SIEMENS

Data sheet 6GK7443-1GX20-0XE0

Product type designation

CP 443-1 Advanced

Communications processor CP 443-1 Advanced for connection from SIMATIC S7-400 CPU to Industrial Ethernet: PROFINET IO-Controller with RT and IRT MRP, PROFINET CBA, TCP/IP, ISO, UDP, S7 comm., S5-compat. Comm. (SEND/RECEIVE) fetch/write, with and without RFC1006, Multicast, Diagnostic extension, SNMP, DHCP, FTP client/server, Email, Data storage on C-plug PROFINET interface 4x RJ45 (10/100 MBit) Gigabit interface 1x RJ45 (10/100/1000 MB)

Transmission rate	
Transfer rate	
• at the 1st interface	10 ... 1000 Mbit/s
• at the 2nd interface	10 ... 100 Mbit/s

Interfaces	
Number of interfaces / acc. to Industrial Ethernet	5
Number of electrical connections	
• at the 1st interface / acc. to Industrial Ethernet	1
• at the 2nd interface / acc. to Industrial Ethernet	4
Type of electrical connection	
• at the 1st interface / acc. to Industrial Ethernet	RJ45 port
• 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
Supply voltage	5 V

Relative symmetrical tolerance / at DC	
• at 5 V	5 %
Consumed current	
• from backplane bus / at DC / at 5 V / typical	1.8 A
Power loss [W]	9 W

Ambient conditions	
Ambient temperature	
• during operation	0 ... 60 °C
• during storage	-40 ... +70 °C
• 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	
• per CPU / maximum	14
• 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	
• as user data per ISO connection / for open communication / by means of SEND/RECEIVE blocks / maximum	8 Kibyte
• as user data per ISO on TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum	8 Kibyte
• as user data per TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum	8 Kibyte
• 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	

• by means of T blocks / maximum	64
Amount of data	
• 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	
• maximum	128
• with PG connections / maximum	2
• with OP connections / maximum	30
• 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	
• as client / by means of FTP / maximum	20
• as server / by means of FTP / maximum	10
Number of possible connections	
• as server / by means of HTTP / maximum	4
• as e-mail client / maximum	1
Amount of data / as user data for email / maximum	8 Kibyte
Storage capacity / of the user memory	
• as flash memory file system	30 Mibyte
• as RAM	16 Mibyte
• 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	128
Number of external PN IO lines / with PROFINET / per rack	4
Amount of data	
• as user data for input variables / as PROFINET IO controller / maximum	4 Kibyte

• as user data for input variables / as PROFINET IO controller / maximum	4 Kibyte
• as user data for input variables per PN IO device / as PROFINET IO controller / maximum	1433 byte
• as user data for output variables per PN IO device / as PROFINET IO controller / maximum	1433 byte
• as user data for input variables per PN IO device / for each sub-module as PROFINET IO controller / maximum	240 byte
• 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 functions / management, configuration	

Product function / MIB support	Yes
Protocol / is supported	
• SNMP v1	Yes
• DCP	Yes
• LLDP	Yes
Configuration software	
• required	STEP 7 V5.4 SP4 or higher
• for PROFINET CBA / required	SIMATIC iMap V3.0 SP1 and higher

Product functions / Diagnosis

Product function / Web-based diagnostics	Yes

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	
• Ring redundancy	Yes
• Redundancy manager	Yes
Protocol / is supported / Media Redundancy Protocol (MRP)	Yes

Product functions / Security

Product function	
• password protection for Web applications	Yes
• ACL - IP-based	Yes
• ACL - IP-based for PLC/routing	Yes
• switch-off of non-required services	Yes
• Blocking of communication via physical ports	Yes
• log file for unauthorized access	No

Product functions / Time

Product function / SICLOCK support	Yes
Product function / pass on time synchronization	Yes
Protocol / is supported	
• NTP	Yes

Further Information / Internet Links

Internet-Link	
• to website: Selector SIMATIC NET SELECTION TOOL	http://www.siemens.com/snst
• to website: Industrial communication	http://www.siemens.com/simatic-net

• to website: Industry Mall	https://mall.industry.siemens.com
• to website: Information and Download Center	http://www.siemens.com/industry/infocenter
• to website: Image database	http://automation.siemens.com/bilddb
• to website: CAx Download Manager	http://www.siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com

Security information

Security information	Siemens provides products and solutions with industrial security functions that support the secure operation of plants, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this in mind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates. For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action(e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit http://www.siemens.com/industrialsecurity. To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit http://support.automation.siemens.com. (V3.4)
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