

product type designation



TIM 1531 IRC

TIM 1531 IRC Communications module for SIMATIC S7-1500, S7-400, S7-300 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 communications 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 interface 3	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

<ul style="list-style-type: none"> • for horizontally arranged busbars / during operation • during storage • during transport 	0 ... 70 °C -40 ... +70 °C -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 top hat 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	
<ul style="list-style-type: none"> • by means of a permanent connection 	Systems with ST7, DNP3 and IEC 60870-5-101/104 protocol 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 	Polling, polling with time slot procedure
<ul style="list-style-type: none"> with dial-up network / with SINAUT ST7 protocol 	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 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 protocol / is supported	Yes
<ul style="list-style-type: none"> • NTP 	Yes
<ul style="list-style-type: none"> • NTP (secure) 	Yes
product component / hardware real time clock	No
product feature / hardware real time clock w. battery backup	No
time synchronization	
<ul style="list-style-type: none"> • from NTP-server 	Yes
<ul style="list-style-type: none"> • from GPS-signal 	No
<ul style="list-style-type: none"> • from control center 	Yes
<ul style="list-style-type: none"> • from mobile network provider 	No
<ul style="list-style-type: none"> • PC 	No
<ul style="list-style-type: none"> • manual setting 	No

product functions / position detection

product function	
<ul style="list-style-type: none"> • position detection with GPS 	No
<ul style="list-style-type: none"> • pass on position data 	No

standards, specifications, approvals / hazardous environments

certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
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further information / internet-Links

Internet-Link	
<ul style="list-style-type: none"> • to web page: selection aid TIA Selection Tool 	http://www.siemens.com/tia-selection-tool
<ul style="list-style-type: none"> • to website: Industrial communication 	http://www.siemens.com/simatic-net
<ul style="list-style-type: none"> • to website: Industry Mall 	https://mall.industry.siemens.com
<ul style="list-style-type: none"> • to website: Information and Download Center 	http://www.siemens.com/industry/infocenter
<ul style="list-style-type: none"> • to website: Image database 	http://automation.siemens.com/bilddb
<ul style="list-style-type: none"> • to website: CAx-Download-Manager 	http://www.siemens.com/cax
<ul style="list-style-type: none"> • 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)
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