

product type designation



Figure similar

TIM 4R-IE

-- spare part -- SINAUT ST7, TIM 4R-IE communications module for SIMATIC S7-300, S7-400, PC; with two RS232/RS485 interfaces for SINAUT communication via standard WANs and two RJ45 interfaces for SINAUT communication via IP-based networks (WAN or LAN).

Technical Product Detail Page

<https://i.siemens.com/1P6NH7800-4BA00>

transfer rate

transfer rate

- for Industrial Ethernet
- according to RS 232

10 ... 100 Mbit/s
50 ... 38400 bit/s

interfaces

number of interfaces / according to Industrial Ethernet

2

number of electrical connections

- for external data transmission / according to RS 232
- for power supply

2
1

type of electrical connection

- of Industrial Ethernet interface

RJ45 port

type of electrical connection

- at interface 1 / for external data transmission
- at interface 2 / for external data transmission
- for power supply

9 pin Sub-D-connector, RS232 switchable to RS485
9-pole D-sub connector, RS232 can be switched to RS485
2-pole plugable terminal block

design of the removable storage

- C-PLUG

Yes

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 backplane bus / at DC / at 24 V / maximum
- from external supply voltage / at DC / at 24 V / maximum

0.2 A
0.17 A

power loss [W]

4.6 W

product extension / optional / backup battery

Yes

type of battery

Lithium AA / 3.6 V / 2.3 Ah

backup current

- typical
- maximum

100 µA
160 µA

ambient conditions

ambient temperature

- during operation
- during storage

0 ... 60 °C
-40 ... +70 °C

<ul style="list-style-type: none"> 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 S7-300 double width
width	80 mm
height	125 mm
depth	120 mm
net weight	0.4 kg
product features, product functions, product components / general	
number of units	
<ul style="list-style-type: none"> note 	Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU
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 	64
<ul style="list-style-type: none"> with PG connections / maximum 	2
<ul style="list-style-type: none"> with OP connections / maximum 	62
service	
<ul style="list-style-type: none"> SINAUT ST7 via S7 communication 	Yes
<ul style="list-style-type: none"> PG/OP communication 	Yes
performance data / multi-protocol mode	
number of active connections / with multi-protocol mode	128
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
protocol / is supported	
<ul style="list-style-type: none"> DNP3 	No
<ul style="list-style-type: none"> SINAUT ST1 protocol 	Yes
<ul style="list-style-type: none"> SINAUT ST7 protocol 	Yes
product function / data buffering if connection is aborted	Yes; 56,000 data messages
storage capacity	
<ul style="list-style-type: none"> of S7 CPU work memory / for TD7onCPU mode data blocks on CPU / required 	20 Kibyte
<ul style="list-style-type: none"> of S7 CPU work memory / for TD7onTIM mode data blocks on TIM / required 	0 Kibyte
<ul style="list-style-type: none"> note 	TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case
product feature / buffered message frame memory	Yes
transmission format	
<ul style="list-style-type: none"> for SINAUT ST1 protocol with polling / 11 bit 	Yes
<ul style="list-style-type: none"> for SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit 	Yes
<ul style="list-style-type: none"> for SINAUT ST7 protocol with multi-master polling / 10-bit 	Yes
<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 ST1 protocol 	Polling, polling with time slot procedure
<ul style="list-style-type: none"> with dedicated line/radio link / with SINAUT ST7 protocol 	Polling, polling with time slot procedure, multi-master polling with time slot procedure
<ul style="list-style-type: none"> with dial-up network / with SINAUT ST1 protocol 	spontaneous
<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 ST1 protocol 	4

<ul style="list-style-type: none"> • for SINAUT ST7 protocol 	4
product functions / management, configuration, engineering	
configuration software	SINAUT ST7 ES
<ul style="list-style-type: none"> • required 	Yes
<ul style="list-style-type: none"> • for CPU configuring / required / SINAUT TD7 block library for CPU 	Yes
<ul style="list-style-type: none"> • for PG configuring / required / SINAUT ST7 configuration software for PG 	Yes
storage location / of TIM configuration data	on internal TIM flash memory, or on TIM in optional C-PLUG, or on MMC of the S7-300 CPU if TIM installed in S7-300 controller
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
product functions / security	
operating mode / Virtual Private Network (VPN)	Yes
type of authentication / with Virtual Private Network / PSK	Yes
product function	
<ul style="list-style-type: none"> • password protection for VPN 	Yes
<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 	128
product functions / time	
product component / hardware real time clock	Yes
product feature / hardware real time clock w. battery backup	Yes
accuracy / of the hardware real time clock / per day / maximum	4 s
time synchronization	
<ul style="list-style-type: none"> • from NTP-server 	Yes
standards, specifications, approvals	
certificate of suitability / CE marking	Yes
certificate of suitability / UKCA marking	Yes
certificate of suitability / KC approval	Yes
certificate of suitability / Regulatory Compliance Mark (RCM)	Yes
certificate of suitability / RoHS conformity	Yes
standards, specifications, approvals / hazardous environments / header	
certificate of suitability / ATEX	Yes
certificate of suitability / IECEx	Yes
certificate of suitability / ULhazloc approval	Yes
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
certificate of suitability / FM registration	Yes
further information / internet links	
internet link	
<ul style="list-style-type: none"> • to website: Selection guide for cables and connectors 	https://support.industry.siemens.com/cs/ww/en/view/109766358
<ul style="list-style-type: none"> • to web page: selection aid TIA Selection Tool 	https://www.siemens.com/tstcloud
<ul style="list-style-type: none"> • to website: Industrial communication 	https://www.siemens.com/simatic-net
<ul style="list-style-type: none"> • to web page: SiePortal 	https://sieportal.siemens.com/
<ul style="list-style-type: none"> • to website: Image database 	https://www.automation.siemens.com/bilddb
<ul style="list-style-type: none"> • to website: CAx-Download-Manager 	https://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 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, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is

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Approvals / Certificates

General Product Approval



[Declaration of Con-
formity](#)



[China RoHS](#)



General Product Ap- proval	EMV	For use in hazardous locations
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[KC](#)



[FM](#)

[CCC-Ex](#)

For use in hazardous locations



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