

**6GK6015-0BM2-.... RUGGEDCOM RX1501**

Technical Data

**Product-type designation** RUGGEDCOM RX1501

**Product description**  
**Utility Grade Layer 2 and Router**  
 THE RUGGEDCOM RX1501 SERIES IS A UTILITY GRADE LAYER 2 AND LAYER 3 SWITCH AND ROUTER. 1 X POWER SUPPLY FIELD REPLACEABLE LINE MODULES UP TO 36-PORTS 100FX; UP TO 36-PORTS 10/100TX; UP TO 4-PORTS GIGABIT ETHERNET UP TO 18 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



**Transmission rate**

|                   |             |
|-------------------|-------------|
| Transfer rate / 1 | 10 Mbit/s   |
| Transfer rate / 2 | 100 Mbit/s  |
| Transfer rate / 3 | 1000 Mbit/s |

**Interfaces**

|   |   |
|---|---|
| Number of electrical/optical connections / for network components or terminal equipment / maximum | 36  |
| • remark  | up to 36 x 10/100TX Ports                                   |
| number of electrical/optical connections / for gigabit Ethernet / maximum                         | 4   |
| Number of electrical connections  |   |
| • for network components and terminal equipment   |   |
| • maximum   | 36  |
| • for gigabit Ethernet / maximum  | 4   |
| • for serial interfaces / in accordance with RS 232/RS 422/RS 485 / maximum                       | 36  |
| • for operator console  | 1   |
| • for management purposes   | 1   |
| Design of electrical connection   |   |
| • for operator console  | RS232   |
| • for management purposes   | RJ45  |
| • for power supply  | 6-pole terminal block, permanently installed, screw contact |

|  |   |
|--|---|
| Number of optical connections / for network components or terminal equipment / maximum   | 36  |
| Range / at the optical interface / depending on the optical fiber used                   | 2...90 km   |
| operating distance / of optical interface / depending of used optical fiber / at gigabit | 0.5...70 km   |
| <b>Signal-Inputs/outputs</b>   |   |
| type of the relay output   | Change-over (NO/NC)   |
| operating voltage / of the signal contact  |   |
| <ul style="list-style-type: none"> <li>at AC</li> <li>maximum</li> </ul>                 | 250 V   |
| <ul style="list-style-type: none"> <li>at DC</li> <li>maximum</li> </ul>                 | 125 V   |
| Operating current / of signaling contacts  |   |
| <ul style="list-style-type: none"> <li>at AC</li> <li>at 250 V / maximum</li> </ul>      | 8 A   |
| <ul style="list-style-type: none"> <li>at DC</li> <li>at 30 V / maximum</li> </ul>       | 5 A   |
| <b>Supply voltage, current consumption, power loss</b>                                   |   |
| product options / wide range power supply product characteristic                         | Yes   |
| <ul style="list-style-type: none"> <li>voltage supply modular</li> </ul>                 | Yes   |
| <b>Type of voltage / 1 / of the supply voltage</b>                                       | DC  |
| Supply voltage / 1   |   |
| <ul style="list-style-type: none"> <li>rated value</li> <li>rated value</li> </ul>       | 24 V<br>15...36 V   |
| <b>Type of voltage / 2 / of the supply voltage</b>                                       | DC  |
| Supply voltage / 2   |   |
| <ul style="list-style-type: none"> <li>rated value</li> <li>rated value</li> </ul>       | 48 V<br>36...72 V   |
| <b>Type of voltage / 3 / of the supply voltage</b>                                       | DC  |
| Supply voltage / 3   |   |
| <ul style="list-style-type: none"> <li>rated value</li> </ul>                            | 88...300 V  |
| <b>Type of voltage / 4 / of the supply voltage</b>                                       | AC  |
| Supply voltage / 4   |   |
| <ul style="list-style-type: none"> <li>rated value</li> </ul>                            | 85...264 V  |
| Power loss   |   |
| <ul style="list-style-type: none"> <li>maximum</li> </ul>                                | 50 W  |
| <b>Permitted ambient conditions</b>  |   |
| Ambient temperature  |   |
| <ul style="list-style-type: none"> <li>during operating</li> <li>Comment</li> </ul>      | -40...+85 °C<br>A maximum operating temperature of +85 °C is permissible for a duration of 16 hours |
| Coating  | Conformal Coating optional  |
| operating condition / fanless operation  | Yes   |
| Protection class IP  | IP40  |

| Design, dimensions and weight  |   |
|--|---|
| Design   | 19" rack                                    |
| number of height rack units / related to 19 inch cabinet                                   | 1   |
| Number of slots  | 6   |
| Width  | 440.944 mm ( 17.36 in )                     |
| Height   | 44.2 mm ( 1.74 in )                         |
| Depth  | 302.26 mm ( 11.9 in )                       |
| Net weight   | 5.13 kg                                     |
| <ul style="list-style-type: none"> <li>Comment</li> </ul>                                  | Weight is depending on the built in modules |
| Material / of the enclosure  | Aluminum                                    |
| Type of mounting   |   |
| <ul style="list-style-type: none"> <li>Installation 19 inch</li> </ul>                     | Yes   |
| <ul style="list-style-type: none"> <li>35 mm DIN rail mounting</li> </ul>                  | No  |
| <ul style="list-style-type: none"> <li>wall mounting</li> </ul>                            | Yes   |
| Product properties, functions, components / general  |   |
| product function   |   |
| <ul style="list-style-type: none"> <li>RAW socket mode for any serial protocols</li> </ul> | Yes   |
| number of automatically learnable MAC addresses  | 8192  |
| memory capacity  |   |
| <ul style="list-style-type: none"> <li>of MAC-address table</li> </ul>                     | 64 Kibyte                                   |
| <ul style="list-style-type: none"> <li>of message buffer / maximum</li> </ul>              | 1 Mibyte                                    |
| switch-latency period  | 7 $\mu$ s                                   |
| transfer rate / of the switch  | 10 Gbit/s                                   |
| number of priority channels  | 4   |
| product characteristic   |   |
| <ul style="list-style-type: none"> <li>no head-off-line-blocking</li> </ul>                | Yes   |
| <ul style="list-style-type: none"> <li>Switching-Method Store &amp; Forward</li> </ul>     | Yes   |
| protocol / is supported / Generic Object Oriented Substation Events (GOOSE)                | Yes   |
| Product functions / management, configuration  |   |
| Product function   |   |
| <ul style="list-style-type: none"> <li>CLI</li> </ul>                                      | Yes   |
| <ul style="list-style-type: none"> <li>web-based management</li> </ul>                     | Yes   |
| <ul style="list-style-type: none"> <li>MIB support</li> </ul>                              | Yes   |
| <ul style="list-style-type: none"> <li>RMON</li> </ul>                                     | Yes   |
| <ul style="list-style-type: none"> <li>switch-managed</li> </ul>                           | Yes   |
| Protocol / is supported  |   |
| <ul style="list-style-type: none"> <li>Telnet</li> </ul>                                   | Yes   |
| <ul style="list-style-type: none"> <li>HTTP</li> </ul>                                     | Yes   |
| <ul style="list-style-type: none"> <li>HTTPS</li> </ul>                                    | Yes   |
| <ul style="list-style-type: none"> <li>TFTP</li> </ul>                                     | Yes   |
| <ul style="list-style-type: none"> <li>NETCONF</li> </ul>                                  | Yes   |
| <ul style="list-style-type: none"> <li>IGMP (snooping/querier)</li> </ul>                  | 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                                       |
| <b>Product functions / Diagnosis</b>          |   |
| Product function                              |   |
| • loopback diagnostics                        | Yes   |
| • real time line traces with/without decoding | Yes   |
| <b>Product functions / VLAN</b>               |   |
| Product function                              |   |
| • VLAN - port based                           | Yes   |
| Number of VLANs / maximum                     | 255   |
| Protocol / is supported / GVRP                | Yes   |
| <b>Product functions / DHCP</b>               |   |
| Product function                              |   |
| • DHCP client                                 | Yes   |
| • DHCP Option 82                              | Yes   |
| • DHCP Option 66                              | No  |
| • DHCP Option 67                              | No  |
| <b>Product functions / Routing</b>            |   |
| Product function                              |   |
| • dynamic IP routing                          | Yes   |
| protocol / is supported                       |   |
| • RIP v1                                      | Yes   |
| • RIPv2                                       | Yes   |
| • OSPFv2                                      | Yes   |
| • VRRP  | Yes   |
| • BGP   | Yes   |
| <b>Product functions / Redundancy</b>         |   |
| Product function                              |   |
| • redundancy procedure STP                    | Yes   |
| • RSTP redundancy protocol                    | Yes   |
| • redundancy procedure MSTP                   | Yes   |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>eRSTP</li> </ul>  | Yes   |
| Protocol / is supported  |   |
| <ul style="list-style-type: none"> <li>STP</li> </ul>  | Yes   |
| <ul style="list-style-type: none"> <li>RSTP</li> </ul>   | Yes   |
| <ul style="list-style-type: none"> <li>MSTP</li> </ul>   | Yes   |
| <b>Product functions / Security</b>  |   |
| product function   |   |
| <ul style="list-style-type: none"> <li>ACL - MAC-based</li> </ul>  | Yes   |
| <ul style="list-style-type: none"> <li>IEEE 802.1x (radius)</li> </ul>                                       | Yes   |
| <ul style="list-style-type: none"> <li>Broadcast/Multicast/Unicast Limiter</li> </ul>                        | Yes   |
| <ul style="list-style-type: none"> <li>blocking of communication via physical ports</li> </ul>               | Yes   |
| protocol / is supported  |   |
| <ul style="list-style-type: none"> <li>SSH</li> </ul>  | Yes   |
| product function / port-rate-limiting  | Yes   |
| <b>Product functions / Time</b>  |   |
| product function   |   |
| <ul style="list-style-type: none"> <li>SNTP-client</li> </ul>  | Yes   |
| <ul style="list-style-type: none"> <li>SNTP-server</li> </ul>  | Yes   |
| Protocol / is supported  |   |
| <ul style="list-style-type: none"> <li>SNTP</li> </ul>   | Yes   |
| <b>Standards, specifications, approvals</b>  |   |
| Standard   |   |
| <ul style="list-style-type: none"> <li>for EMC</li> </ul>  | FCC Part 15 (Class A), EN55022 (CISPR22 Class A)              |
| <ul style="list-style-type: none"> <li>for safety / of CSA and UL</li> </ul>                                 | cCSAus (Compliant with CSA C22.2 No. 60950, UL60950, EN60950) |
| Laser protection class   | Complies with 21 CFR Chapter1, Subchapter J                   |
| Verification of suitability  |   |
| <ul style="list-style-type: none"> <li>CE mark</li> </ul>  | Yes   |
| <ul style="list-style-type: none"> <li>IEC 61850-3</li> </ul>  | Yes   |
| product conformity   |   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.3-10BaseT</li> </ul>                            | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.3u-100BaseTX</li> </ul>                         | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.3u-100BaseFX</li> </ul>                         | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.3x-Flow Control</li> </ul>                      | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.3ab-1000BaseT</li> </ul>                        | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.3ad-Link Aggregation</li> </ul>                 | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.1d-MAC Bridges</li> </ul>                       | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.1d-STP</li> </ul>                               | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.1Q-VLAN tagging</li> </ul>                      | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.1Q-2005 (formerly IEEE 802.1s) MSTP</li> </ul>  | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.1w-RRST</li> </ul>                              | Yes   |
| <ul style="list-style-type: none"> <li>according to IEEE 802.1x-port based Network Access Control</li> </ul> | Yes   |
| product conformity   |   |

- 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
- RFC2475-Differentiated Service Yes
- RFC2865-RADIUS Yes
- RFC3414-SNMPv3-USM Yes
- RFC3415-SNMPv3-VACM Yes

#### Further Information / Internet Links

##### Internet link

- to website
- Industry Mall/RUGGEDCOM Selector <http://ruggedcom-selector.automation.siemens.com>
- Siemens RUGGEDCOM <http://siemens.com/ruggedcom>
- Industry Mall <http://www.siemens.com/industrial-controls/mall>
- selection instrument cables and connectors <http://www.siemens.com/snst>
- CAx-Download-Manager <http://www.siemens.com/cax>
- industrial communication <http://www.siemens.com/simatic-net>
- Information und Download Center <http://www.siemens.com/automation/net/catalog>
- image database <http://automation.siemens.com/bilddb>
- Industry Online Support <http://support.automation.siemens.com>

**letzte Änderung:**

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