

**Product:** [GRS103-22TX/4C-1HV-2S](#)
**Managed 26-port Fast Ethernet 19" Switch**

**Product Description**

26 port Fast Ethernet/Gigabit Ethernet Industrial Workgroup Switch (4 x GE, 22 x FE), managed, Software HiOS 2S, Store-and-Forward-Switching, fanless Design

**Technical Specifications**
**Product description**

|                         |  |
|-------------------------|--|
| Name:                   | GRS103-22TX/4C-1HV-2S                            |
| Software Version:       | HiOS 10.0.00                                     |
| Port type and quantity: | 26 Ports in total, 4 x FE/GE TX/SFP , 22 x FE TX |

**More Interfaces**

|  |  |
|--|--|
| Power supply/signaling contact:          | 1 x IEC plug / 1 x plug-in terminal block, 2-pin, output manual or automatic switchable (max. 1 A, 24 V DC bzw. 24 V AC) |
| Local Management and Device Replacement: | USB-C  |

**Network size - length of cable**

|  |  |
|--|--|
| Twisted pair (TP):                                       | 0-100 m  |
| Single mode fiber (SM) 9/125 µm:                         | Fast Ethernet: see SFP LWL module M-FAST SFP-SM/LC and M-FAST SFP-SM+/LC; Gigabit Ethernet: see SFP LWL module M-SFP-LX/LC |
| Single mode fiber (LH) 9/125 µm (long haul transceiver): | Fast Ethernet: see SFP LWL module M-FAST SFP-LH/LC; Gigabit Ethernet: see SFP LWL module M-SFP-LH/LC and M-SFP-LH+/LC      |
| Multimode fiber (MM) 50/125 µm:                          | Fast Ethernet: see SFP LWL module M-FAST SFP-MM/LC; Gigabit Ethernet: see SFP LWL module M-SFP-SX/LC and M-SFP-LX/LC       |
| Multimode fiber (MM) 62.5/125 µm:                        | Fast Ethernet: see SFP LWL module M-FAST SFP-MM/LC; Gigabit Ethernet: see SFP LWL module M-SFP-SX/LC and M-SFP-LX/LC       |

**Network size - cascadiability**

|                         |     |
|-------------------------|-----|
| Line - / star topology: | any |
|-------------------------|-----|

**Power requirements**

|                             |                           |
|-----------------------------|---------------------------|
| Operating Voltage:          | 100 - 240 VAC, 47 - 63 Hz |
| Power consumption:          | expected max 16 W         |
| Power output in BTU (IT)/h: | expected max 55           |

**Software**

|              |   |
|--------------|---|
| Switching:   | Independent VLAN Learning, Fast Aging, Static Unicast/Multicast Address Entries, QoS / Port Prioritization (802.1D/p), TOS/DSCP Prioritization, Interface Trust Mode, CoS Queue Management, Flow Control (802.3X), Egress Interface Shaping, Ingress Storm Protection, VLAN (802.1Q), VLAN Unaware Mode, GARP VLAN Registration Protocol (GVRP), Voice VLAN, GARP Multicast Registration Protocol (GMRP), IGMP Snooping/Querier per VLAN (v1/v2/v3), Unknown Multicast Filtering, Multiple VLAN Registration Protocol (MVRP), Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP) |
| Redundancy:  | Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2), RSTP 802.1D-2004 (IEC62439-1), RSTP Guards   |
| Management:  | Dual Software Image Support, TFTP, SFTP, SCP, LLDP (802.1AB), LLDP-MED, SSHv2, HTTP, HTTPS, IPv6 Management, Traps, SNMP v1/v2/v3, Telnet   |
| Diagnostics: | Management Address Conflict Detection, MAC Notification, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, Persistent Logging on ACA, Port Monitoring with Auto-Disable, Link Flap Detection, Overload Detection, Duplex Mismatch Detection, Link Speed and Duplex Monitoring, RMON (1,2,3,9), Port Mirroring 1:1, Port Mirroring 8:1, Port Mirroring N:1, Port Mirroring N:2, System Information, Self-Tests on Cold Start, Copper Cable Test, SFP Management, Configuration Check Dialog, Switch Dump  |

|                       |   |
|-----------------------|---|
| Configuration:        | Automatic Configuration Undo (roll-back), Text-based Configuration File (XML), Backup config on a remote server when saving, Clear config but keep IP settings, BOOTP/DHCP Client with Auto-Configuration, DHCP Server: per Port, DHCP Server: Pools per VLAN, , HiDiscovery, DHCP Relay with Option 82, USB-C Management support, Command Line Interface (CLI), CLI Scripting, CLI script handling over ENV M at boot, Full-featured MIB Support, Context-sensitive Help, HTML5 based Management   |
| Security:             | MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, Integrated Authentication Server (IAS), RADIUS VLAN Assignment, Denial-of-Service Prevention, LDAP, VLAN-based ACL, Ingress VLAN-based ACL, Basic ACL, Access to Management restricted by VLAN, Device Security Indication, Audit Trail, CLI Logging, HTTPS Certificate Management, Restricted Management Access, Appropriate Use Banner, Configurable Password Policy, Configurable Number of Login Attempts, SNMP Logging, Multiple Privilege Levels, Local User Management, Remote Authentication via RADIUS, User Account Locking, Password change on first login |
| Time synchronisation: | Buffered Real Time Clock, SNTP Client, SNTP Server  |
| Industrial Profiles:  | IEC61850 Protocol (MMS Server, Switch Model), ModbusTCP   |
| Miscellaneous:        | Manual Cable Crossing, Port Power Down  |

## Ambient conditions

|  |            |
|--|------------|
| MTBF (Telecordia SR-332 Issue 3) @ 25°C: | 295 701 h  |
| Operating temperature:                   | -10-+60 °C |
| Storage/transport temperature:           | -20-+70 °C |
| Relative humidity (non-condensing):      | 5-90 %     |

## Mechanical construction

|                     |  |
|---------------------|--|
| Dimensions (WxHxD): | 448 mm x 44 mm x 310 mm (without fixing bracket) |
| Weight:             | approx 3.85 kg                                   |
| Mounting:           | 19" control cabinet                              |
| Protection class:   | IP20   |

## Mechanical stability

|                          |  |
|--------------------------|--|
| IEC 60068-2-6 vibration: | 3.5 mm, 5 Hz – 8.4 Hz, 10 cycles, 1 octave/min.; 1 g, 8.4 Hz-200 Hz, 10 cycles, 1 octave/min |
| IEC 60068-2-27 shock:    | 15 g, 11 ms duration, 18 shocks  |

## EMC interference immunity

|   |  |
|---|--|
| EN 61000-4-2 electrostatic discharge (ESD): | 6 kV contact discharge, 8 kV air discharge                       |
| EN 61000-4-3 electromagnetic field:         | 20 V/m (80-2700 MHz), 10V/m (2.7-6 GHz); 1 kHz, 80% AM           |
| EN 61000-4-4 fast transients (burst):       | 2 kV power line, 2 kV data line                                  |
| EN 61000-4-5 surge voltage:                 | power line: 2 kV (line/earth), 1 kV (line/line); data line: 1 kV |
| EN 61000-4-6 Conducted Immunity:            | 3 V (10 kHz-150 kHz), 10 V (150 kHz-80 MHz)                      |

## EMC emitted immunity

|                    |                            |
|--------------------|----------------------------|
| EN 55032:          | EN 55032 Class A           |
| FCC CFR47 Part 15: | FCC 47CFR Part 15, Class A |

## Approvals

|                 |                  |
|-----------------|------------------|
| Basis Standard: | CE, FCC, EN61131 |
|-----------------|------------------|

## Reliability

|            |   |
|------------|---|
| Guarantee: | 60 months (please refer to the terms of guarantee for detailed information) |
|------------|---|

## Scope of delivery and accessories

|                                  |   |
|----------------------------------|---|
| Accessories to Order Separately: | M1 modules, Network management software Industrial HiVision (943156xxx), Bracket for fastening the casing (2 pcs.) (943943001) Bracket, long (+50 mm/1.97 in) for fastening the casing (2 pcs.) (943943101) Non-heating-appliance cable (Euro model) (942271001) 2-pin terminal block (50 pieces) (943845010) 2-pin terminal block with screw lock (50 pieces) (943845009) 3-pin High Voltage Interlock terminal block (50 pcs.) (94 8450089) Protection cap for RJ45 socket (50 pieces) (943 936001) Protection cap for SFP slot (25 pieces) (943942001) AutoConfiguration Adapter ACA22-USB-C (EEC) (942239001) |
| Scope of delivery:               | GRS103 device, Safety and general information sheet, 2-pin terminal block for signal contact, 2 × Cover panel for media module slot   |

## Further Instructions

|                        |   |
|------------------------|---|
| Product Documentation: | <a href="https://www.doc.hirschmann.com">https://www.doc.hirschmann.com</a>   |
| Certificates:          | <a href="https://www.doc.hirschmann.com/certificates.html">https://www.doc.hirschmann.com/certificates.html</a>           |
| Software Download:     | <a href="https://hirschmann-support.belden.com/en-US/downloads">https://hirschmann-support.belden.com/en-US/downloads</a> |

## History

**Variants**

| Item #    | Type                  |
|-----------|-----------------------|
| 942298005 | GRS103-22TX/4C-1HV-2S |

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