

### 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"> <li>at the 1st interface</li> </ul>	10 ... 100 Mbit/s
interfaces	
number of interfaces / according to Industrial Ethernet	1
number of electrical connections	
<ul style="list-style-type: none"> <li>at the 1st interface / according to Industrial Ethernet</li> </ul>	2
type of electrical connection	
<ul style="list-style-type: none"> <li>at the 1st interface / according to Industrial Ethernet</li> </ul>	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"> <li>at 15 V</li> </ul>	3 %
consumed current	
<ul style="list-style-type: none"> <li>from backplane bus / at DC / at 15 V / typical</li> </ul>	0.22 A
power loss [W]	3.3 W
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> <li>for vertical installation / during operation</li> </ul>	0 ... 40 °C
<ul style="list-style-type: none"> <li>for horizontally arranged busbars / during operation</li> </ul>	0 ... 60 °C
<ul style="list-style-type: none"> <li>during storage</li> </ul>	-40 ... +70 °C
<ul style="list-style-type: none"> <li>during transport</li> </ul>	-40 ... +70 °C
relative humidity	
<ul style="list-style-type: none"> <li>at 25 °C / without condensation / during operation / maximum</li> </ul>	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"> <li>S7-1500 rail mounting</li> </ul>	Yes
product features, product functions, product components / general	
number of units	
<ul style="list-style-type: none"> <li>per CPU / maximum</li> </ul>	8

<ul style="list-style-type: none"> <li>• note</li> </ul>	depending on CPU type
<b>performance data / open communication</b>	
number of possible connections / for open communication	
<ul style="list-style-type: none"> <li>• by means of T blocks / maximum</li> </ul>	64; depending on the system upper limit
data volume	
<ul style="list-style-type: none"> <li>• as user data per ISO on TCP connection / for open communication / by means of T blocks / maximum</li> </ul>	65536 byte
number of Multicast stations	6
<b>performance data / S7 communication</b>	
number of possible connections / for S7 communication	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	64; depending on the system upper limit
<b>performance data / multi-protocol mode</b>	
number of active connections / with multi-protocol mode	64
<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	64
number of external PN IO lines / with PROFINET / per rack	10
data volume	
<ul style="list-style-type: none"> <li>• as user data for input variables / as PROFINET IO controller / maximum</li> </ul>	8 Kibyte
<ul style="list-style-type: none"> <li>• as user data for output variables / as PROFINET IO controller / maximum</li> </ul>	8 Kibyte
<ul style="list-style-type: none"> <li>• as user data for input variables per PN IO device / as PROFINET IO controller / maximum</li> </ul>	1433 byte
<ul style="list-style-type: none"> <li>• as user data for output variables per PN IO device / as PROFINET IO controller / maximum</li> </ul>	1433 byte
<ul style="list-style-type: none"> <li>• as user data for input variables per PN IO device / for each sub-module as PROFINET IO controller / maximum</li> </ul>	256 byte
<ul style="list-style-type: none"> <li>• as user data for output variables per PN IO device / for each sub-module as PROFINET IO controller / maximum</li> </ul>	256 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>	8192 byte
<ul style="list-style-type: none"> <li>• as user data for output variables / as PROFINET IO device / maximum</li> </ul>	8192 byte
<ul style="list-style-type: none"> <li>• as user data for input variables / for each sub-module as PROFINET IO device</li> </ul>	256 byte
<ul style="list-style-type: none"> <li>• as user data for output variables / for each sub-module as PROFINET IO device</li> </ul>	256 byte
<ul style="list-style-type: none"> <li>• as user data for the consistency area for each sub-module</li> </ul>	256 byte
number of submodules / per PROFINET IO-Device	32
<b>performance data / telecontrol</b>	
protocol / is supported	
<ul style="list-style-type: none"> <li>• TCP/IP</li> </ul>	Yes
<b>product functions / management, configuration, engineering</b>	
product function / MIB support	Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>• SNMP v1</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• DCP</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• LLDP</li> </ul>	Yes
configuration software	
<ul style="list-style-type: none"> <li>• required</li> </ul>	STEP 7 Professional V14 (TIA Portal) or higher
identification & maintenance function	
<ul style="list-style-type: none"> <li>• I&amp;M0 - device-specific information</li> </ul>	Yes

<ul style="list-style-type: none"> <li>• I&amp;M1 – higher level designation/location designation</li> </ul>	Yes
<b>product functions / diagnostics</b>	
product function / web-based diagnostics	Yes; via S7-1500 CPU
<b>product functions / switch</b>	
product feature / switch	Yes
product function	
<ul style="list-style-type: none"> <li>• switch-managed</li> </ul>	No
<ul style="list-style-type: none"> <li>• with IRT / PROFINET IO switch</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• configuration with STEP 7</li> </ul>	Yes
<b>product functions / routing</b>	
service / routing / note	IP routing up to 1 Mbps
product function	
<ul style="list-style-type: none"> <li>• static IP routing</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• static IP routing IPv6</li> </ul>	No
<ul style="list-style-type: none"> <li>• dynamic IP routing</li> </ul>	No
<ul style="list-style-type: none"> <li>• dynamic IP routing IPv6</li> </ul>	No
protocol / is supported	
<ul style="list-style-type: none"> <li>• RIP v1</li> </ul>	No
<ul style="list-style-type: none"> <li>• RIPv2</li> </ul>	No
<ul style="list-style-type: none"> <li>• RIPnG for IPv6</li> </ul>	No
<ul style="list-style-type: none"> <li>• OSPFv2</li> </ul>	No
<ul style="list-style-type: none"> <li>• OSPFv3 for IPv6</li> </ul>	No
<ul style="list-style-type: none"> <li>• VRRP</li> </ul>	No
<ul style="list-style-type: none"> <li>• VRRP for IPv6</li> </ul>	No
<ul style="list-style-type: none"> <li>• BGP</li> </ul>	No
<ul style="list-style-type: none"> <li>• PPP</li> </ul>	No
<ul style="list-style-type: none"> <li>• PPOE via DSL</li> </ul>	No
<b>product functions / redundancy</b>	
product function	
<ul style="list-style-type: none"> <li>• ring redundancy</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• redundancy manager</li> </ul>	Yes
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
<b>product functions / security</b>	
product function	
<ul style="list-style-type: none"> <li>• switch-off of non-required services</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• blocking of communication via physical ports</li> </ul>	No
<ul style="list-style-type: none"> <li>• log file for unauthorized access</li> </ul>	No
<b>product functions / time</b>	
product function / SICLOCK support	Yes
product function / pass on time synchronization	Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>• NTP</li> </ul>	Yes
<b>standards, specifications, approvals / hazardous environments</b>	
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
<b>further information / internet-Links</b>	
Internet-Link	
<ul style="list-style-type: none"> <li>• to web page: selection aid TIA Selection Tool</li> </ul>	<a href="http://www.siemens.com/tia-selection-tool">http://www.siemens.com/tia-selection-tool</a>
<ul style="list-style-type: none"> <li>• to website: Industrial communication</li> </ul>	<a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a>
<ul style="list-style-type: none"> <li>• to website: Industry Mall</li> </ul>	<a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a>
<ul style="list-style-type: none"> <li>• to website: Information and Download Center</li> </ul>	<a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a>
<ul style="list-style-type: none"> <li>• to website: Image database</li> </ul>	<a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a>
<ul style="list-style-type: none"> <li>• to website: CAx-Download-Manager</li> </ul>	<a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a>
<ul style="list-style-type: none"> <li>• to website: Industry Online Support</li> </ul>	<a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>
<b>security information</b>	
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'

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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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