SIEMENS

Data sheet 6GK7543-1MX00-0XE0

product type designation	**TIM 1531 IRC**



TIM 1531 IRC Communications module for SIMATIC S7-1500, S7-400, S7-300 and ET200SP with SINAUT ST7, DNP3 and IEC 60870-5-101/104 with three RJ45 interfaces for communication via IP-based networks (WAN / LAN) and an RS-232/RS-485 interface for communication via classic wide area networks.

product brand name	SIMATIC NET
Technical Product Detail Page	https://i.siemens.com/1P6GK7543-1MX00-0XE0
transfer rate	
transfer rate	
● at the 1st interface	10 ... 1000 Mbit/s
● at the 2nd interface	10 ... 100 Mbit/s
● at the 3rd interface	10 ... 100 Mbit/s
● according to RS 232	300 ... 115200 bit/s
interfaces	
number of interfaces / according to Industrial Ethernet	3
number of electrical connections	
● for external data transmission / according to RS 232	1
● for power supply	1
number of slots	
● for memory cards	1
type of electrical connection	
● of Industrial Ethernet interface	RJ45 port
type of electrical connection	
● at interface 1 / for external data transmission	9 pin Sub-D-connector, RS232 switchable to RS485
● for power supply	2-pole plugable terminal block
slot version	
● of the memory card	SD 1.0, SD 1.1, SDHC, Siemens SMC
storage capacity / of the memory card / maximum	32 Gibyte
supply voltage, current consumption, power loss	
type of voltage / of the supply voltage	DC
supply voltage	24 V
supply voltage	20.4 ... 28.8 V
supply voltage / external / at DC / rated value	24 V
supply voltage / external / at DC / rated value	20.4 ... 28.8 V
consumed current	
● from external supply voltage / at DC / at 24 V / typical	0.15 A
● from external supply voltage / at DC / at 24 V / maximum	0.3 A
power loss [W] / with external supply voltage / at 24 V DC	
● in update mode / typical	3.9 W
● in communication mode / typical	3.9 W
product extension / optional / backup battery	No
ambient conditions	
ambient temperature	

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● during operation	0 ... 70 °C
● for vertical installation / during operation	0 ... 50 °C
● for horizontally arranged busbars / during operation	0 ... 70 °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 weights	
module format	Compact module S7-1500 double-wide
width	70 mm
height	147 mm
depth	129 mm
net weight	0.525 kg
fastening method	
● 35 mm DIN-rail mounting	No
● S7-300 rail mounting	No
● S7-1500 rail mounting	Yes
product features, product functions, product components / general	
product function	
● DynDNS client	No
number of units	
● note	Number of TIM per S7-1500: 1
wire length	
● with RS 232 interface / maximum	6 m
● with RS 485 interface / maximum	30 m
performance data / S7 communication	
number of possible connections / for S7 communication	
● maximum	132; only via LAN
● with PG connections / maximum	4
● with PG/OP connections / maximum	4
● with OP connections / maximum	4
service	
● of SIMATIC communication / as server	Yes
● SINAUT ST7 via S7 communication	Yes
● PG/OP communication	Yes
performance data / IT functions	
number of possible connections	
● as server / by means of HTTP / maximum	2
● as server / by means of HTTPS / maximum	2; 2 per Ethernet interface
● as email client / maximum	1
performance data / telecontrol	
suitability for use	
● node station	Yes
● substation	Yes
● TIM control center	Yes
control center connection	Systems with ST7, DNP3 and IEC 60870-5-101/104 protocol
● by means of a permanent connection	Systems with ST7, DNP3 and IEC 60870-5-101/104 protocol
protocol / is supported	
● DNP3	Yes
● IEC 60870-5	Yes
● SINAUT ST1 protocol	No
● SINAUT ST7 protocol	Yes
● Modbus RTU	No
product function / data buffering if connection is aborted	Yes; 100000 data telegrams (ST7) or 250000 events (IEC 60870-5 / DNP3)
number of data points per device / maximum	3000
number of DNP3 masters	
● for Ethernet / maximum	4

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● with RS 232 interface / maximum	4
product feature / buffered message frame memory	Yes
transmission format	
● for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit	Yes
operating mode for scanning of data transmission	
● with dedicated line/radio link / with SINAUT ST7 protocol	Polling, polling with time slot procedure
● with dial-up network / with SINAUT ST7 protocol	spontaneous
hamming distance	
● for SINAUT ST7 protocol	4
performance data / teleservice	
diagnostics function / online diagnostics with SIMATIC STEP 7	Yes
product function	
● program download with SIMATIC STEP 7	Yes
● remote firmware update	Yes
● remote configuration	Yes
product functions / management, configuration, engineering	
product function / MIB support	Yes
protocol / is supported	
● SNMP v1	Yes
● SNMP v3	Yes
● DCP	Yes
● LLDP	Yes
configuration software	
● required	STEP 7 Professional V14 SP1 (TIA Portal) or higher
● for CPU configuring / required / SINAUT TD7 block library for CPU	No
● for PG configuring / required / SINAUT ST7 configuration software for PG	No
storage location / of TIM configuration data	Flash or SD card of the TIM 1531 IRC
identification & maintenance function	
● I&M0 - device-specific information	Yes
● I&M1 - higher level designation/location designation	Yes
● I&M2 - installation date	Yes
● I&M3 - comment	Yes
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
product functions / diagnostics	
product function / web-based diagnostics	Yes
product functions / routing	
service / routing / note	IP routing up to 1 Mbps
product function	
● static IP routing	Yes
● static IP routing IPv6	Yes
● 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 / security	
product function	
● MSC client via GPRS modem with MSC capability	Yes

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protocol	
● is supported / MSC protocol	Yes
● with Virtual Private Network MSC / is supported	TCP/IP
key length / for MSC / with Virtual Private Network	128 bit
number of possible connections	
● as MSC client / with VPN connection	1
● as MSC server / with VPN connection	127
product functions / time	
product function / SICLOCK support	No
product function / pass on time synchronization	Yes
protocol / is supported	
● NTP	Yes
● NTP (secure)	Yes
product component / hardware real time clock	No
product feature / hardware real time clock w. battery backup	No
time synchronization	
● from NTP-server	Yes
● from GPS-signal	No
● from control center	Yes
● from mobile network provider	No
● PC	No
● manual setting	No
product functions / position detection	
product function	
● position detection with GPS	No
● pass on position data	No
standards, specifications, approvals	
certificate of suitability / CE marking	Yes
certificate of suitability / Regulatory Compliance Mark (RCM)	Yes
certificate of suitability / RoHS conformity	Yes
certificate of suitability / EAC approval	Yes
standards, specifications, approvals / hazardous environments / header	
certificate of suitability / ATEX	Yes
certificate of suitability / IECEx	Yes
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
certificate of suitability / FM registration	Yes
standards, specifications, approvals / marine classification / header	
Marine classification association / Det Norske Veritas (DNV)	Yes
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
● total	128.35 kg
● during manufacturing	18.7 kg
● during operation	109 kg
● after end of life	0.65 kg
further information / internet links	
internet link	
● to website: Selection guide for cables and connectors	https://support.industry.siemens.com/cs/ww/en/view/109766358
● to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
● to website: Industrial communication	https://www.siemens.com/simatic-net
● to web page: SiePortal	https://sieportal.siemens.com/
● to website: Image database	https://www.automation.siemens.com/bilddb
● to website: CAx-Download-Manager	https://siemens.com/cax
● 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. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement - and continuously maintain - a holistic,

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Approvals / Certificates

General Product Approval

Declaration of Conformity | Declaration of Conformity | China RoHS | Manufacturer Declaration

General Product Approval

UL | RCM | EG-Konf. | China RoHS | UKCA

For use in hazardous locations

ATEX

For use in hazardous locations

IECEx | FM | CCC-Ex

Environment

EPD

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