

### 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	
<ul style="list-style-type: none"> <li>at the 1st interface</li> <li>at the 2nd interface</li> <li>at interface 3</li> <li>acc. to RS 232</li> </ul>	10 ... 1000 Mbit/s 10 ... 100 Mbit/s 10 ... 100 Mbit/s 300 ... 115200 bit/s
interfaces	
number of interfaces / according to Industrial Ethernet	3
number of electrical connections	
<ul style="list-style-type: none"> <li>for external data transmission / acc. to RS 232</li> <li>for power supply</li> </ul>	1 1
number of slots	
<ul style="list-style-type: none"> <li>for memory cards</li> </ul>	1
type of electrical connection	
<ul style="list-style-type: none"> <li>of Industrial Ethernet interface</li> </ul>	RJ45 port
type of electrical connection	
<ul style="list-style-type: none"> <li>at interface 1 / for external data transmission</li> <li>for power supply</li> </ul>	9 pin Sub-D-connector, RS232 switchable to RS485 2-pole plugable terminal block
slot version	
<ul style="list-style-type: none"> <li>of the memory card</li> </ul>	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	
<ul style="list-style-type: none"> <li>from external supply voltage / at DC / at 24 V / typical</li> <li>from external supply voltage / at DC / at 24 V / maximum</li> </ul>	0.15 A 0.3 A
power loss [W] / with external supply voltage / at 24 V DC	
<ul style="list-style-type: none"> <li>in update mode / typical</li> <li>in communication mode / typical</li> </ul>	3.9 W 3.9 W
product extension / optional / backup battery	No
ambient conditions	
ambient temperature	

<ul style="list-style-type: none"> <li>during operation</li> <li>for vertical installation / during operation</li> <li>for horizontally arranged busbars / during operation</li> <li>during storage</li> <li>during transport</li> </ul>	<p>0 ... 70 °C</p> <p>0 ... 50 °C</p> <p>0 ... 70 °C</p> <p>-40 ... +70 °C</p> <p>-40 ... +70 °C</p>
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 double-wide
width	70 mm
height	147 mm
depth	129 mm
net weight	0.525 kg
fastening method <ul style="list-style-type: none"> <li>35 mm top hat DIN rail mounting</li> <li>S7-300 rail mounting</li> <li>S7-1500 rail mounting</li> </ul>	<p>No</p> <p>No</p> <p>Yes</p>

### product features, product functions, product components / general

product function <ul style="list-style-type: none"> <li>DynDNS client</li> </ul>	No
number of units <ul style="list-style-type: none"> <li>note</li> </ul>	Number of TIM per S7-1500: 1
wire length <ul style="list-style-type: none"> <li>with RS 232 interface / maximum</li> <li>with RS 485 interface / maximum</li> </ul>	<p>6 m</p> <p>30 m</p>

### performance data / S7 communication

number of possible connections / for S7 communication <ul style="list-style-type: none"> <li>maximum</li> <li>with PG connections / maximum</li> <li>with PG/OP connections / maximum</li> <li>with OP connections / maximum</li> </ul>	<p>132; only via LAN</p> <p>4</p> <p>4</p> <p>4</p>
service <ul style="list-style-type: none"> <li>of SIMATIC communication / as server</li> <li>SINAUT ST7 via S7 communication</li> <li>PG/OP communication</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p>

### performance data / IT functions

number of possible connections <ul style="list-style-type: none"> <li>as server / by means of HTTP / maximum</li> <li>as server / by means of HTTPS / maximum</li> <li>as email client / maximum</li> </ul>	<p>2</p> <p>2; 2 per Ethernet interface</p> <p>1</p>
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### performance data / telecontrol

suitability for use <ul style="list-style-type: none"> <li>node station</li> <li>substation</li> <li>TIM control center</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
control center connection <ul style="list-style-type: none"> <li>by means of a permanent connection</li> </ul>	<p>Systems with ST7, DNP3 and IEC 60870-5-101/104 protocol</p> <p>Systems with ST7, DNP3 and IEC 60870-5-101/104 protocol</p>
protocol / is supported <ul style="list-style-type: none"> <li>DNP3</li> <li>IEC 60870-5</li> <li>SINAUT ST1 protocol</li> <li>SINAUT ST7 protocol</li> <li>Modbus RTU</li> </ul>	<p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>No</p>
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"> <li>for Ethernet / maximum</li> </ul>	4

<ul style="list-style-type: none"> <li>with RS 232 interface / maximum</li> </ul>	4
product feature / buffered message frame memory	Yes
transmission format <ul style="list-style-type: none"> <li>for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit</li> </ul>	Yes
operating mode for scanning of data transmission <ul style="list-style-type: none"> <li>with dedicated line/radio link / with SINAUT ST7 protocol</li> <li>with dial-up network / with SINAUT ST7 protocol</li> </ul>	Polling, polling with time slot procedure spontaneous
hamming distance <ul style="list-style-type: none"> <li>for SINAUT ST7 protocol</li> </ul>	4
<b>performance data / teleservice</b>	
diagnostics function / online diagnostics with SIMATIC STEP 7	Yes
product function <ul style="list-style-type: none"> <li>program download with SIMATIC STEP 7</li> <li>remote firmware update</li> <li>remote configuration</li> </ul>	Yes Yes 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> <li>SNMP v3</li> <li>DCP</li> <li>LLDP</li> </ul>	Yes Yes Yes Yes
configuration software <ul style="list-style-type: none"> <li>required</li> <li>for CPU configuring / required / SINAUT TD7 block library for CPU</li> <li>for PG configuring / required / SINAUT ST7 configuration software for PG</li> </ul>	STEP 7 Professional V14 SP1 (TIA Portal) or higher No 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"> <li>I&amp;M0 - device-specific information</li> <li>I&amp;M1 – higher level designation/location designation</li> <li>I&amp;M2 - installation date</li> <li>I&amp;M3 - comment</li> </ul>	Yes Yes Yes Yes
<b>product functions / diagnostics</b>	
product function / web-based diagnostics	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> <li>static IP routing IPv6</li> <li>dynamic IP routing</li> <li>dynamic IP routing IPv6</li> </ul>	Yes Yes No No
protocol / is supported <ul style="list-style-type: none"> <li>RIP v1</li> <li>RIPv2</li> <li>RIPnG for IPv6</li> <li>OSPFv2</li> <li>OSPFv3 for IPv6</li> <li>VRRP</li> <li>VRRP for IPv6</li> <li>BGP</li> <li>PPP</li> <li>PPoE via DSL</li> </ul>	No No No No No No No No No No No No
<b>product functions / security</b>	
product function <ul style="list-style-type: none"> <li>MSC client via GPRS modem with MSC capability</li> </ul>	Yes
protocol	

<ul style="list-style-type: none"> <li>• is supported / MSC protocol</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• with Virtual Private Network MSC / is supported</li> </ul>	TCP/IP
key length / for MSC / with Virtual Private Network	128 bit
number of possible connections	
<ul style="list-style-type: none"> <li>• as MSC client / with VPN connection</li> </ul>	1
<ul style="list-style-type: none"> <li>• as MSC server / with VPN connection</li> </ul>	127
<b>product functions / time</b>	
product function / SICLOCK support	No
product function / pass on time synchronization	Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>• NTP</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• NTP (secure)</li> </ul>	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"> <li>• from NTP-server</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• from GPS-signal</li> </ul>	No
<ul style="list-style-type: none"> <li>• from control center</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• from mobile network provider</li> </ul>	No
<ul style="list-style-type: none"> <li>• PC</li> </ul>	No
<ul style="list-style-type: none"> <li>• manual setting</li> </ul>	No
<b>product functions / position detection</b>	
product function	
<ul style="list-style-type: none"> <li>• position detection with GPS</li> </ul>	No
<ul style="list-style-type: none"> <li>• pass on position data</li> </ul>	No
<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>	
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