prove screen navigation, alarms, PLC data exchange and touch response after restoration.

Application map

Machine visualization and alarm operation

Display process values, alarm messages and operator screens defined by the installed HMI project.

Serial PLC operator station

Exchange project tags through the documented RS232, RS422, RS485, MPI or PROFIBUS path supported by the installed configuration.

Recipe and service-data handling

Use the CompactFlash slot for supported project, backup or recipe workflows defined by the engineering environment.

Installed-base TP270 maintenance

Restore an existing TP270 station only after matching the panel cutout, 24 V DC supply, interface allocation and saved project.

Interface acceptance map

IF1A RS232	Use the project-assigned serial path; verify the interface selection, cable pinout, PLC node and baud rate.
IF1B RS422/485	Use only when the installed project and wiring assign IF1B; do not operate IF1A and IF1B simultaneously.
USB service port	Keep the connected load at or below 500 mA and use only a supported engineering or service workflow.
CompactFlash workflow	Archive the installed card content, recipes and service data before replacement or project transfer.

03 Precautions, diagnostics and acceptance

Back up the project
Save the installed ProTool or WinCC flexible project, communication settings and CF-card content before removal.

Verify the 24 V DC supply
Measure the panel supply under load and keep it within the documented 20.4 to 28.8 V DC range.

Respect IF1A and IF1B selection
Use either IF1A RS232 or IF1B RS422/485 as documented; do not operate both alternatives simultaneously.

Preserve mounting conditions
Confirm the panel cutout, sealing surface, 2.5 to 6 mm panel thickness, ventilation clearance and permitted inclination.

Protect the touchscreen
Operate with a finger or approved touchscreen pen and keep sharp or hard tools away from the touch surface.

Complete functional acceptance
After restoration, prove startup, project loading, touch calibration, PLC communication, alarms and every used operator function.

Diagnostic starting points

Panel does not start	Measure 24 V DC under load, inspect protection and wiring, then observe the loader or transfer dialog.
Blank or dim display	Separate power, backlight and project-loading causes; compare the startup sequence with the known-good baseline.
Touch position is wrong	Run the approved calibration and test the full active area before replacing the panel.
PLC values do not update	Check project driver, IF1A or IF1B selection, node address, cable pinout and PLC operating state.
Alarms differ from the machine	Compare the restored project, alarm text, PLC tags and time synchronization with the archived record.
Clock loses time	Check the optional 3.6 V backup battery and the approved clock-synchronization method.

Commissioning acceptance

Identity and project	Complete marking, HMI project version and communication driver are recorded.
Power and fit	24 V DC supply, panel cutout, sealing surface and ventilation are accepted.
Interface proof	The documented IF1A or IF1B path, PLC address and field cable are verified.
Functional proof	Startup, touch area, screen navigation, alarms, live tags and used commands are accepted.
Handover	As-left project, CF-card content, clock state and test record are retained.

Project-preservation checklist

Archive	HMI project, engineering version, CF-card image, recipes and alarm text
Communications	PLC driver, node address, IF1A or IF1B selection, baud rate and cable pinout
Installation	Cutout, seal, panel thickness, inclination, ventilation, protective earth and 24 V DC supply
Functional baseline	Startup, touch calibration, screen navigation, alarms, live values, commands and clock
As-left record	Restored project, photographs, measured supply, communication proof and release approval

04 Product-specific support and technical decisions

Power and startup	Apply 24 V DC within 20.4 to 28.8 V DC, observe the startup dialog and confirm the saved project opens without a configuration or communication fault.
Serial communication	Verify the documented IF1A or IF1B selection, cable pinout, PLC address and project communication driver before energizing the connected station.
Project restoration	Use the approved ProTool or WinCC flexible project and retain the CF-card data, recipes, alarm text and communication parameters required by the machine.
Touch and display proof	Check the full active touch area, screen navigation, alarm acknowledgement, color display, backlight condition and every used operator control.

Lifecycle status

Complete order identity	Siemens 6AV6545-0CC10-0AX0 is in End Product Lifecycle.
Replacement position	No direct replacement product is identified for the complete order code; migration requires independent hardware and project engineering review.
Support planning	Preserve the HMI project, panel image, PLC communication settings and installed interface allocation before planning a replacement.
Supply boundary	Apter Power availability is confirmed separately from the manufacturer lifecycle phase.

Available unit details

Offered hardware	One Siemens SIMATIC TP270 10-inch touch operator panel with the complete order identity shown on the page.
Installed data to retain	HMI project, CF-card content, PLC node and interface settings, touch calibration record and alarm configuration.
Separate items	Programming cable, PLC network hardware, CompactFlash card and panel wiring are separate unless itemized in the quotation.
Acceptance scope	Confirm panel fit, 24 V DC supply, project restoration, serial communication, touch response and used operator functions.

Engineer questions 1-4

What should be backed up before removing Siemens 6AV6545-0CC10-0AX0?	Retain the ProTool or WinCC flexible project, CF-card content, recipe data, alarm configuration, PLC interface selection, node settings and a photographic record of the installed wiring.
How should an IF1A or IF1B communication fault be isolated on Siemens 6AV6545-0CC10-0AX0?	Confirm which interface the project assigns, verify its switch setting and cable pinout, then check the PLC address, baud rate and driver without using IF1A and IF1B simultaneously.
What checks apply when Siemens 6AV6545-0CC10-0AX0 has a blank screen?	Measure the 24 V DC supply under load, observe startup indications, check backlight condition and determine whether the panel reaches the loader, transfer dialog or configured project.
How is touch operation accepted after replacing Siemens 6AV6545-0CC10-0AX0?	Run the approved touch calibration, test the full active area, navigate every used screen and prove alarms and commands with the machine in an approved test state.

Acceptance focus

Match the saved HMI project, interface allocation and PLC communication parameters before transfer. Release the operator station only after the full touch area, screens, alarms, live values and used commands have been proved.

05 Technical FAQ, evidence and support

How is PLC communication proved after installing Siemens 6AV6545-0CC10-0AX0?	Verify the project driver, node address, interface selection and field wiring, then compare live tags, alarm updates and command acknowledgements with the PLC state.
What is the effect of the optional backup battery in Siemens 6AV6545-0CC10-0AX0?	The 3.6 V battery supports the hardware clock during loss of panel power; record the clock behavior and replace the battery only under the approved service procedure.
Which mounting checks are required for Siemens 6AV6545-0CC10-0AX0?	Confirm the panel cutout and sealing surface, keep the mounting sheet within 2.5 to 6 mm, preserve ventilation clearance and keep the installed inclination within +/-35 degrees.
Which engineering-software checks apply to Siemens 6AV6545-0CC10-0AX0?	Confirm the archived project version and required ProTool or WinCC flexible environment before transfer, then document the restored project, communication result and functional acceptance.

Evidence boundary

Technical basis	Siemens product data for 6AV6545-0CC10-0AX0 and SIMATIC HMI TP 270, OP 270, MP 270B Operating Instructions, 6AV6691-1DD01-0AB0, Edition 03/2004
Applicability	Exact-product identity, display, power, memory and engineering-software data apply to the TP270 10-inch order code; interface and installation values apply to the documented TP270 10 configuration.

Verified related product references

Siemens 6AV2124-1GC01-0AX0	Related Siemens HMI reference; verify the complete installed order identity.
Siemens 6AV2124-0GC01-0AX0	Related Siemens HMI reference; verify the complete installed order identity.
Siemens 6AV6647-0AH11-3AX0	Related Siemens HMI reference; verify the complete installed order identity.
Siemens 6AV6648-0EC11-3AX0	Related Siemens HMI reference; verify the complete installed order identity.

Discuss the exact HMI project and installed interface with Apter Power.
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Final release record

Delivered identity	Photograph and record the complete order code, serial data and visible revision markings.
Installed asset	Record the machine, panel, PLC station and drawing references for the operator station.
Saved configuration	Identify the archived project, engineering-software version, CF-card backup and restore date.
As-left interface	Record IF1A or IF1B selection, PLC address, communication result and supply voltage.
Release evidence	Retain touch-area test, screen and alarm proof, command checks, reviewer and release date.