

The RUGGEDCOM RX1500 series is a utility grade layer 2 and layer 3 switch and router. 2x power supply (Hot Swappable) Field replaceable line modules Up to 24-ports 100FX; Up to 24-ports 10/100TX; Up to 8-ports Gigabit Ethernet Up to 12 ports 10FL/100SX SC, ST, LC and MTRJ Pluggable Optics (SFP) Up to 4 T1/E1 ports cellular (EVDO/HSPA), DDS (56K Master/Slave, 64K Slave) Up to 24 RS232/422/485 HIP = 88-300 VDC or 85-264 VAC, pluggable terminal block XXP = No power supply 2 RM = 19" Rack Mount Kit L2 = Layer 2 Switch XX = Manufacturing modification: none



Figure similar

product type designation	RUGGEDCOM RX1500
transfer rate	
transfer rate	10, 100 Mbit/s
transfer rate	1 Gbit/s
number of ports / maximum	24; Number of ports depending on configuration
transfer rate / for GPRS transmission	
• with downlink / maximum	85.6 bit/s
• with uplink / maximum	85.6 bit/s
transfer rate / with UMTS transmission	
• with downlink / maximum	14.4 bit/s
• with uplink / maximum	5.76 bit/s
transfer rate / for LTE transmission	
• with downlink / maximum	100 bit/s
• with uplink / maximum	50 bit/s
interfaces / for communication / maximum configuration for modular devices	
number of electrical ports / maximum	24
number of optical ports / maximum	24
interfaces / for communication / integrated	
number of electrical connections	
• for network components or terminal equipment	24
number of optical interfaces / for network components or terminal equipment	24; Depending on device configuration
interfaces / for communication / plug-in	
number of 10/100/1000 Mbit/s RJ45 ports	24
• with securing collar	24
number of 100 Mbit/s LC ports / for multimode	24
number of electrical connections	
• for SFP	24; compatible with Fast Ethernet
interfaces / other	
number of electrical connections	
• for serial interfaces / according to RS 232/RS 422/RS 485 / maximum	24
• for operator console	1
• for management purposes	1
• for signaling contact	1
• for media module	4
• for power supply	2
type of electrical connection	

<ul style="list-style-type: none"> • for external network • for power supply • for power supply and signaling contact 	SMA antennas depending on the configuration 5-pole terminal block, screwable 3-pole terminal block, screwable or plugable
design of the removable storage	
<ul style="list-style-type: none"> • CLP • CF card 	Yes Yes
product feature / hot-swappable interface modules	Yes
additional processing engine	
number of additional processing engines	2; Up to two APEs
additional processing engine / options	Multiple Operating System and Application Image Options
WAN connection	
type of wireless network / is supported	
<ul style="list-style-type: none"> • GSM • UMTS • CDMA • EV-DO • LTE 	Yes Yes Yes Yes Yes
type of mobile wireless service / is supported	
<ul style="list-style-type: none"> • GPRS • eGPRS • HSPA+ 	Yes Yes Yes
operating frequency / for GSM transmission	
<ul style="list-style-type: none"> • 850 MHz • 900 MHz • 1800 MHz • 1900 MHz 	Yes Yes Yes Yes
operating frequency / with UMTS transmission	
<ul style="list-style-type: none"> • 800 MHz • 850 MHz • 900 MHz • AWS-1 (1700/2100) MHz • 1800 MHz • 1900 MHz • 2100 MHz 	No Yes Yes Yes No Yes Yes
operating frequency / for LTE transmission	
<ul style="list-style-type: none"> • 700 MHz • 800 MHz • 850 MHz • 900 MHz • AWS-1 (1700/2100) MHz • 1800 MHz • 1900 MHz • 2100 MHz • 2600 MHz 	Yes No Yes No Yes No Yes No No
signal inputs/outputs	
type of relay output	Changeover contact (CO)
number of relay outputs / as CO contact	1
operating voltage / of the signaling contacts	
<ul style="list-style-type: none"> • at AC / maximum • at DC / maximum 	250 V 125 V
operational current / of the signaling contacts	
<ul style="list-style-type: none"> • at AC / at 250 V / maximum • at DC / at 30 V / maximum 	6.25 A 5 A
supply voltage, current consumption, power loss	
product options / wide range power supply	Yes
product component / power supply for PoE	No
product feature	
<ul style="list-style-type: none"> • modular power supply • hot-swappable power supply 	Yes Yes

type of voltage supply / redundant power supply unit	Yes
type of voltage / 1 / of the supply voltage	
<ul style="list-style-type: none"> • supply voltage / 1 / rated value • supply voltage / 1 / rated value • consumed current / 1 / maximum • type of electrical connection / 1 / for power supply 	12 V 9 ... 15 V 12 A screw or pluggable terminal block
type of voltage / 2 / of the supply voltage	
<ul style="list-style-type: none"> • supply voltage / 2 / rated value • power loss [W] / 2 / rated value • supply voltage / 2 / rated value 	24 V 63.5 W 13 ... 36 V
type of voltage / 3 / of the supply voltage	
<ul style="list-style-type: none"> • supply voltage / 3 / rated value • power loss [W] / 3 / rated value • supply voltage / 3 / rated value 	DC 48 V 60 W 36 ... 72 V
type of voltage / 4 / of the supply voltage	
<ul style="list-style-type: none"> • supply voltage / 4 / rated value 	88 ... 300 V
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> • during operation • note 	-40 ... +85 °C A maximum operating temperature of +85 °C is permissible for a duration of 16 hours
relative humidity / at 25 °C / without condensation / during operation / maximum	95 %
operating condition / fanless operation	Yes
protection class IP	IP30
design, dimensions and weights	
display version / LED panel mounted on the front or on the rear side	Yes
design	19-inch rack
number of modular height units / relating to 19-inch cabinet	1
number of slots	4
width	440.9 mm
height	44.2 mm
depth	296.7 mm
net weight	4.7 kg; Weight is depending on the built in modules
product feature / conformal coating	Yes; optional
material / of the enclosure	aluminum
fastening method	
<ul style="list-style-type: none"> • 19-inch installation • 35 mm DIN-rail mounting • wall mounting 	Yes No Yes
product features, product functions, product components / general	
product function	
<ul style="list-style-type: none"> • RAW socket mode for any serial protocols 	Yes
number of automatically learnable MAC addresses	8192
storage capacity	
<ul style="list-style-type: none"> • of the MAC-address table 	64 kbyte
switch latency period	7 µs
transfer rate / of the switch	10 Gbit/s
number of priority channels	4
number of QoS queues / per port	4
size per QoS queues	1536 frames
product function / QoS according to IEEE 802.1Q	Yes
product feature	
<ul style="list-style-type: none"> • no head-off-line-blocking • Store & Forward switching method • Zero-Packet-Loss technology 	Yes Yes Yes
protocol / is supported / Generic Object Oriented Substation Events (GOOSE)	Yes
operating system / ROX	Yes

product function	
• Access Point Mode	Yes
• client Mode	Yes
number of SSIDs	2
product function	
• DynDNS client	Yes
• no-ip.com client	Yes
product functions / management, configuration, engineering	
product function	
• CLI	Yes
• web-based management	Yes
• MIB support	Yes
• RMON	Yes
product function / switch-managed	Yes
protocol / is supported	
• Telnet	Yes
• HTTP	Yes
• HTTPS	Yes
• TFTP	Yes
• NETCONF	Yes
• SNMP v1	Yes
• SNMP v2	Yes
• SNMP v2c	Yes
• SNMP v3	Yes
• IGMP (snooping/querier)	Yes
number of groups / at IGMP	256
product function	
• for MIB support / by BRIDGE-MIB	RFC1493
• for MIB support / by IF-MIB	RFC2863
• for MIB support / by RMON-MIB	RFC2819
• for MIB support / by RSTP-MIB	draft-ietf-bridge-bridgemib-smiv2-03-RSTP-MIB
• for MIB support / by SNMPv2-MIB	RFC1907
• for MIB support / by SNMPv2-SMI	RFC2578
• for MIB support / by SNMPv2-TC	RFC2579
• for MIB support / by TCP-MIB	RFC2012
• for MIB support / by UDP-MIB	RFC2013
product functions / diagnostics	
product function	
• loopback diagnostics	Yes
• Real time line traces with/without decoding	Yes
product functions / VLAN	
product function	
• VLAN - port based	Yes
number of VLANs / maximum	255
VLAN identification number	1 ... 4094
protocol / is supported / GVRP	Yes
product functions / DHCP	
product function	
• DHCP client	Yes
• DHCP Option 82	Yes
• DHCP Option 66	No
• DHCP Option 67	No
product functions / routing	
product function	
• dynamic IP routing	Yes
product functions / redundancy	
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product function	
• media redundancy protocol (MRP) with redundancy	Yes

manager	
• 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
• broadcast/multicast/unicast limiter	Yes
• blocking of communication via physical ports	Yes
protocol / is supported	
• TACACS+	Yes
• SSH	Yes
• SSL	Yes
key length	
• with SSL	128 bit
• with RSA	2048 bit
product function / port-rate-limiting	Yes
product functions / time	
product function	
• NTP-client	Yes
• NTP-server	Yes
• SNTP client	Yes
• SNTP server	Yes
• IEEE 1588 v2 master	No
• IEEE 1588 v2 device	No
• IEEE 1588 v2 transparent forwarding	No
protocol / is supported	
• NTP	Yes
• SNTP	Yes
product function / hardware-supported timestamp at all ports	Yes
product component / hardware real time clock	Yes
product functions / cloud connectivity	
product function	depending on configuration, cloud connection via MQTT, device connection via S7 or Modbus TCP communication, support for 10 devices and up to 1000 data points, built-in trigger management
standards, specifications, approvals	
standard	
• for safety / from CSA and UL	cCSAus (Compliant with CSA C22.2 No. 60950, UL60950, EN60950)
• for interference immunity	IEC 61000-6-2
standards, specifications, approvals / CE	
certificate of suitability / CE marking	Yes
standard	
• for EMC	FCC Part 15 (Class A), EN55022 (CISPR22 Class A)
standards, specifications, approvals / other	
laser protection class	Complies with 21 CFR chapter 1, subchapter J
certificate of suitability	
• KC approval	Yes
• CCC approval	Yes
• railway application in accordance with EN 50155	Yes
• IEC 61850-3	Yes
• IEEE 1613	Yes
• Regulatory Compliance Mark (RCM)	Yes
• FCC, Part 15, Section B, Class b	Yes
• EAC approval	Yes

standards, specifications, approvals / marine classification

Marine classification association

- American Bureau of Shipping Europe Ltd. (ABS) Yes
- DNV GL No; F

standards, specifications, approvals / product conformity

product conformity

- according to IEEE 802.3-10BaseT Yes
- according to IEEE 802.3u-100BaseTX Yes
- according to IEEE 802.3u-100BaseFX Yes
- according to IEEE 802.3ab-1000BaseT Yes
- according to IEEE 802.3z-1000BaseLX Yes
- according to IEEE 802.3x-Flow Control Yes
- according to IEEE 802.1d-MAC Bridges Yes
- according to IEEE 802.1d-STP Yes
- according to IEEE 802.1D-2004-RSTP Yes
- according to IEEE 802.1p-class of service Yes
- according to IEEE 802.1Q-VLAN tagging Yes
- according to IEEE 802.1Q-2005 (formerly IEEE 802.1s) MSTP Yes
- according to IEEE 802.1w-RRST Yes
- according to IEEE 802.1x-port based Network Access Control Yes
- RFC768-UDP Yes
- RFC783-TFTP Yes
- RFC791-IP Yes
- RFC792-ICMP Yes
- RFC793-TCP Yes
- RFC826-ARP Yes
- RFC854-Telnet Yes
- RFC894-IP over Ethernet Yes
- RFC1112-IGMPv1 Yes
- RFC1294-Frame Relay Yes
- RFC1321-PPP (MD5) Yes
- RFC1332-PPP (IPCP) Yes
- RFC1334-PPP Authentication Yes
- RFC1490-Frame Relay Yes
- RFC1519-CIDR Yes
- RFC1541-DHCP (client) Yes
- RFC1661-PPP Yes
- RFC2030-SNTP Yes
- RFC2068-HTTP Yes
- RFC2236-IGMPv2 Yes
- RFC2284-EAP Yes
- RFC2338-VRRP Yes
- RFC2475-Differentiated Service Yes
- RFC2865-RADIUS Yes
- RFC3414-SNMPv3-USM Yes
- RFC3415-SNMPv3-VACM Yes

further information / internet links

internet link






- to website: Selection guide for cables and connectors <https://support.industry.siemens.com/cs/ww/en/view/109766358>
- to website: Industry Mall/RUGGEDCOM selector <https://www.siemens.com/ruggedcom-selector>
- to website: Industrial communication <https://www.siemens.com/simatic-net>
- to website: Siemens RUGGEDCOM <https://www.siemens.com/ruggedcom>
- to web page: SiePortal <https://sieportal.siemens.com/>
- to website: Image database <https://www.automation.siemens.com/bilddb>
- to website: CAX-Download-Manager <https://www.siemens.com/cax>
- to website: Industry Online Support <https://support.industry.siemens.com>

security information

security information

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Approvals / Certificates

General Product Approval			Test Certificates		
Manufacturer Declaration		 EG-Konf.	 RCM	Type Test Certificates/Test Report	Type Test Certificates/Test Report
Maritime application	other	Dangerous goods	Environment		
 ABS	inspection certificate	Dangerous goods information			

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