

Product type designation**RUGGEDCOM RSG2288**

THE RUGGEDCOM RSG2288 IS AN INDUSTRIALLY HARDENED, FULLY MANAGED MODULAR GIGABIT ETHERNET SWITCH; 128-BIT ENCRYPTION; UP TO 9-GIGABIT ETHERNET PORTS COPPER AND/OR FIBER; UP TO 9 100FX FIBER FAST ETHERNET PORTS; 2 PORT MODULES FOR TREMENDOUS FLEXIBILITY; MULTIMODE, SINGLEMODE; NON-BLOCKING, STORE AND FORWARD SWITCHING; LONG HAUL OPTICS ALLOW GIGABIT DISTANCES UP TO 70KM; MULTIPLE CONNECTOR TYPES (LC, SC, SFP, GBIC)



Figure similar

Transmission rate

Transfer rate	10 Mbit/s, 100 Mbit/s, 1000 Mbit/s
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Interfaces

Number of electrical/optical connections	
<ul style="list-style-type: none"> for network components or terminal equipment / maximum 	9; 6 Slots in sum: 1, 2, 3, 4 two Ethernet-Ports each, 5 one Ethernet-Port, 6 one PTP Module
<ul style="list-style-type: none"> for gigabit Ethernet / maximum 	9
Number of electrical connections	
<ul style="list-style-type: none"> for network components or terminal equipment / maximum 	9
<ul style="list-style-type: none"> for gigabit Ethernet / maximum 	9
Number of optical interfaces	
<ul style="list-style-type: none"> for network components or terminal equipment / maximum 	9
Range / at the optical interface / depending on the optical fiber used	2 ... 90 km
<ul style="list-style-type: none"> with gigabit 	0.5 ... 70 km

Interfaces / others

Number of electrical connections	
<ul style="list-style-type: none"> • for operator console • for management purposes 	1 0
Type of electrical connection	
<ul style="list-style-type: none"> • for operator console • for power supply and signaling contact • for GPS • for IRIG-B 	RJ45 10-pole terminal block, screwable or plugable, screw contact 50 ohm BNC female connector 50 ohm BNC female connector

Signal-Inputs/outputs

Type of relay output	Changeover contact
Operating voltage / of the signaling contacts	
<ul style="list-style-type: none"> • at AC / maximum • at DC / maximum 	250 V 125 V
Operating current / of the signaling contacts	
<ul style="list-style-type: none"> • at AC / at 250 V / maximum • at DC / at 30 V / maximum 	2 A 2 A
Product component	
<ul style="list-style-type: none"> • IRIG-B PWM output • IRIG-B PWM input 	Yes Yes
Type of signal	
<ul style="list-style-type: none"> • at the IRIG-B output • at the IRIG-B input 	IRIG-B unmodulated (TTL) or PPS TTL levels PWM output (format B002, B003)
Accuracy / at IRIG-B / not less than	1 μ s
Protocol / at GPS input / is supported / NMEA 0183	Yes

Supply voltage, current consumption, power loss

product options / wide range power supply	Yes
Supply voltage / 1 / Rated value	24 V
<ul style="list-style-type: none"> • Supply voltage / 1 / rated value • Type of voltage / 1 / of the supply voltage • Consumed current / 1 / at rated supply voltage / maximum 	10 ... 36 V DC 1.2 A
Supply voltage / 2 / Rated value	48 V
<ul style="list-style-type: none"> • Supply voltage / 2 / rated value • Type of voltage / 2 / of the supply voltage • Consumed current / 2 / at rated supply voltage / maximum 	36 ... 72 V DC 0.6 A
Supply voltage / 3 / Rated value	
<ul style="list-style-type: none"> • Supply voltage / 3 / rated value • Type of voltage / 3 / of the supply voltage 	88 ... 300 V DC
Supply voltage / 4 / Rated value	
<ul style="list-style-type: none"> • Supply voltage / 4 / rated value / minimum 	85 V

<ul style="list-style-type: none"> • Supply voltage / 4 / rated value / maximum 	264 V
<ul style="list-style-type: none"> • Type of voltage / 4 / of the supply voltage 	AC
Power loss [W]	
<ul style="list-style-type: none"> • maximum 	28 W

Permitted ambient conditions

Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-40 ... +85 °C
<ul style="list-style-type: none"> • Note 	A maximum operating temperature of +85 °C is permissible for a duration of 16 hours
Operating condition / fanless operation	Yes
Coating	Conformal Coating optional
Protection class IP	IP40

Design, dimensions and weight

Display version / LED panel mounted on the front or on the rear side	Yes
Design	19" rack
Number of modular height units / relating to 19-inch cabinet	1
Number of slots	6
Width	464.8 mm
Height	44.2 mm
Depth	315 mm
Net weight	4.8 kg
Material / of the enclosure	18 AWG galvanized steel enclosure
Mounting type	
<ul style="list-style-type: none"> • 19-inch installation 	Yes
<ul style="list-style-type: none"> • 35 mm DIN rail mounting 	Yes
<ul style="list-style-type: none"> • wall mounting 	Yes

Product properties, functions, components / general

Product function	
<ul style="list-style-type: none"> • Temperature Compensated Oscillator (TCXO) 	Yes
Number of automatically learnable MAC addresses	8192
Storage capacity	
<ul style="list-style-type: none"> • of the MAC-address table 	64 Kibyte
Switch latency period	7 µs
Transfer rate / of the switch	18 Gbit/s
Number of priority channels	4
Product feature	
<ul style="list-style-type: none"> • active antenna with 5 volt supply connectable 	Yes
<ul style="list-style-type: none"> • no head-off-line-blocking 	Yes
<ul style="list-style-type: none"> • Store & Forward switching method 	Yes
<ul style="list-style-type: none"> • Zero-Packet-Loss technology 	Yes

Product functions / management, configuration

Product function	
• CLI	Yes
• web-based management	Yes
• MIB support	Yes
• RMON	Yes
• switch-managed	Yes
Protocol / is supported	
• Telnet	Yes
• HTTP	Yes
• HTTPS	Yes
• TFTP	Yes
• SFTP	Yes
• IGMP (snooping/querier)	Yes
Number of groups / at IGMP	256
Protocol / is supported	
• SNMP v1	Yes
• SNMP v2	No
• SNMP v2c	Yes
• SNMP v3	Yes
Product function / for MIB support	
• by BRIDGE-MIB	RFC1493
• by IF-MIB	RFC2863
• by RMON-MIB	RFC2819
• by RSTP-MIB	draft-ietf-bridge-bridgemib-smiv2-03-RSTP-MIB
• by SNMPv2-MIB	RFC1907
• by SNMPv2-SMI	RFC2578
• by SNMPv2-TC	RFC2579
• by TCP-MIB	RFC2012
• by UDP-MIB	RFC2013

Product functions / Diagnosis

Product function	
• peer-to-peer measurement of delay time	Yes

Product functions / VLAN

Product function	
• VLAN - port based	Yes
VLAN identification number	1 ... 4094
Protocol / is supported / GVRP	Yes

Product functions / DHCP

Product function	
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• DHCP client	Yes
• DHCP Option 82	Yes
• DHCP Option 66	No
• DHCP Option 67	No

Product functions / Redundancy

Product function	
• redundancy procedure STP	Yes
• redundancy procedure RSTP	Yes
• redundancy procedure MSTP	Yes
• eRSTP	Yes
Protocol / is supported	
• STP	Yes
• RSTP	Yes
• MSTP	Yes

Product functions / Security

Product function	
• IEEE 802.1x (radius)	Yes
Protocol / is supported	
• TACACS+	Yes
• SSH	Yes
• SSL	Yes
Key length	
• with SSL	128 bit
• with RSA	1024 bit
Product function / port-rate-limiting	Yes

Product functions / Time

Product function	
• SNTP client	Yes
• SNTP server	Yes
• IEEE 1588 v2 to IRIG-B conversion	Yes
Protocol / is supported	
• SNTP	Yes
Accuracy / at IEEE 1588 v2	
• not less than	1 μ s
• typical	100 ns
Product function / hardware-supported timestamp at all ports	Yes

Standards, specifications, approvals

Standard	
• for EMC	FCC Part 15 (Class A), EN55022 (CISPR22 Class A)

<ul style="list-style-type: none"> • for safety / from CSA and UL 	cCSAus (Compliant with CSA C22.2 No. 60950, UL60950, EN60950)
Laser protection class	Complies with 21 CFR chapter 1, subchapter J
Certificate of suitability	
<ul style="list-style-type: none"> • CE marking 	Yes
<ul style="list-style-type: none"> • IEC 61850-3 	Yes
product conformity	
<ul style="list-style-type: none"> • acc. to IEEE 802.3-10BaseT 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.3u-100BaseTX 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.3u-100BaseFX 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.3ab-1000BaseT 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.3z-1000BaseLX 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.3ad-Link Aggregation 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.3x-Flow Control 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.1d-MAC Bridges 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.1d-STP 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.1p-class of service 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.1Q-VLAN tagging 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.1Q-2005 (formerly IEEE 802.1s) MSTP 	No
<ul style="list-style-type: none"> • acc. to IEEE 802.1w-RRST 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 802.1x-port based Network Access Control 	Yes
<ul style="list-style-type: none"> • acc. to IEEE 1588 v2-Precision Time Protocol 	Yes
<ul style="list-style-type: none"> • RFC768-UDP 	Yes
<ul style="list-style-type: none"> • RFC783-TFTP 	Yes
<ul style="list-style-type: none"> • RFC791-IP 	Yes
<ul style="list-style-type: none"> • RFC792-ICMP 	Yes
<ul style="list-style-type: none"> • RFC793-TCP 	Yes
<ul style="list-style-type: none"> • RFC826-ARP 	Yes
<ul style="list-style-type: none"> • RFC854-Telnet 	Yes
<ul style="list-style-type: none"> • RFC894-IP over Ethernet 	Yes
<ul style="list-style-type: none"> • RFC1112-IGMPv1 	Yes
<ul style="list-style-type: none"> • RFC1519-CIDR 	Yes
<ul style="list-style-type: none"> • RFC1541-DHCP (client) 	Yes
<ul style="list-style-type: none"> • RFC2068-HTTP 	Yes
<ul style="list-style-type: none"> • RFC2236-IGMPv2 	Yes
<ul style="list-style-type: none"> • RFC2284-EAP 	Yes
<ul style="list-style-type: none"> • RFC2475-Differentiated Service 	Yes
<ul style="list-style-type: none"> • RFC2865-RADIUS 	Yes
<ul style="list-style-type: none"> • RFC3414-SNMPv3-USM 	Yes
<ul style="list-style-type: none"> • RFC3415-SNMPv3-VACM 	Yes

Further Information / Internet Links

Internet-Link

- to website: Industry Mall/RUGGEDCOM selector
- to website: Siemens RUGGEDCOM
- to website: Selector for cables and connectors
- to website: Industrial communication
- to website: Industry Mall
- to website: Information and Download Center
- to website: Image database
- to website: CAx Download Manager
- to website: Industry Online Support

<http://ruggedcom-selector.automation.siemens.com>

<http://siemens.com/ruggedcom>

<http://www.siemens.com/snst>

<http://www.siemens.com/simatic-net>

<https://mall.industry.siemens.com>

<http://www.siemens.com/industry/infocenter>

<http://automation.siemens.com/bilddb>

<http://www.siemens.com/cax>

<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)

last modified:

11.12.2015