# 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.

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

11/1/2023

| | |
|---|---|
| ● 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 top hat 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 station / maximum | 3000 |
| number of DNP3 masters | |
| ● for Ethernet / maximum | 4 |
| ● 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 |

11/1/2023

| | |
|---|---|
| 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 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 |
| 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 / hazardous environments** | |
|---|---|
| certificate of suitability / CCC / for hazardous zone according to GB standard | Yes |
| ● as marking | Ex nA IIC T4 Gc |

| **further information / internet links** | |
|---|---|
| internet link | |
| ● to web page: selection aid TIA Selection Tool | http://www.siemens.com/tia-selection-tool |
| ● to website: Industrial communication | http://www.siemens.com/simatic-net |
| ● to website: Industry Mall | https://mall.industry.siemens.com |
| ● to website: Information and Download Center | http://www.siemens.com/industry/infocenter |
| ● to website: Image database | http://automation.siemens.com/bilddb |
| ● to website: CAx-Download-Manager | http://www.siemens.com/cax |
| ● 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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