

### 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, email, Gigabit-SS1X RJ45 (10/100/1000); PROFINET interface 2x RJ45 (10/100 Mbit/s); PROFINET CBA; firewall/VPN; PROFIenergy.

### transfer rate

|                        |                    |
|------------------------|--------------------|
| transfer rate          |                    |
| • at the 1st interface | 10 ... 1000 Mbit/s |
| • at the 2nd interface | 10 ... 100 Mbit/s  |

### interfaces

|                                                           |                                |
|-----------------------------------------------------------|--------------------------------|
| number of interfaces / according to Industrial Ethernet   | 3                              |
| number of electrical connections                          |                                |
| • at the 1st interface / according to Industrial Ethernet | 1                              |
| • at the 2nd interface / according to Industrial Ethernet | 2                              |
| • for power supply                                        | 1                              |
| type of electrical connection                             |                                |
| • at the 1st interface / according to Industrial Ethernet | RJ45 port                      |
| • at the 2nd interface / according to Industrial Ethernet | RJ45 port                      |
| type of electrical connection                             |                                |
| • 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           |

|                                                                                                                |                |
|----------------------------------------------------------------------------------------------------------------|----------------|
| <b>design, dimensions and weights</b>                                                                          |                |
| module format                                                                                                  | Compact module |
| width                                                                                                          | 80 mm          |
| height                                                                                                         | 125 mm         |
| depth                                                                                                          | 120 mm         |
| net weight                                                                                                     | 0.45 kg        |
| fastening method                                                                                               |                |
| • S7-300 rail mounting                                                                                         | Yes            |
| <b>performance data / open communication</b>                                                                   |                |
| number of possible connections / for open communication / by means of SEND/RECEIVE blocks / maximum            | 16             |
| data volume                                                                                                    |                |
| • 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 Multicast stations                                                                                   | 16             |
| <b>performance data / S7 communication</b>                                                                     |                |
| number of possible connections / for S7 communication                                                          |                |
| • maximum                                                                                                      | 16             |
| <b>performance data / multi-protocol mode</b>                                                                  |                |
| number of active connections / with multi-protocol mode                                                        | 48             |
| <b>performance data / IT functions</b>                                                                         |                |
| number of possible connections                                                                                 |                |
| • as client / by means of FTP / maximum                                                                        | 10             |
| • as server / by means of FTP / maximum                                                                        | 2              |
| number of possible connections                                                                                 |                |
| • as server / by means of HTTP / maximum                                                                       | 4              |
| • as email client / maximum                                                                                    | 1              |
| data volume / as user data for email / maximum                                                                 | 8 Kibyte       |
| storage capacity / of the user memory                                                                          |                |
| • as flash memory file system                                                                                  | 28 Mibyte      |
| • as RAM                                                                                                       | 30 Mibyte      |
| number of possible write cycles / of the flash memory cells                                                    | 100000         |
| <b>performance data / PROFINET communication / as PN IO controller</b>                                         |                |
| product function / PROFINET IO controller                                                                      | Yes            |
| number of PN IO devices / on PROFINET IO controller / operable / total                                         | 128            |
| number of PN IO IRT devices / on PROFINET IO controller / operable                                             | 128            |
| number of external PN IO lines / with PROFINET / per rack                                                      | 1              |
| data volume                                                                                                    |                |
| • as user data for input variables / as PROFINET IO controller / maximum                                       | 4 Kibyte       |
| • as user data for output 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       |
| <b>performance data / PROFINET communication / as PN IO device</b>                                             |                |
| product function / PROFINET IO device                                                                          | Yes            |
| data volume                                                                                                    |                |

|                                                                                                                                                                              |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <ul style="list-style-type: none"> <li>• as user data for input variables / as PROFINET IO device / maximum</li> </ul>                                                       | 1024 byte |
| <ul style="list-style-type: none"> <li>• as user data for output variables / as PROFINET IO device / maximum</li> </ul>                                                      | 1024 byte |
| <ul style="list-style-type: none"> <li>• as user data for input variables / for each sub-module as PROFINET IO device</li> </ul>                                             | 240 byte  |
| <ul style="list-style-type: none"> <li>• as user data for output variables / for each sub-module as PROFINET IO device</li> </ul>                                            | 240 byte  |
| <ul style="list-style-type: none"> <li>• as user data for the consistency area for each sub-module</li> </ul>                                                                | 240 byte  |
| number of submodules / per PROFINET IO-Device                                                                                                                                | 32        |
| <b>performance data / PROFINET CBA</b>                                                                                                                                       |           |
| number of remote connection partners / with PROFINET CBA                                                                                                                     | 64        |
| number of connections / with PROFINET CBA / total                                                                                                                            | 1000      |
| data volume                                                                                                                                                                  |           |
| <ul style="list-style-type: none"> <li>• as user data for digital inputs / with PROFINET CBA / maximum</li> </ul>                                                            | 8 Kibyte  |
| <ul style="list-style-type: none"> <li>• as user data for digital outputs / with PROFINET CBA / maximum</li> </ul>                                                           | 8 Kibyte  |
| <ul style="list-style-type: none"> <li>• as user data for arrays and data types / in the case of acyclic transmission / with PROFINET CBA / maximum</li> </ul>               | 8 Kibyte  |
| <ul style="list-style-type: none"> <li>• as user data for arrays and data types / with PROFINET CBA / with cyclical transfer / maximum</li> </ul>                            | 250 byte  |
| <ul style="list-style-type: none"> <li>• as user data for arrays and data types / with PROFINET CBA / in the case of local interconnection / maximum</li> </ul>              | 2400 byte |
| <b>performance data / PROFINET CBA / remote interconnection / with acyclic transfer</b>                                                                                      |           |
| update 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       |
| data volume                                                                                                                                                                  |           |
| <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> </ul>  | 8 Kibyte  |
| <ul style="list-style-type: none"> <li>• as user data for remote interconnections with output variables / in the case of acyclic transmission / with PROFINET CBA</li> </ul> | 8 Kibyte  |
| <b>performance data / PROFINET CBA / remote interconnection / with cyclic transfer</b>                                                                                       |           |
| update time / of the remote interconnections / with cyclical transfer / with PROFINET CBA                                                                                    | 8 ms      |
| number of remote connections to input variables / with PROFINET CBA / with cyclic transfer / maximum                                                                         | 200       |
| number of remote connections to output variables / with cyclical transfer / with PROFINET CBA / maximum                                                                      | 200       |
| data volume                                                                                                                                                                  |           |
| <ul style="list-style-type: none"> <li>• as user data for remote interconnections with input variables / with cyclical transfer / with PROFINET CBA / maximum</li> </ul>     | 2000 byte |
| <ul style="list-style-type: none"> <li>• as user data for remote interconnections with output variables / with cyclical transfer / with PROFINET CBA / maximum</li> </ul>    | 2000 byte |
| <b>performance data / PROFINET CBA / HMI variables via PROFINET / acyclic</b>                                                                                                |           |
| number of connectable HMI stations / for HMI variables / in the case of acyclic transmission / with PROFINET CBA                                                             | 3         |
| update 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       |
| data volume / as user data for HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum                                                             | 8 Kibyte  |
| <b>performance data / PROFINET CBA / device-internal interconnections</b>                                                                                                    |           |
| number of internal connections / with PROFINET CBA / maximum                                                                                                                 | 256       |
| data volume / of the internal connections / with PROFINET CBA / maximum                                                                                                      | 2400 byte |
| <b>performance data / PROFINET CBA / interconnections to constants</b>                                                                                                       |           |
| number of connections with constants / with PROFINET CBA / maximum                                                                                                           | 200       |

|                                                                                              |                                                                                                   |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| data volume / as user data for interconnections with constants / with PROFINET CBA / maximum | 4096 byte                                                                                         |
| <b>performance data / PROFINET CBA / PROFIBUS proxy functionality</b>                        |                                                                                                   |
| product function / with PROFINET CBA / PROFIBUS proxy functionality                          | No                                                                                                |
| <b>performance data / telecontrol</b>                                                        |                                                                                                   |
| protocol / is supported                                                                      |                                                                                                   |
| • TCP/IP                                                                                     | Yes                                                                                               |
| <b>product functions / management, configuration, engineering</b>                            |                                                                                                   |
| 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                                                                                               |
| <b>product functions / diagnostics</b>                                                       |                                                                                                   |
| product function / web-based diagnostics                                                     | Yes                                                                                               |
| <b>product functions / switch</b>                                                            |                                                                                                   |
| product feature / switch                                                                     | Yes                                                                                               |
| product function                                                                             |                                                                                                   |
| • switch-managed                                                                             | No                                                                                                |
| • with IRT / PROFINET IO switch                                                              | Yes                                                                                               |
| • configuration with STEP 7                                                                  | Yes                                                                                               |
| <b>product functions / redundancy</b>                                                        |                                                                                                   |
| product function                                                                             |                                                                                                   |
| • ring redundancy                                                                            | Yes                                                                                               |
| • redundancy manager                                                                         | Yes                                                                                               |
| protocol / is supported / Media Redundancy Protocol (MRP)                                    | Yes                                                                                               |
| <b>product functions / security</b>                                                          |                                                                                                   |
| 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                                                                                                |
| <b>product functions / time</b>                                                              |                                                                                                   |
| product function / SICLOCK support                                                           | Yes                                                                                               |
| product function / pass on time synchronization                                              | Yes                                                                                               |
| protocol / is supported                                                                      |                                                                                                   |
| • NTP                                                                                        | Yes                                                                                               |
| <b>standards, specifications, approvals / hazardous environments</b>                         |                                                                                                   |
| certificate of suitability / CCC / for hazardous zone according to GB standard               | Yes; GB3836.1, GB3836.8                                                                           |
| certificate of suitability / CCC / for hazardous zone according to GB standard / as marking  | Ex nA IIC T4 Gc                                                                                   |
| <b>further information / internet links</b>                                                  |                                                                                                   |
| internet link                                                                                |                                                                                                   |
| • to website: Image database                                                                 | <a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a> |

## security information

### security information

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