SIEMENS

Product type designation	CM 1542-1
	COMMUNICATIONS MODULE CM 1542-1 FOR CONNECTING S7-1500 TO PROFINET AS IO-CONTROLLER: TCP/IP, ISO-ON-TCP, UDP, S7-COMMUNICATION, IP-BROADCAST/ MULTICAST, SNMPV1, CLOCK SYNCHRONISATION VIA NTP, 2XRJ45 (10/100 MBIT)

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

Interfaces	
Number of interfaces / acc. to Industrial Ethernet	1
Number of electrical connections	
• at the 1st interface / acc. to Industrial Ethernet	2
Type of electrical connection	
• at the 1st interface / acc. 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

Permitted 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 S7-1500 single width
Width	35 mm
Height	142 mm
Depth	129 mm
Net weight	0.4 kg
Mounting type	
• S7-1500 rail mounting	Yes

Product properties, functions, components / general

Number of units	
• per CPU / maximum	8
• Note	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
Amount of data	
• 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	
• maximum	64
• Note	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 / usable / total	128
Number of PN IO IRT devices / on PROFINET IO controller / usable	64
Number of external PN IO lines / with PROFINET / per rack	10
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	256 byte
• as user data for output variables per PN IO device / for each sub-module as PROFINET IO controller / maximum	256 byte

Performance data / telecontrol	
Protocol / is supported	
• TCP/IP	Yes
Product function / MIB support	Yes
Protocol / is supported	
• SNMP v1	Yes
• DCP	Yes
• LLDP	Yes
Configuration software	
• required	STEP 7 Professional V13 (TIA Portal) or 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; yes, via S7-1500 CPU

Product functions / switch	
Product feature / Switch	Yes
Product function	
• switch-managed	No
• with IRT / PROFINET IO switch	Yes
• Configuration with STEP 7	Yes

01/31/2017

Product functions / Redundancy

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

Product functions / Security

Product function	
• switch-off of non-required services	Yes
• Blocking of communication via physical ports	No
• 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)