

product type designation



CP 1545-1

Communications processor CP 1545-1 for connecting SIMATIC S7-1500 to Industrial Ethernet; TCP/IP, ISO, UDP, S7 communication, security (VPN, firewall), SNMPv1/v3, DHCP, FTP client/server, email, IPv4/IPv6, IEEE 802.1X (radius), time synchronization via NTP, connection to cloud systems via MQTT, 1x RJ45 (10/100/1000 Mbps).

product brand name	SIMATIC NET
Technical Product Detail Page	https://l.siemens.com/1P6GK7545-1GX10-0XE0
transfer rate	
transfer rate	
<ul style="list-style-type: none"> at the 1st interface 	10 ... 1000 Mbit/s
interfaces	
number of interfaces / according to Industrial Ethernet	1
number of electrical connections	
<ul style="list-style-type: none"> at the 1st interface / according to Industrial Ethernet 	1
type of electrical connection	
<ul style="list-style-type: none"> at the 1st interface / according to Industrial Ethernet 	RJ45 port
supply voltage, current consumption, power loss	
type of voltage / of the supply voltage	DC
supply voltage / 1 / from backplane bus	15 V
relative symmetrical tolerance / at DC	
<ul style="list-style-type: none"> at 15 V 	3 %
consumed current	
<ul style="list-style-type: none"> from backplane bus / at DC / at 15 V / typical 	0.25 A
power loss [W]	3.75 W
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> for vertical installation / during operation for horizontally arranged busbars / during operation during storage during transport note 	-30 ... +40 °C -30 ... +60 °C -40 ... +70 °C -40 ... +70 °C without condensation or icing
installation altitude / at height above sea level / maximum	5000 m
ambient condition / relating to ambient temperature - air pressure - installation altitude	restrictions for installation altitudes > 2 000 m, see manual
relative humidity	
<ul style="list-style-type: none"> at 25 °C / without condensation / during operation / maximum 	95 %
protection class IP	IP20
design, dimensions and weights	
module format	Compact module S7-1500 single width
width	35 mm
height	142 mm
depth	129 mm

net weight	0.26 kg
fastening method	
<ul style="list-style-type: none"> • S7-1500 rail mounting 	Yes
product features, product functions, product components / general	
number of units	
<ul style="list-style-type: none"> • per CPU / maximum • note 	8 depending on CPU type
product functions / cloud connectivity	
protocol / is supported	
<ul style="list-style-type: none"> • Message Queuing Telemetry Transport (MQTT) • Advanced Message Queuing Protocol (AMQP) 	Yes No
product function / for cloud connectivity	
<ul style="list-style-type: none"> • trigger management • time stamping 	Yes Yes
product feature / for cloud connectivity / buffered message frame memory	No
number of data points per device / maximum	500
performance data / open communication	
number of possible connections / for open communication	
<ul style="list-style-type: none"> • by means of T blocks / maximum 	118; depending on the system upper limit
data volume	
<ul style="list-style-type: none"> • as user data per ISO on TCP connection / for open communication / by means of T blocks / maximum 	65536 byte
number of Multicast stations	118
performance data / S7 communication	
number of possible connections / for S7 communication	
<ul style="list-style-type: none"> • maximum 	118; depending on the system upper limit
performance data / multi-protocol mode	
number of active connections / with multi-protocol mode	118
performance data / IT functions	
number of possible connections	
<ul style="list-style-type: none"> • as client / by means of FTP / maximum • as server / by means of FTP / maximum 	32 16
number of possible connections	
<ul style="list-style-type: none"> • as server / by means of HTTP / maximum • as email client / maximum 	4 1
data volume / as user data for email / maximum	64 Kibyte
performance data / telecontrol	
protocol / is supported	
<ul style="list-style-type: none"> • TCP/IP 	Yes
product functions / management, configuration, engineering	
product function / MIB support	Yes
protocol / is supported	
<ul style="list-style-type: none"> • SNMP v1 • SNMP v3 • DCP • LLDP 	Yes Yes Yes Yes
configuration software	
<ul style="list-style-type: none"> • required 	STEP 7 Professional V19 (TIA Portal) or higher
identification & maintenance function	
<ul style="list-style-type: none"> • I&M0 - device-specific information • I&M1 - higher level designation/location designation 	Yes Yes
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
product functions / diagnostics	
product function / web-based diagnostics	Yes; via S7-1500 CPU
product functions / routing	
service / routing / note	IP routing up to 1 Mbps
product function	
<ul style="list-style-type: none"> • static IP routing 	Yes

<ul style="list-style-type: none"> • static IP routing IPv6 	No
<ul style="list-style-type: none"> • dynamic IP routing 	No
<ul style="list-style-type: none"> • dynamic IP routing IPv6 	No
protocol / is supported	
<ul style="list-style-type: none"> • RIP v1 	No
<ul style="list-style-type: none"> • RIPv2 	No
<ul style="list-style-type: none"> • RIPnG for IPv6 	No
<ul style="list-style-type: none"> • OSPFv2 	No
<ul style="list-style-type: none"> • OSPFv3 for IPv6 	No
<ul style="list-style-type: none"> • VRRP 	No
<ul style="list-style-type: none"> • VRRP for IPv6 	No
<ul style="list-style-type: none"> • BGP 	No
<ul style="list-style-type: none"> • PPP 	No
<ul style="list-style-type: none"> • PPOE via DSL 	No
product functions / security	
firewall version	stateful inspection
product function / with VPN connection	IPSec
type of encryption algorithms / with VPN connection	AES-256, AES-192, AES-128, 3DES-168, DES-56
type of authentication procedure / with VPN connection	Preshared key (PSK), X.509v3 certificates
type of hashing algorithms / with VPN connection	MD5, SHA-1, SHA-256, SHA-384, SHA-512
number of possible connections / with VPN connection	16
product function	
<ul style="list-style-type: none"> • IEEE 802.1x (radius) 	Yes
<ul style="list-style-type: none"> • password protection for Web applications 	No
<ul style="list-style-type: none"> • ACL - IP-based 	No
<ul style="list-style-type: none"> • ACL - IP-based for PLC/routing 	No
<ul style="list-style-type: none"> • switch-off of non-required services 	Yes
<ul style="list-style-type: none"> • blocking of communication via physical ports 	No
<ul style="list-style-type: none"> • log file for unauthorized access 	Yes
product functions / time	
product function / SICLOCK support	No
product function / pass on time synchronization	Yes
protocol / is supported	
<ul style="list-style-type: none"> • NTP 	Yes
standards, specifications, approvals	
certificate of suitability / CE marking	Yes
certificate of suitability / UKCA marking	Yes
certificate of suitability / cULus approval	Yes
certificate of suitability / KC approval	Yes
certificate of suitability / Regulatory Compliance Mark (RCM)	Yes
certificate of suitability / RoHS conformity	Yes
certificate of suitability / EAC approval	Yes
standards, specifications, approvals / hazardous environments / header	
certificate of suitability / ATEX	Yes
certificate of suitability / IECEx	Yes
certificate of suitability / ULhazloc approval	Yes
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
certificate of suitability / FM registration	Yes
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
<ul style="list-style-type: none"> • total 	140.88 kg
<ul style="list-style-type: none"> • during manufacturing 	21.24 kg
<ul style="list-style-type: none"> • during operation 	119.29 kg
<ul style="list-style-type: none"> • after end of life 	0.35 kg
further information / internet links	
internet link	
<ul style="list-style-type: none"> • to website: Selection guide for cables and connectors 	https://support.industry.siemens.com/cs/ww/en/view/109766358

- to web page: selection aid TIA Selection Tool
- to website: Industrial communication
- to web page: SiePortal
- to website: Image database
- to website: CAX-Download-Manager
- to website: Industry Online Support

- <https://www.siemens.com/tstcloud>
- <https://www.siemens.com/simatic-net>
- <https://sieportal.siemens.com/>
- <https://www.automation.siemens.com/bilddb>
- <https://siemens.com/cax>
- <https://support.industry.siemens.com>

security information

security information

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Approvals / Certificates

General Product Approval



[China RoHS](#)

[China RoHS](#)



EMV

For use in hazardous locations

[Miscellaneous](#)



[FM](#)

[CCC-Ex](#)

[Miscellaneous](#)



Maritime application

Environment



[NK / Nippon Kaiji Kyokai](#)



last modified:

5/26/2026