

Product type designation	CP 443-1 Advanced SIMATIC NET CP 443-1 ADVANCED 1X 10/100/1000 MBIT/S; 4 X 10/100 MBIT/S (IE SWITCH); RJ 45 PORTS; ISO; TCP; UDP; PROFINET-IO CONTROLLER; S7-COMMUNICATION; OPEN COMMUNICATION (SEND/RECEIVE); S7-ROUTING; IP-KONFIGURATION VIA DHCP/BLOCK; IP ACCESS CONTROL LIST; TIME-SYNCHRONISATION; EXTENDED WEB-DIAGNOSIS; FAST STARTUP; PROFIENERGY SUPPORT; IP-ROUTING; FTP; WEB-SERVER; SEC. E-MAIL; PN CBA, SECURITY
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Transmission rate

Transfer rate	
<ul style="list-style-type: none"> at the 1st interface 	10 ... 1000 Mbit/s
<ul style="list-style-type: none"> at the 2nd interface 	10 ... 100 Mbit/s

Interfaces

Number of interfaces / acc. to Industrial Ethernet	5
Number of electrical connections	
<ul style="list-style-type: none"> at the 1st interface / acc. to Industrial Ethernet 	1
<ul style="list-style-type: none"> at the 2nd interface / acc. to Industrial Ethernet 	4
Type of electrical connection	
<ul style="list-style-type: none"> at the 1st interface / acc. to Industrial Ethernet 	RJ45 port
<ul style="list-style-type: none"> at the 2nd interface / acc. to Industrial Ethernet 	RJ45 port
design of the removable storage / C-PLUG	Yes

Supply voltage, current consumption, power loss

Type of voltage / of the supply voltage	DC
Supply voltage / 1 / from backplane bus	5 V
Relative symmetrical tolerance / at DC	
<ul style="list-style-type: none"> at 5 V 	5 %
Consumed current	
<ul style="list-style-type: none"> from backplane bus / at DC / at 5 V / typical 	1.8 A
Power loss [W]	9 W

Permitted ambient conditions

Ambient temperature	
<ul style="list-style-type: none"> during operation 	0 ... 60 °C
<ul style="list-style-type: none"> during storage 	-40 ... +70 °C
<ul style="list-style-type: none"> during transport 	-40 ... +70 °C
Relative humidity / at 25 °C / without condensation / during operation / maximum	95 %
Protection class IP	IP20

Design, dimensions and weight	
Module format	Compact module S7-400 single width
Width	25 mm
Height	290 mm
Depth	210 mm
Net weight	0.7 kg
Product properties, functions, components / general	
Number of units	
<ul style="list-style-type: none"> • per CPU / maximum 	14
<ul style="list-style-type: none"> • Note 	max. 4 as PN IO ctrl.
Performance data / open communication	
Number of possible connections / for open communication / by means of SEND/RECEIVE blocks / maximum	64
Amount of data	
<ul style="list-style-type: none"> • as user data per ISO connection / for open communication / by means of SEND/RECEIVE blocks / maximum 	8 Kibyte
<ul style="list-style-type: none"> • as user data per ISO on TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum 	8 Kibyte
<ul style="list-style-type: none"> • as user data per TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum 	8 Kibyte
<ul style="list-style-type: none"> • as user data per UDP connection / for open IE communication / by means of SEND/RECEIVE blocks / maximum 	2 Kibyte
Number of possible connections / for open communication	
<ul style="list-style-type: none"> • by means of T blocks / maximum 	64
Amount of data	
<ul style="list-style-type: none"> • as user data per ISO on TCP connection / for open communication / by means of T blocks / maximum 	1452 byte
Performance data / S7 communication	
Number of possible connections / for S7 communication	
<ul style="list-style-type: none"> • maximum 	128
<ul style="list-style-type: none"> • with PG connections / maximum 	2
<ul style="list-style-type: none"> • Note 	when using several CPUs
Performance data / multi-protocol mode	
Number of active connections / with multi-protocol mode	128

Performance data / IT functions

Number of possible connections	
<ul style="list-style-type: none"> • as client / by means of FTP / maximum 	20
<ul style="list-style-type: none"> • as server / by means of FTP / maximum 	10
<ul style="list-style-type: none"> • as server / by means of HTTP / maximum 	4
<ul style="list-style-type: none"> • as e-mail client / maximum 	1
Amount of data / as user data for email / maximum	8 Kibyte
Storage capacity / of the user memory	
<ul style="list-style-type: none"> • as flash memory file system 	30 Mibyte
<ul style="list-style-type: none"> • as RAM 	16 Mibyte
<ul style="list-style-type: none"> • additionally buffered as RAM via central backup battery 	512 Kibyte
Number of possible write cycles / of the flash memory cells	100000

Performance data / PROFINET communication / as PN IO-Controller

Product function / PROFINET IO controller	Yes
Number of PN IO devices / on PROFINET IO controller / usable / total	128
Number of PN IO IRT devices / on PROFINET IO controller / usable	64
Number of external PN IO lines / with PROFINET / per rack	4
Amount of data	
<ul style="list-style-type: none"> • as user data for input variables / as PROFINET IO controller / maximum 	4 Kibyte
<ul style="list-style-type: none"> • as user data for input variables / as PROFINET IO controller / maximum 	4 Kibyte
<ul style="list-style-type: none"> • as user data for input variables per PN IO device / as PROFINET IO controller / maximum 	1433 byte
<ul style="list-style-type: none"> • as user data for output variables per PN IO device / as PROFINET IO controller / maximum 	1433 byte
<ul style="list-style-type: none"> • as user data for input variables per PN IO device / for each sub-module as PROFINET IO controller / maximum 	240 byte
<ul style="list-style-type: none"> • as user data for output variables per PN IO device / for each sub-module as PROFINET IO controller / maximum 	240 byte

Performance data / PROFINET CBA

Number of remote connection partners / with PROFINET CBA	64
Number of connections / with PROFINET CBA / total	600
Amount of data	

• as user data for digital inputs / with PROFINET CBA / maximum	8 Kibyte
• as user data for digital outputs / with PROFINET CBA / maximum	8 Kibyte
• as user data for arrays and data types / in the case of acyclic transmission / with PROFINET CBA / maximum	8 Kibyte
• as user data for arrays and data types / with PROFINET CBA / with cyclical transfer / maximum	250 byte
• as user data for arrays and data types / with PROFINET CBA / in the case of local interconnection / maximum	2400 byte

Performance data / PROFINET CBA / remote connection / with acyclic transmission

Refresh time / of the remote interconnections / in the case of acyclic transmission / with PROFINET CBA	100 ms
Number of remote connections to input variables / in the case of acyclic transmission / with PROFINET CBA / maximum	150
Number of remote connections to output variables / in the case of acyclic transmission / with PROFINET CBA / maximum	150
Amount of data	
• as user data for remote interconnections with input variables / in the case of acyclic transmission / with PROFINET CBA	8 Kibyte
• as user data for remote interconnections with output variables / in the case of acyclic transmission / with PROFINET CBA	8 Kibyte

Performance data / PROFINET CBA / remote connection / with cyclic transmission

Refresh time / of the remote interconnections / with PROFINET CBA / with cyclical transfer	10 ms
Number of remote connections to input variables / with PROFINET CBA / with cyclical transfer / maximum	250
Number of remote connections to output variables / with PROFINET CBA / with cyclical transfer / maximum	250
Amount of data	
• as user data for remote interconnections with input variables / with PROFINET CBA / with cyclical transfer / maximum	2000 byte
• as user data for remote interconnections with output variables / with PROFINET CBA / with cyclical transfer / maximum	2000 byte

Performance data / PROFINET CBA / HMI variables via PROFINET / acyclic

Number of connectable HMI stations / for HMI variables / in the case of acyclic transmission / with PROFINET CBA	3
Refresh time / of the HMI variables / in the case of acyclic transmission / with PROFINET CBA	500 ms
Number of HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum	200
Amount of data / as user data for HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum	8 Kibyte

Performance data / PROFINET CBA / device-internal connections

Number of internal connections / with PROFINET CBA / maximum	300
Amount of data / of the internal connections / with PROFINET CBA / maximum	2400 byte

Performance data / PROFINET CBA / connections to constants

Number of connections with constants / with PROFINET CBA / maximum	500
Amount of data / as user data for interconnections with constants / with PROFINET CBA / maximum	4000 byte

Performance data / PROFINET CBA / PROFIBUS proxy functionality

Product function / with PROFINET CBA / PROFIBUS proxy functionality	No
Product function / MIB support	Yes
Protocol / is supported	
• SNMP v1	Yes
• SNMP v3	Yes
• DCP	Yes
• LLDP	Yes
Configuration software	
• required	STEP 7 V5.5 SP3 or higher / STEP 7 Professional V12 (TIA Portal) or higher
• for PROFINET CBA / required	SIMATIC iMap V3.0 SP1 and higher

Product functions / Diagnosis

Product function / Web-based diagnostics	Yes
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Product functions / switch

Product feature / Switch	Yes
Product function	
• switch-managed	No
• with IRT / PROFINET IO switch	Yes
• Configuration with STEP 7	Yes

Product functions / Redundancy

Product function	
<ul style="list-style-type: none"> • Ring redundancy 	Yes
<ul style="list-style-type: none"> • Redundancy manager 	Yes
<ul style="list-style-type: none"> • Parallel Redundancy Protocol (PRP)/operation in the PRP-network 	Yes
Protocol / is supported / Media Redundancy Protocol (MRP)	Yes

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
Number of possible connections / with VPN connection	32
Product function	
<ul style="list-style-type: none"> • password protection for Web applications 	Yes
<ul style="list-style-type: none"> • ACL - IP-based 	Yes
<ul style="list-style-type: none"> • ACL - IP-based for PLC/routing 	Yes
<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 	Yes
<ul style="list-style-type: none"> • log file for unauthorized access 	No

Product functions / Time

Product function / SICLOCK support	Yes
Product function / pass on time synchronization	Yes
Protocol / is supported	
<ul style="list-style-type: none"> • NTP 	Yes

Further Information / Internet Links

Internet-Link	
<ul style="list-style-type: none"> • to website: Selector SIMATIC NET SELECTION TOOL 	http://www.siemens.com/snst
<ul style="list-style-type: none"> • to website: Industrial communication 	http://www.siemens.com/simatic-net
<ul style="list-style-type: none"> • to website: Industry Mall 	https://mall.industry.siemens.com
<ul style="list-style-type: none"> • to website: Information and Download Center 	http://www.siemens.com/industry/infocenter
<ul style="list-style-type: none"> • to website: Image database 	http://automation.siemens.com/bilddb
<ul style="list-style-type: none"> • to website: CAx Download Manager 	http://www.siemens.com/cax
<ul style="list-style-type: none"> • to website: Industry Online Support 	https://support.industry.siemens.com

Security information

Security information

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