

product type designation

CM 1542-1

communications module CM 1542-1 for connection of S7-1500 to PROFINET as IO Controller or IO Device: TCP/IP, ISO-on-TCP, UDP, S7 communication, IP broadcast multicast, SNMPV1, time-of-day synchronization via NTP, 2xRJ45 (10/100 Mbit).

transfer rate

transfer rate

- at the 1st interface

10 ... 100 Mbit/s

interfaces

number of interfaces / according to Industrial Ethernet

1

number of electrical connections

- at the 1st interface / according to Industrial Ethernet

2

type of electrical connection

- at the 1st interface / according to Industrial Ethernet

RJ45 port

supply voltage, current consumption, power loss

type of voltage / of the supply voltage

DC

supply voltage / 1 / from backplane bus

15 V

relative symmetrical tolerance / at DC

- at 15 V

3 %

consumed current

- from backplane bus / at DC / at 15 V / typical

0.22 A

power loss [W]

3.3 W

ambient conditions

ambient temperature

- for vertical installation / during operation
- for horizontally arranged busbars / during operation
- during storage
- during transport

-25 ... +40 °C

-25 ... +60 °C

-40 ... +70 °C

-40 ... +70 °C

installation altitude / at height above sea level / maximum

5000 m

relative humidity

- at 25 °C / without condensation / during operation / maximum

95 %

protection class IP

IP20

design, dimensions and weights

module format

Compact module S7-1500 single width

width

35 mm

height

142 mm

depth

129 mm

net weight

0.4 kg

fastening method

- S7-1500 rail mounting

Yes

product features, product functions, product components / general

number of units

- per CPU / maximum
- note

8

depending on CPU type

performance data / open communication

number of possible connections / for open communication

- by means of T blocks / maximum

64; depending on the system upper limit

data volume

- as user data per ISO on TCP connection / for open communication / by means of T blocks / maximum

65536 byte

number of Multicast stations

6

performance data / S7 communication

number of possible connections / for S7 communication

<ul style="list-style-type: none"> • maximum 	64; depending on the system upper limit
performance data / multi-protocol mode	
number of active connections / with multi-protocol mode	64
performance data / PROFINET communication / as PN IO controller	
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	64
number of external PN IO lines / with PROFINET / per rack	10
data volume	
<ul style="list-style-type: none"> • as user data for input variables / as PROFINET IO controller / maximum 	8 Kibyte
<ul style="list-style-type: none"> • as user data for output variables / as PROFINET IO controller / maximum 	8 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 	256 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 	256 byte
performance data / PROFINET communication / as PN IO device	
product function / PROFINET IO device	Yes
data volume	
<ul style="list-style-type: none"> • as user data for input variables / as PROFINET IO device / maximum 	8192 byte
<ul style="list-style-type: none"> • as user data for output variables / as PROFINET IO device / maximum 	8192 byte
<ul style="list-style-type: none"> • as user data for input variables / for each sub-module as PROFINET IO device 	256 byte
<ul style="list-style-type: none"> • as user data for output variables / for each sub-module as PROFINET IO device 	256 byte
<ul style="list-style-type: none"> • as user data for the consistency area for each sub-module 	256 byte
number of submodules / per PROFINET IO-Device	32
performance data / telecontrol	
protocol / is supported	
<ul style="list-style-type: none"> • TCP/IP 	Yes
product functions / management, configuration, engineering	
product function / MIB support	Yes
protocol / is supported	
<ul style="list-style-type: none"> • SNMP v1 	Yes
<ul style="list-style-type: none"> • DCP 	Yes
<ul style="list-style-type: none"> • LLDP 	Yes
identification & maintenance function	
<ul style="list-style-type: none"> • I&M0 - device-specific information 	Yes
<ul style="list-style-type: none"> • I&M1 - higher level designation/location designation 	Yes
product functions / diagnostics	
product function / web-based diagnostics	Yes; via S7-1500 CPU
product functions / switch	
product feature / switch	Yes
product function	
<ul style="list-style-type: none"> • switch-managed 	No
<ul style="list-style-type: none"> • with IRT / PROFINET IO switch 	Yes
<ul style="list-style-type: none"> • configuration with STEP 7 	Yes
product functions / routing	
service / routing / note	IP routing up to 1 Mbps
product function	
<ul style="list-style-type: none"> • static IP routing 	Yes
<ul style="list-style-type: none"> • static IP routing IPv6 	No
<ul style="list-style-type: none"> • dynamic IP routing 	No
<ul style="list-style-type: none"> • dynamic IP routing IPv6 	No

protocol / is supported	
<ul style="list-style-type: none"> • RIP v1 • RIPv2 • RIPnG for IPv6 • OSPFv2 • OSPFv3 for IPv6 • VRRP • VRRP for IPv6 • BGP • PPP • PoE via DSL 	<p>No</p>
product functions / redundancy	
product function	
<ul style="list-style-type: none"> • ring redundancy • redundancy manager 	<p>Yes</p> <p>Yes</p>
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product functions / security	
product function	
<ul style="list-style-type: none"> • switch-off of non-required services • blocking of communication via physical ports • log file for unauthorized access 	<p>Yes</p> <p>No</p> <p>No</p>
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
standards, specifications, approvals / hazardous environments	
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
<ul style="list-style-type: none"> • as marking 	Ex nA IIC T4 Gc
further information / internet links	
internet link	
<ul style="list-style-type: none"> • to web page: selection aid TIA Selection Tool • to website: Industrial communication • to website: Industry Mall • to website: Information and Download Center • to website: Image database • to website: CAx-Download-Manager • to website: Industry Online Support 	<p>http://www.siemens.com/tia-selection-tool</p> <p>http://www.siemens.com/simatic-net</p> <p>https://mall.industry.siemens.com</p> <p>http://www.siemens.com/industry/infocenter</p> <p>http://automation.siemens.com/bilddb</p> <p>http://www.siemens.com/cax</p> <p>https://support.industry.siemens.com</p>
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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