HIRSCHMANN
A BELDEN BRAND

Product: GRS106-16TX/14SFP-2HV-3AUR

Configurator: GRS106-16TX/14SFP-2HV-3AUR

Configurator Description

The GREYHOUND 105/106 switches' flexible design makes this a future-proof networking device that can evolve alongside your network's bandwidth and power needs. With a focus on maximum network availability under industrial conditions, these switches enable you to select the device's port count and type – even giving you the ability to use the GREYHOUND 105/106 series as a backbone switch.

Technical Specifications

Product description

Type	GRS106-16TX/14SFP-2HV-3AUR (Product code: GRS106-6F8F16TSGGY9HHSE3AURXX.X.XX)
Description	GREYHOUND 105/106 Series, Managed Industrial Switch, fanless design, 19" rack mount, according to IEEE 802.3, 6x1/2.5/10GE +8x1/2.5GE +16xGE
Software Version	HiOS 10.0
Part Number	942287016
Port type and quantity	30 Ports in total, 6x GE/2.5GE/10GE SFP(+) slot + 8x GE/2.5GE SFP slot + 16x FE/GE TX ports

More Interfaces

Power supply/signaling contact	Power supply input 1: IEC plug, Signal contact: 2 pin plug-in terminal block , Power supply input 2: IEC plug
SD-card slot	1 x SD card slot to connect the auto configuration adapter ACA31
USB-C	1 x USB-C (client) for local management

Network size - length of cable

Twisted pair (TP)	0-100 m
Single mode fiber (SM) 9/125 µm	see SFP modules
Single mode fiber (LH) 9/125 µm (long haul transceiver)	see SFP modules
Multimode fiber (MM) 50/125 µm	see SFP modules
Multimode fiber (MM) 62.5/125 µm	see SFP modules

Network size - cascadibility

Line - / star topology	any

Power requirements

Operating Voltage	Power supply input 1: 110 - 240 VAC, 50 Hz - 60 Hz , Power supply input 2: 110 - 240 VAC, 50 Hz - 60 Hz
Power consumption	Basic unit with one power supply max. 35W
Power output in BTU (IT)/h	max. 120

Software

Switching	CoS Queue Management, Double VLAN Tagging (QinQ), Egress Interface Shaping, Fast Aging, Flow Control (802.3X), Forward unknown multicast to query ports, GARP Multicast Registration Protocol (GMRP), GARP VLAN Registration Protocol (GVRP), IGMP Snooping/Querier per VLAN (v1/v2/v3), Independent VLAN Learning, Ingress Storm Protection, Interface Trust Mode, IP Egress DiffServ Classification and Policing, IP Ingress DiffServ Classification and Policing, IP subnet-based VLAN, Jumbo Frames, MAC-based VLAN, Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP), Multiple VLAN Registration Protocol (MVRP), Protocol-based VLAN, QoS / Port Prioritization (802.1D/p), Queue-Shaping / Max. Queue Bandwidth, Static Unicast/Multicast Address Entries, TOS/DSCP Prioritization, Unknown Multicast Filtering, VLAN (802.1Q), VLAN Unaware Mode, Voice VLAN

Redundancy	HIPER-Ring (Ring Switch), HIPER-Ring over Link Aggregation, HiVRRP (VRRP enhancements), Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2), MRP over Link Aggregation, MSTP (802.1Q), Redundant Network Coupling, RSTP 802.1D-2004 (IEC62439-1), RSTP Guards, Sub Ring Manager, VRRP, VRRP Ping Answer, VRRP Tracking
Management	DNS Client, Dual Software Image Support, TFTP, SFTP, SCP, LLDP (802.1AB), LLDP-MED, SSHv2, OPC-UA Server, HTTP, HTTPS, IPv6 Management, Service Discovery (bonjour), ITxPT Module Inventory, Traps, SNMPv1/v2 Read-Only, SNMP v1/v2/v3, SNMPv3 Traps, Telnet
Diagnostics	Management Address Conflict Detection, Address Conflict Detection for routing interfaces, MAC Notification, Loop Protection, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, Persistent Logging on ACA, Email Notification, 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, RSPAN, SFLOW, VLAN Mirroring, System Information, Self-Tests on Cold Start, Copper Cable Test, SFP Management, Configuration Check Dialog, Switch Dump,
Configuration	Automatic Configuration Undo (roll-back), Configuration Fingerprint, XML-based Configuration File, 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, AutoConfiguration Adapter ACA31 (SD card), HiDiscovery, DHCP Relay with Option 82, Auto Disable, USB-C Management support, Command Line Interface (CLI), CLI Scripting, CLI script handling over ENVM at boot, Full-featured MIB Support, Context-sensitive Help, HTML5 based Management, Interface Shutdown via Tracking
Security	Signed Firmware Images, MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, Integrated Authentication Server (IAS), RADIUS VLAN Assignment, RADIUS Policy Assignment, Multi-Client Authentication per Port, MAC Authentication Bypass, Format options for MAC authentication bypass, DHCP Snooping, IP Source Guard, Dynamic ARP Inspection, Denial-of-Service Prevention, RADIUS Client, LDAP, Ingress MAC-based ACL, Egress MAC-based ACL, Ingress IPv4-based ACL, Egress IPv4-based ACL, Time-based ACL, VLAN-based ACL, Ingress VLAN-based ACL, Egress VLAN-based ACL, ACL Flow-based Limiting, Access to Management restricted by VLAN, Device Security Indication, Audit Trail, Secure Boot, 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	PTPv2 Transparent Clock two-step, PTPv2 Boundary Clock, BC with Up to 8 Sync / s , 802.1AS, 802.1AS-2020, Buffered Real Time Clock, SNTP Client, SNTP Server
Industrial Profiles	EtherNet/IP Protocol, Modbus TCP, PROFINET Protocol
Miscellaneous	Manual Cable Crossing, Port Power Down
Routing	IP/UDP Helper, Full Wire-Speed Routing, Port-based Router Interfaces, VLAN-based Router Interfaces, Loopback Interface, ICMP Filter, Net-directed Broadcasts, OSPFv2, RIP v1/v2, ICMP Router Discovery (IRDP), Equal Cost Multiple Path (ECMP), Static Unicast Routing, Proxy ARP, Static Route Tracking, IGMP v1/v2/v3, IGMP Proxy (Multicast Routing)

Ambient conditions

MTBF (Telecordia SR-332 Issue 3) @ 25°C	1 013 941
Operating temperature	-10 - +60
Storage/transport temperature	-20 - +70 °C
Relative humidity (non-condensing)	5-90 %

Mechanical construction

Dimensions (WxHxD)	444 x 44 x 355 mm
Weight	5 kg estimated
Mounting	Rack mount
Protection class	IP30

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 (800-1000 MHz), 10V/m (80-800 MHz ; 1000-6000 MHz); 1 kHz, 80% AM
EN 61000-4-4 fast transients (burst)	2 kV power line, 4 kV data line STP, 2 kV data line UTP
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth) and 1 kV (line/line); data line: 2 kV
EN 61000-4-6 Conducted Immunity	10 V (150 kHz - 80 MHz)

EMC emitted immunity

EN 55032	EN 55032 Class A

Approvals

Basis Standard	CE, FCC, EN61131
Safety of information technology equipment	EN62368, cUL62368

Reliability

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

Scope of delivery and accessories

Accessories to Order Separately	Network Management Industrial HiVision, ACA31, SFP/SFP+
Scope of delivery	Device, General safety instructions

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