


**6GK6022-0MS1.-.... RUGGEDCOM M2200NC**

Technical Data

| Product-type designation   | RUGGEDCOM M2200NC  |
|--|--|
| <b>Product description</b><br><br> | <b>MIL-STD 9-Port Managed Gigabit Ethernet Switch, 56-bit Encryption</b><br><br>THE RUGGEDCOM M2200NC IS A MIL-STD HARDENED, FULLY MANAGED, MODULAR GIGABIT ETHERNET SWITCH; 56-BIT ENCRYPTION; UP TO 9-GIGABIT ETHERNET PORTS COPPER AND/OR FIBER; 2 PORT MODULES FOR TREMENDOUS FLEXIBILITY; SUPPORTS MULTIMODE AND SINGLEMODE FIBER; NON-BLOCKING, STORE AND FORWARD SWITCHING; SUPPORTS LC CONNECTORS FOR FIBER, MICRO-D CONNECTORS FOR COPPER |
| <b>Transmission rate</b>   |  |
| Transfer rate / 1  | 10 Mbit/s  |
| Transfer rate / 2  | 100 Mbit/s   |
| Transfer rate / 3  | 1000 Mbit/s  |
| <b>Interfaces</b>  |  |
| Number of electrical/optical connections / for network components or terminal equipment / maximum                    | 9  |
| <ul style="list-style-type: none"> <li>remark</li> </ul>   | Slot 1, 2, 3, 4, with 2 Ports each + Slot 5 with 1 Port  |
| number of electrical/optical connections / for gigabit Ethernet / maximum  | 9  |
| Number of electrical connections   |  |
| <ul style="list-style-type: none"> <li>for network components and terminal equipment</li> </ul>                      |  |
| <ul style="list-style-type: none"> <li>maximum</li> </ul>  | 9  |
| <ul style="list-style-type: none"> <li>for gigabit Ethernet / maximum</li> </ul>                                     | 9  |
| <ul style="list-style-type: none"> <li>for operator console</li> </ul>   | 1  |
| <ul style="list-style-type: none"> <li>for management purposes</li> </ul>  | 0  |
| Design of electrical connection  |  |
| <ul style="list-style-type: none"> <li>for operator console</li> </ul>   | RJ45   |
| <ul style="list-style-type: none"> <li>for power supply and signaling contact</li> </ul>                             | 10-pole terminal block, screwable or plugable, screw contact   |
| Number of optical connections / for network components or terminal equipment / maximum                               | 9  |

|  |   |
|--|---|
| operating distance / of optical interface / depending of used optical fiber / at gigabit | 0.5...25 km   |
| <b>Signal-Inputs/outputs</b>   |   |
| Relay design   | Form-C contact relay (SP CO) as critical alarm relay                                |
| 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>      | 2 A   |
| <ul style="list-style-type: none"> <li>at DC</li> <li>at 30 V / maximum</li> </ul>       | 2 A   |
| <b>Supply voltage, current consumption, power loss</b>                                   |   |
| product options / wide range power supply  | 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  |
|  | 10...36 V   |
| Current consumed / 1 / at rated value of supply voltage / max.                           | 1.2 A   |
| <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  |
|  | 36...59 V   |
| Current consumed / 2 / at rated value of supply voltage / max.                           | 0.6 A   |
| <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>                                | 28 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  |
|  | 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 of display/ LED panel mounted on the front or on the rear side                    | Yes                               |
| Design   | 19" rack                          |
| number of height rack units / related to 19 inch cabinet                                 | 1                                 |
| Number of slots  | 5                                 |
| Width  | 464.8 mm ( 18.3 in )              |
| Height   | 44.2 mm ( 1.74 in )               |
| Depth  | 315 mm ( 12.4 in )                |
| Net weight   | 4.8 kg                            |
| Material / of the enclosure  | 18 AWG galvanized steel enclosure |
| Type of mounting   |                                   |
| <ul style="list-style-type: none"> <li>• Installation 19 inch</li> </ul>                 | Yes                               |
| <ul style="list-style-type: none"> <li>• wall mounting</li> </ul>                        | Yes                               |
| Product properties, functions, components / general                                      |                                   |
| 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>          | 2 Mibyte                          |
| switch-latency period  | 7 $\mu$ s                         |
| transfer rate / of the switch  | 18 Gbit/s                         |
| number of priority channels  | 6                                 |
| 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                               |
| <ul style="list-style-type: none"> <li>• Zero-Packet-Loss technology</li> </ul>          | 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>                                | No                                |
| <ul style="list-style-type: none"> <li>• TFTP</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  |                                   |
| <ul style="list-style-type: none"> <li>• SNMP v1</li> </ul>                              | Yes                               |
| <ul style="list-style-type: none"> <li>• SNMP v2</li> </ul>                              | No                                |
| <ul style="list-style-type: none"> <li>• SNMP v2c</li> </ul>                             | 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 / VLAN</b>       |   |
| Product function                      |   |
| • VLAN - port based                   | Yes   |
| Number of VLANs / maximum             | 255   |
| VLAN-Identification number            | 1...4094                                      |
| 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>    |   |
| protocol / is supported               |   |
| • PPP                                 | Yes   |
| <b>Product functions / Redundancy</b> |   |
| Product function                      |   |
| • redundancy procedure STP            | Yes   |
| • RSTP redundancy protocol            | Yes   |
| • redundancy procedure MSTP           | Yes   |
| • eRSTP                               | Yes   |
| Protocol / is supported               |   |
| • STP                                 | Yes   |
| • RSTP                                | Yes   |
| • MSTP                                | Yes   |
| <b>Product functions / Security</b>   |   |
| product function                      |   |
| • IEEE 802.1x (radius)                | Yes   |
| • RADIUS client                       | Yes   |
| protocol / is supported               |   |
| • RADIUS                              | Yes   |
| • TACACS+                             | Yes   |
| • SSL                                 | Yes   |
| key length                            |   |

|   |  |
|---|--|
| • at SSL  | 56 bit   |
| • at RSA  | 1024 bit   |
| product function / port-rate-limiting                             | Yes  |
| <b>Product functions / Time</b>                                   |  |
| product function  |  |
| • SNTP-client   | Yes  |
| • SNTP-server   | Yes  |
| Protocol / is supported   |  |
| • SNTP  | Yes  |
| <b>Standards, specifications, approvals</b>                       |  |
| Standard  |  |
| • for EMC   | FCC Part 15 (Class A), EN55022 (CISPR22 Class A)                         |
| • for safety / of CSA and UL                                      | cCSAus (Compliant with CSA C22.2 No. 60950, UL 60950, EN60950) (Pending) |
| Laser protection class  | Complies with 21 CFR Chapter1, Subchapter J                              |
| Verification of suitability                                       |  |
| • CE mark   | Yes  |
| • IEC 61850-3   | Yes  |
| 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 802.3x-Flow Control                           | Yes  |
| • according to IEEE 802.3ab-1000BaseT                             | Yes  |
| • according to IEEE 802.3ad-Link Aggregation                      | Yes  |
| • according to IEEE 802.1d-MAC Bridges                            | Yes  |
| • according to IEEE 802.1d-STP                                    | 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  |
| product conformity  |  |
| • according to MIL-STD 167-Vibration                              | Yes  |
| • according to MIL-STD 461-EMI                                    | Yes  |
| • according to MIL-STD 810-Temperature and Humidity               | Yes  |
| • according to MIL-S 901D-Shock (Hard Mounted)                    | Yes  |
| • according to MIL-STD 1399 Magnetic Field (DC Magnetic Exposure) | Yes  |
| product conformity  |  |
|   | Yes  |

- RFC768-UDP
- RFC783-TFTP
- RFC791-IP
- RFC792-ICMP
- RFC793-TCP
- RFC826-ARP
- RFC854-Telnet
- RFC894-IP over Ethernet
- RFC1112-IGMPv1
- RFC1519-CIDR
- RFC1541-DHCP (client)
- RFC2030-SNTP
- RFC2068-HTTP
- RFC2236-IGMPv2
- RFC2284-EAP
- RFC2475-Differentiated Service
- RFC2865-RADIUS
- RFC3414-SNMPv3-USM
- RFC3415-SNMPv3-VACM

Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
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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