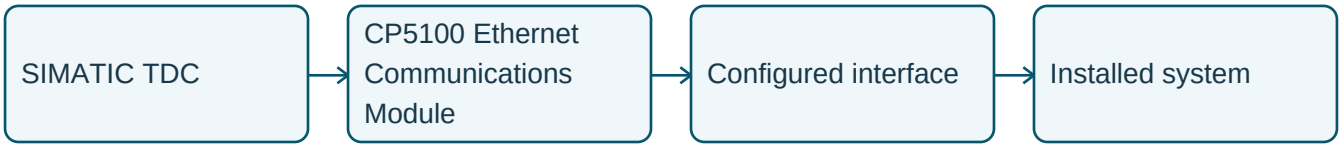
6DD1661-0AE0

01 / System identity and preparation

Siemens 6DD1661-0AE0 is the SIMATIC TDC CP5100 communications module for Industrial Ethernet using TCP/IP and UDP. It has one RJ45 Ethernet connection with automatic 10/100 Mbit/s network detection. The exact CP5100 identity must be retained when matching an existing system; protocol functions of a later communications-module version are separate.



Preparation priorities

Module identity	Match 6DD1661-0AE0 and the CP5100 execution; preserve the installed hardware and configuration identity.
Network integration	Coordinate the IP address, subnet, router and application ports with the existing Industrial Ethernet network.

Guide boundary

This Apter Power guide organizes preparation and acceptance checks. Apply the manufacturer instructions and approved site procedure for detailed wiring, mounting, configuration and functional testing.

Application boundary

Facts apply to the CP5100 execution. Later CP51M1 protocol features and application examples do not automatically extend this module capability.

Product and installation enquiries

sales13@apterpower.com | +86 18030235313

Apply manufacturer instructions and approved site procedures.

02 / Configuration review before service

Module identity	Match 6DD1661-0AE0 and the CP5100 execution; preserve the installed hardware and configuration identity.
Network integration	Coordinate the IP address, subnet, router and application ports with the existing Industrial Ethernet network.
Application mapping	Retain the configured communication blocks, peer identity and telegram data layout.
Communication validation	Verify process data or WinCC display/message behavior at both ends after restoration.

Module identity

Match 6DD1661-0AE0 and the CP5100 execution; preserve the installed hardware and configuration identity.

Network integration

Coordinate the IP address, subnet, router and application ports with the existing Industrial Ethernet network.

Configured system behavior

CP5100 exchanges process data with configured Ethernet peers and supports WinCC process-data or message visualization. In the applicable TDC rack configuration it occupies slots 18 to 21, allowing up to four modules; its coding-switch setting must match the selected slot. The @TCPIP central block initializes and monitors the module, while CTV and CRV blocks provide the configured sending and receiving functions.

Mismatch decision

Resolve a different catalog marking, interface, software requirement or installed configuration before proceeding. Physical similarity alone does not establish an approved replacement.

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03 / Hardware and interface checks

Application mapping

Retain the configured communication blocks, peer identity and telegram data layout.

Communication validation

Verify process data or WinCC display/message behavior at both ends after restoration.

Key hardware references

Network connection	1 × RJ45 Industrial Ethernet
Network rate	10 / 100 Mbit/s, automatic detection
Protocols	TCP/IP and UDP
Application scope	Configured process-data and visualization communication

Configuration and service context

Handshake, Refresh, Multiple and Select channel modes support different data-transfer behavior. Refresh and Multiple can overwrite older data; Handshake and Select do not. Up to 256 channels are possible, but the achievable count depends on payload size, access mode and the available 254 KB data-interface RAM. Telegram length is limited to 55,759 bytes for receiving and 65,535 bytes for sending. Coordinate addresses and ports, monitor important data at application level and validate the actual peer exchange after service.

Preserve the connection record

Photograph and label the affected connections before disconnection. Retain the original routing, module positions and identification with the work order, and compare the restored installation against that record.

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04 / Commissioning and diagnostic decisions

Protect the hardware

Use the applicable isolation and electrostatic-discharge controls. Preserve connectors, identification and mechanical retention during handling.

Verify the restored function

Apply the approved site acceptance procedure and compare actual behavior with the recorded system configuration before returning equipment to service.

Acceptance checkpoints

Before energization	Coordinate the IP address, subnet, router and application ports with the existing Industrial Ethernet network.
Configuration review	Retain the configured communication blocks, peer identity and telegram data layout.
Functional release	Verify process data or WinCC display/message behavior at both ends after restoration.

How do the channel modes on 6DD1661-0AE0 differ?

Refresh and Multiple permit older data to be overwritten; Handshake and Select do not. Choose the protocol and application-level monitoring accordingly.

Abnormal result

If diagnostics, communication or functional response differ from the approved baseline, stop the release and resolve the configuration or installation issue. Do not bypass an interlock or protective function to obtain a passing test.

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05 / Service record and technical references

Lifecycle and support

The manufacturer lifecycle phase is End of Product Lifecycle. Plan service and any replacement around the complete installed configuration.

Technical basis

Siemens 6DD1661-0AE0 product information; SIMATIC TDC User Guide; System and Communication Configuring D7-SYS, A5E01115023-04, 07/2009.

Applicability

Facts apply to the CP5100 execution. Later CP51M1 protocol features and application examples do not automatically extend this module capability.

Related portfolio references

Siemens 6DD1660-0BJ0

Siemens 6DD1688-0AE0

Siemens 6DD1640-0AD0

Navigation only. These listings are not confirmed replacements, compatible accessories or included items.

Handover record

Retain the complete fitted marking, hardware/software revision where applicable, connection record and accepted test results. Confirm separate accessories and documents in the quotation.

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