

Product type designation

**CP 343-1 Advanced**  
Communications processor CP 343-1 Advanced for connection of SIMATIC S7-300 CPU to Industrial Ethernet: PROFINET IO controller a./o. IO device; RT and IRT, MRP, PROFINET CBA; TCP/IP, ISO, UDP, S7 comm., S5-compat. communication (SEND/RECEIVE) with Fetch/Write RFC1006, Multicast Diagnostic extension, SNMP, DHCP, FTP client/server, e-mail, Gigabit-SS1X RJ45 (10/100/1000) PROFINET interface 2x RJ45 (10/100 Mbit); PROFINET CBA; security (firewall/VPN); PROFINergy



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	3
Number of electrical connections	
• at the 1st interface / acc. to Industrial Ethernet	1
• at the 2nd interface / acc. to Industrial Ethernet	2
• for power supply	1
Type of electrical connection	
• at the 1st interface / acc. to Industrial Ethernet	RJ45 port
• at the 2nd interface / acc. to Industrial Ethernet	RJ45 port
• for power supply	2-pole plugable terminal block
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 / external	24 V
Supply voltage / external / at DC / Rated value	24 V
Relative positive tolerance / at DC / at 24 V	20 %
Relative negative tolerance / at DC / at 24 V	15 %
Consumed current	
• from backplane bus / at DC / at 5 V / typical	0.14 A
• from external supply voltage / at DC / at 24 V / typical	0.48 A
• from external supply voltage / at DC / at 24 V / maximum	0.62 A
Power loss [W]	14.7 W

#### Ambient conditions

Ambient temperature	
• for vertical installation / during operation	0 ... 40 °C
• for horizontally arranged busbars / 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
Width	80 mm
Height	125 mm
Depth	120 mm
Net weight	0.8 kg
Mounting type	
• S7-300 rail mounting	Yes

#### Performance data / open communication

Number of possible connections / for open communication / by means of SEND/RECEIVE blocks / maximum	16
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

<ul style="list-style-type: none"> <li>• as user data per TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum</li> </ul>	8 Kibyte
<ul style="list-style-type: none"> <li>• as user data per UDP connection / for open IE communication / by means of SEND/RECEIVE blocks / maximum</li> </ul>	2 Kibyte
Number of Multicast stations	16

#### Performance data / S7 communication

Number of possible connections / for S7 communication	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	16

#### Performance data / multi-protocol mode

Number of active connections / with multi-protocol mode	48
---	----

#### Performance data / IT functions

Number of possible connections	
<ul style="list-style-type: none"> <li>• as client / by means of FTP / maximum</li> </ul>	10
<ul style="list-style-type: none"> <li>• as server / by means of FTP / maximum</li> </ul>	2
Number of possible connections	
<ul style="list-style-type: none"> <li>• as server / by means of HTTP / maximum</li> </ul>	4
<ul style="list-style-type: none"> <li>• as e-mail client / maximum</li> </ul>	1
Amount of data / as user data for email / maximum	8 Kibyte
Storage capacity / of the user memory	
<ul style="list-style-type: none"> <li>• as flash memory file system</li> </ul>	28 Mibyte
<ul style="list-style-type: none"> <li>• as RAM</li> </ul>	30 Mibyte
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	1
Amount of data	
<ul style="list-style-type: none"> <li>• as user data for input variables / as PROFINET IO controller / maximum</li> </ul>	4 Kibyte
<ul style="list-style-type: none"> <li>• as user data for input variables / as PROFINET IO controller / maximum</li> </ul>	4 Kibyte
<ul style="list-style-type: none"> <li>• as user data for input variables per PN IO device / as PROFINET IO controller / maximum</li> </ul>	1433 byte

- as user data for output variables per PN IO device / as PROFINET IO controller / maximum
- as user data for input variables per PN IO device / for each sub-module as PROFINET IO controller / maximum
- as user data for output variables per PN IO device / for each sub-module as PROFINET IO controller / maximum

1433 byte

240 byte

240 byte

#### Performance data / PROFINET communication / as PN IO-Device

Product function / PROFINET IO device	Yes
Amount of data	
• as user data for input variables / as PROFINET IO device / maximum	1024 byte
• as user data for input variables / as PROFINET IO device / maximum	1024 byte
• as user data for input variables / for each sub-module as PROFINET IO device	240 byte
• as user data for input variables / for each sub-module as PROFINET IO device	240 byte
• as user data for the consistency area for each sub-module	240 byte
Number of submodules / per PROFINET IO-Device	32

#### Performance data / PROFINET CBA

Number of remote connection partners / with PROFINET CBA	64
Number of connections / with PROFINET CBA / total	1000
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	128
Number of remote connections to output variables / in the case of acyclic transmission / with PROFINET CBA / maximum	128
Amount of data <ul style="list-style-type: none"> <li>• as user data for remote interconnections with input variables / in the case of acyclic transmission / with PROFINET CBA</li> <li>• as user data for remote interconnections with output variables / in the case of acyclic transmission / with PROFINET CBA</li> </ul>	8 Kibyte  8 Kibyte

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

Refresh time / of the remote interconnections / with PROFINET CBA / with cyclical transfer	8 ms
Number of remote connections to input variables / with PROFINET CBA / with cyclical transfer / maximum	200
Number of remote connections to output variables / with PROFINET CBA / with cyclical transfer / maximum	200
Amount of data <ul style="list-style-type: none"> <li>• as user data for remote interconnections with input variables / with PROFINET CBA / with cyclical transfer / maximum</li> <li>• as user data for remote interconnections with output variables / with PROFINET CBA / with cyclical transfer / maximum</li> </ul>	2000 byte  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	256
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	200
Amount of data / as user data for interconnections with constants / with PROFINET CBA / maximum	4096 byte

#### Performance data / PROFINET CBA / PROFIBUS proxy functionality

Product function / with PROFINET CBA / PROFIBUS proxy functionality	No
---	----

#### Performance data / telecontrol

Protocol / is supported	
• TCP/IP	Yes

#### Product functions / management, configuration

Product function / MIB support	Yes
Protocol / is supported	
• SNMP v1	Yes
• SNMP v3	Yes
• DCP	Yes
• LLDP	Yes
Configuration software	
• required	STEP7 V5.5 SP2 HF1 or higher / STEP 7 Professional V12 (TIA Portal) or higher
• for PROFINET CBA / required	SIMATIC iMap V3.0 SP4 and higher
Identification & maintenance function	
• I&M0 - device-specific information	Yes
• I&M1 – higher-level designation/location designation	Yes

#### 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

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	
• 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	<a href="http://www.siemens.com/snst">http://www.siemens.com/snst</a>
• to website: Industrial communication	<a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a>
• to website: Industry Mall	<a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a>
• to website: Information and Download Center	<a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a>
• to website: Image database	<a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a>
• to website: CAx Download Manager	<a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a>
• to website: Industry Online Support	<a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>

## 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)

**last modified:**

08/26/2019