



## Product information GRS1020 - Fast Ethernet - GRS1020-16T9SMMV9HHSE2S05.0.

Industrial Ethernet:Ruggedized Switches:GREYHOUND Gigabit Ethernet-Switch, media modules and power supplies:GRS1020 - Fast Ethernet

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<b>Name</b>	GRS1020 - Fast Ethernet
	
	Industrial managed Fast Ethernet Switch, 19" rack mount, fanless Design according to IEEE 802.3, Store-and-Forward-Switching; HiOS Layer 2 Standard
<b>Delivery informations</b>	
<b>Availability</b>	available
<b>Product description</b>	
<b>Type</b>	GRS1020-16T9SMMV9HHSE2S05.0.
<b>Order No.</b>	GRS1020-16T9SMMV9HHSE2S05.0.
<b>Description</b>	Industrial managed Fast Ethernet Switch, 19" rack mount, fanless Design according to IEEE 802.3, Store-and-Forward-Switching; HiOS Layer 2 Standard
<b>Port type and quantity</b>	24 FE ports; Basic unit: 16 FE ports, expandable with media module with 8 FE portsPorts in total up to 24 16 FE TX ports
<b>More Interfaces</b>	
<b>V.24 interface</b>	1 x RJ45 socket
<b>USB interface</b>	1 x USB to connect the AutoConfiguration Adapter ACA21/22-USB
<b>Power supply/signaling contact</b>	power supply 3 pin plug-in terminal block signal contact 2 pin plug-in terminal block; power supply 3 pin plug-in terminal block
<b>Network size - length of cable</b>	
<b>Twisted pair (TP)</b>	0 m ... 100 m
<b>Multimode fiber (MM) 50/125 µm</b>	see SFP modules
<b>Multimode fiber (MM) 62.5/125 µm</b>	see SFP modules
<b>Single mode fiber (SM) 9/125 µm</b>	see SFP modules
<b>Single mode fiber (LH) 9/125 µm (long haul transceiver)</b>	see SFP modules
<b>Network size - cascading</b>	
<b>Line - / star topology</b>	any
<b>Ring structure (HIPER-Ring) quantity switches</b>	MRP, RSTP
<b>Power requirements</b>	
<b>Operating voltage</b>	110 - 250 VDC (88V - 288 VDC) and 110 - 240 VAC (88 - 276 VAC); 110 - 250 VDC (88V - 288 VDC) and 110 - 240 VAC (88 - 276 VAC)
<b>Power consumption</b>	7.5 W
<b>Power output in Btu (IT) h</b>	30
<b>Mechanical construction</b>	
<b>Dimensions (W x H x D)</b>	448 x 44 x 315 mm
<b>Weight</b>	4.08 kg
<b>Protection class</b>	IP30
<b>Mounting</b>	rack mount
<b>Software</b>	
<b>Management</b>	Dual Software Image Support; TFTP; SFTP; SCP; LLDP (802.1AB); LLDP-MED; SSHv2; V.24; HTTP; HTTPS; Traps; SNMP v1/v2/v3; Telnet
<b>Diagnostics</b>	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; System Information; Self-Tests on Cold Start; Copper Cable Test; SFP Management; Configuration Check Dialog; Switch Dump; Snapshot Configuration Feature
<b>Configuration</b>	Automatic Configuration Undo (roll-back); Configuration Fingerprint; Text-based Configuration File (XML); BOOTP/DHCP Client with Auto-Configuration; DHCP Server: per Port; DHCP Server: Pools per VLAN; AutoConfiguration Adapter ACA21/22 (USB); HiDiscovery; DHCP Relay with Option 82; Command Line Interface (CLI); CLI Scripting; Full-featured MIB Support; Web-based Management; Context-sensitive Help
<b>Security</b>	MAC-based Port Security; Port-based Access Control with 802.1X; Guest/unauthenticated VLAN; Integrated Authentication Server (IAS); RADIUS VLAN Assignment; Automatic Denial-of-Service Prevention; 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



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<b>Redundancy functions</b>	Link Aggregation with LACP; Link Backup; Media Redundancy Protocol (MRP) (IEC62439-2); RSTP 802.1D-2004 (IEC62439-1); RSTP Guards
<b>Industrial Profiles</b>	IEC61850 Protocol (MMS Server, Switch Model); ModbusTCP
<b>Time synchronisation</b>	SNTP server and client, Buffered RTC
<b>Miscellaneous</b>	Manual Cable Crossing; Port Power Down
<b>Switching</b>	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; Voice VLAN; 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)
<b>Ambient conditions</b>	
<b>Operating temperature</b>	0 °C ... 60 °C
<b>Storage/transport temperature</b>	-40 °C ... 70 °C
<b>Relative humidity (non-condensing)</b>	5 % ... 95 %
<b>Mechanical stability</b>	
<b>IEC 60068-2-27 shock</b>	15 g, 11 ms duration, 18 shocks
<b>IEC 60068-2-6 vibration</b>	1 mm, 2 Hz-13.2 Hz, 90 min.; 0.7 g, 13.2 Hz-100 Hz, 90 min.; 3.5 mm, 3 Hz-9 Hz, 10 cycles, 1 octave/min.; 1 g, 9 Hz-150 Hz, 10 cycles, 1 octave/min
<b>EMC interference immunity</b>	
<b>EN 61000-4-2 electrostatic discharge (ESD)</b>	8 kV contact discharge, 15 kV air discharge
<b>EN 61000-4-3 electromagnetic field</b>	35 V/m (80-2700 MHz); 1 kHz, 80% AM
<b>EN 61000-4-4 fast transients (burst)</b>	4 kV power line, 4 kV data line
<b>EN 61000-4-5 surge voltage</b>	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line, IEEE1613: power line 5 kV (line/earth)
<b>EN 61000-4-6 conducted immunity</b>	3 V (10 kHz-150 kHz), 10 V (150 kHz-80 MHz)
<b>EN 61000-4-16 mains frequency voltage</b>	30 V, 50 Hz continuous; 300 V, 50 Hz 1 s
<b>EMC emitted immunity</b>	
<b>FCC CFR47 Part 15</b>	FCC 47 CFR Part 15 Class A
<b>EN 55022</b>	EN 55022 Class A
<b>Approvals</b>	
<b>Safety of industrial control equipment</b>	EN61131, EN60950
<b>Substation</b>	IEC61850, IEEE1613
<b>Scope of delivery and accessories</b>	
<b>Scope of delivery</b>	Device, terminal block, operating manual
<b>Accessories to order separately</b>	Terminal Cable, Network management Industrial HiVision, ACA22, SFP

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