

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.

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 Gbyte

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	
• during operation	0 ... 70 °C
• for vertical installation / during operation	0 ... 50 °C
• for horizontally arranged busbars / during operation	0 ... 70 °C

<ul style="list-style-type: none"> during storage during transport 	-40 ... +70 °C
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 double-wide
width	70 mm
height	147 mm
depth	129 mm
net weight	0.525 kg
fastening method	
<ul style="list-style-type: none"> 35 mm DIN-rail mounting 	No
<ul style="list-style-type: none"> S7-300 rail mounting 	No
<ul style="list-style-type: none"> S7-1500 rail mounting 	Yes
product features, product functions, product components / general	
product function	
<ul style="list-style-type: none"> DynDNS client 	No
number of units	
<ul style="list-style-type: none"> note 	Number of TIM per S7-1500: 1
wire length	
<ul style="list-style-type: none"> with RS 232 interface / maximum 	6 m
<ul style="list-style-type: none"> with RS 485 interface / maximum 	30 m
performance data / S7 communication	
number of possible connections / for S7 communication	
<ul style="list-style-type: none"> maximum 	132; only via LAN
<ul style="list-style-type: none"> with PG connections / maximum 	4
<ul style="list-style-type: none"> with PG/OP connections / maximum 	4
<ul style="list-style-type: none"> with OP connections / maximum 	4
service	
<ul style="list-style-type: none"> of SIMATIC communication / as server 	Yes
<ul style="list-style-type: none"> SINAUT ST7 via S7 communication 	Yes
<ul style="list-style-type: none"> PG/OP communication 	Yes
performance data / IT functions	
number of possible connections	
<ul style="list-style-type: none"> as server / by means of HTTP / maximum 	2
<ul style="list-style-type: none"> as server / by means of HTTPS / maximum 	2; 2 per Ethernet interface
<ul style="list-style-type: none"> as email client / maximum 	1
performance data / telecontrol	
suitability for use	
<ul style="list-style-type: none"> node station 	Yes
<ul style="list-style-type: none"> substation 	Yes
<ul style="list-style-type: none"> TIM control center 	Yes
control center connection	Systems with ST7, DNP3 and IEC 60870-5-101/104 protocol
<ul style="list-style-type: none"> by means of a permanent connection 	Systems with ST7, DNP3 and IEC 60870-5-101/104 protocol
protocol / is supported	
<ul style="list-style-type: none"> DNP3 	Yes
<ul style="list-style-type: none"> IEC 60870-5 	Yes
<ul style="list-style-type: none"> SINAUT ST1 protocol 	No
<ul style="list-style-type: none"> SINAUT ST7 protocol 	Yes
<ul style="list-style-type: none"> 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 station / maximum	3000
number of DNP3 masters	
<ul style="list-style-type: none"> for Ethernet / maximum 	4
<ul style="list-style-type: none"> with RS 232 interface / maximum 	4
product feature / buffered message frame memory	Yes
transmission format	
<ul style="list-style-type: none"> for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit 	Yes

operating mode for scanning of data transmission	
<ul style="list-style-type: none"> • with dedicated line/radio link / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol 	Polling, polling with time slot procedure spontaneous
hamming distance	
<ul style="list-style-type: none"> • for SINAUT ST7 protocol 	4
performance data / teleservice	
diagnostics function / online diagnostics with SIMATIC STEP 7	Yes
product function	
<ul style="list-style-type: none"> • program download with SIMATIC STEP 7 	Yes
<ul style="list-style-type: none"> • remote firmware update 	Yes
<ul style="list-style-type: none"> • remote configuration 	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"> • SNMP v3 	Yes
<ul style="list-style-type: none"> • DCP 	Yes
<ul style="list-style-type: none"> • LLDP 	Yes
configuration software	
<ul style="list-style-type: none"> • required 	STEP 7 Professional V14 SP1 (TIA Portal) or higher
<ul style="list-style-type: none"> • for CPU configuring / required / SINAUT TD7 block library for CPU 	No
<ul style="list-style-type: none"> • 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	
<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
<ul style="list-style-type: none"> • I&M2 - installation date 	Yes
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • static IP routing 	Yes
<ul style="list-style-type: none"> • static IP routing IPv6 	Yes
<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 	No
<ul style="list-style-type: none"> • RIPv2 	No
<ul style="list-style-type: none"> • RIPnG for IPv6 	No
<ul style="list-style-type: none"> • OSPFv2 	No
<ul style="list-style-type: none"> • OSPFv3 for IPv6 	No
<ul style="list-style-type: none"> • VRRP 	No
<ul style="list-style-type: none"> • VRRP for IPv6 	No
<ul style="list-style-type: none"> • BGP 	No
<ul style="list-style-type: none"> • PPP 	No
<ul style="list-style-type: none"> • PPOE via DSL 	No
product functions / security	
product function	
<ul style="list-style-type: none"> • MSC client via GPRS modem with MSC capability 	Yes
protocol	
<ul style="list-style-type: none"> • is supported / MSC protocol 	Yes
<ul style="list-style-type: none"> • with Virtual Private Network MSC / is supported 	TCP/IP
key length / for MSC / with Virtual Private Network	128 bit
number of possible connections	
<ul style="list-style-type: none"> • as MSC client / with VPN connection 	1
<ul style="list-style-type: none"> • 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	
reference code	
• according to IEC 81346-2:2019	KEC
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	
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