

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	
<ul style="list-style-type: none"> at the 1st interface 	10 ... 100 Mbit/s
interfaces	
number of interfaces / according to Industrial Ethernet	1
number of electrical connections	
<ul style="list-style-type: none"> at the 1st interface / according to Industrial Ethernet 	2
type of electrical connection	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> at 15 V 	3 %
consumed current	
<ul style="list-style-type: none"> from backplane bus / at DC / at 15 V / typical 	0.22 A
power loss [W]	3.3 W
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> for vertical installation / during operation for horizontally arranged busbars / during operation during storage during transport note 	-25 ... +40 °C -25 ... +60 °C -40 ... +70 °C -40 ... +70 °C without condensation or icing
installation altitude / at height above sea level / maximum	5000 m
ambient condition / relating to ambient temperature - air pressure - installation altitude	restrictions for installation altitudes > 2 000 m, see manual
relative humidity	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> S7-1500 rail mounting 	Yes

product features, product functions, product components / general	
number of units	8
<ul style="list-style-type: none"> per CPU / maximum note 	depending on CPU type
performance data / open communication	
number of possible connections / for open communication	64; depending on the system upper limit
<ul style="list-style-type: none"> by means of T blocks / maximum 	
data volume	65536 byte
<ul style="list-style-type: none"> as user data per ISO on TCP connection / for open communication / by means of T blocks / maximum 	
number of Multicast stations	6
performance data / S7 communication	
number of possible connections / for S7 communication	64; depending on the system upper limit
<ul style="list-style-type: none"> maximum 	
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 as user data for output variables / as PROFINET IO controller / maximum as user data for input variables per PN IO device / as PROFINET IO controller / maximum 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 	8 Kibyte 8 Kibyte 1433 byte 1433 byte 256 byte 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 as user data for output variables / as PROFINET IO device / maximum as user data for input variables / for each sub-module as PROFINET IO device as user data for output variables / for each sub-module as PROFINET IO device as user data for the consistency area for each sub-module 	8192 byte 8192 byte 256 byte 256 byte 256 byte
number of submodules / per PROFINET IO-Device	32
performance data / telecontrol	
protocol / is supported	Yes
<ul style="list-style-type: none"> TCP/IP 	
product functions / management, configuration, engineering	
product function / MIB support	Yes
protocol / is supported	
<ul style="list-style-type: none"> SNMP v1 DCP LLDP 	Yes Yes Yes
configuration software	STEP 7 Professional V18 (TIA Portal) or higher
<ul style="list-style-type: none"> required 	
identification & maintenance function	
<ul style="list-style-type: none"> I&M0 - device-specific information I&M1 - higher level designation/location designation 	Yes Yes

product function / is supported / identification link	Yes
product functions / diagnostics	
product function / web-based diagnostics	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
product functions / routing	
service / routing / note	IP routing up to 1 Mbps
product function	
• static IP routing	Yes
• static IP routing IPv6	No
• dynamic IP routing	No
• dynamic IP routing IPv6	No
protocol / is supported	
• RIP v1	No
• RIPv2	No
• RIPnG for IPv6	No
• OSPFv2	No
• OSPFv3 for IPv6	No
• VRRP	No
• VRRP for IPv6	No
• BGP	No
• PPP	No
• PPOE via DSL	No
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
standards, specifications, approvals / hazardous environments	
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
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
Global Warming Potential [CO2 eq]	
• total	115.52 kg
• during manufacturing	21.24 kg
• during operation	93.93 kg
• after end of life	0.35 kg
further information / internet links	
internet link	
• to website: Image database	https://www.automation.siemens.com/bilddb
• to website: Industry Online Support	https://support.industry.siemens.com
security information	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks.

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Approvals / Certificates

General Product Approval	Environment	Industrial Communication
Manufacturer Declaration 	 EG-Konf.	 PROFINET

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