# SIEMENS

| Product type designation | CP 443-1 Advanced |
|---|---|
| | SIMATIC NET, CP 443-1 ADVANCED COMMUNICATION PROCESSOR FOR CONNECTING SIMATIC S7-400 CPU UP TO V5.0 TO IND. ETHERNET VIA PROFINET IO-CONTROLLER AND PROFINET CBA, ISO,TCP/IP SEND/RECEIVE A. FETCH/WRITE, UDP, TCP, S7-COMMUNICATION, W. AND W/O RFC1006, MULTICAST HTML DIAGNOS.,FTP CLIENT/SERVER SNMP, DHCP, E-MAIL, WWW, 10/100 MBIT, SWITCH CONNECTION 4XRJ45 |

## Transmission rate

| | |
|---|---|
| Transfer rate | |
| • at the 1st interface | 10 ... 100 Mbit/s |

## Interfaces

| | |
|---|---|
| Number of interfaces / acc. to Industrial Ethernet | 4 |
| Number of electrical connections | |
| • at the 1st interface / acc. to Industrial Ethernet | 4 |
| Type of electrical connection | |
| • at the 1st 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] | 7.25 W |

## Permitted 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 |
| • as server / by means of HTTP / maximum | 4 |
| • as e-mail client / maximum | 1 |
| Amount of data / as user data for email / maximum | 2 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 | 125 |
| Number of PN IO IRT devices / on PROFINET IO controller / usable | 0 |
| 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 | 8 Kibyte |
| • as user data for input variables / as PROFINET IO controller / maximum | 8 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 function / MIB support | Yes |
| Protocol / is supported | |
| • SNMP v1 | Yes |
| • LLDP | No |
| Configuration software | |
| • required | STEP 7 V5.4 SP1 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 | No |
| • Configuration with STEP 7 | Yes |

| Product functions / Redundancy | |
|---|---|
| Product function | |
| • Ring redundancy | No |
| • Parallel Redundancy Protocol (PRP)/operation in the PRP-network | No |

| Product functions / Security | |
|---|---|
| Product function | |
| • password protection for Web applications | Yes |
| • ACL - IP-based | Yes |
| • ACL - IP-based for PLC/routing | No |
| • switch-off of non-required services | No |
| • 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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