HIRSCHMANN
A BELDEN BRAND

Product: BRS40-16TX/4SFP

Configurator: BRS40-16TX/4SFP

Configurator Description

The Hirschmann BOBCAT Switch is the first of its kind to enable real-time communication using TSN. To effectively support the increasing real-time communication requirements in industrial settings, a strong Ethernet network backbone is essential. This compact managed switches allow for expanded bandwidth capabilities by adjusting your SFPs from 1 to 2.5 Gigabit – requiring no change to the appliance.

Technical Specifications

Product description

Type	BRS40-16TX/4SFP (Product code: BRS40-0020OOOO-STCY99HHSESXX.X.XX)
Description	Managed Industrial Switch for DIN Rail, fanless design All Gigabit type
Software Version	HiOS10.0.00
Part Number	942170065
Port type and quantity	20 Ports in total: 16x 10/100/1000BASE TX / RJ45, 4x 100/1000Mbit/s fiber ; 1. Uplink: 2 x SFP Slot (100/1000 Mbit/s) ; 2. Uplink: 2 x SFP Slot (100/1000 Mbit/s)

More Interfaces

Power supply/signaling contact	1 x plug-in terminal block, 6-pin
Digital Input	1 x plug-in terminal block, 2-pin
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	see SFP fiber modules see SFP fiber modules
Single mode fiber (LH) 9/125 µm (long haul transceiver)	see SFP fiber modules see SFP fiber modules
Multimode fiber (MM) 50/125 µm	see SFP fiber modules see SFP fiber modules
Multimode fiber (MM) 62.5/125 µm	see SFP fiber modules see SFP fiber modules

Network size - cascadibility

Line - / star topology	any

Power requirements

Operating Voltage	2 x 12 VDC ... 24 VDC
Power consumption	17 W
Power output in BTU (IT)/h	58

Software

Switching	CoS Queue Management, Egress Interface Shaping, Fast Aging, Flow Control (802.3X), 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, Jumbo Frames, Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP), Multiple VLAN Registration Protocol (MVRP), 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), Voice VLAN
Redundancy	High Availability Seamless Redundancy Protocol (HSR) (IEC62439-3), Link Aggregation with LACP, Link Backup, MRP over Link Aggregation, MSTP (802.1Q), RSTP (Rapid Spanning Tree Protocol), RSTP 802.1D-2004, RSTP Guards

Management	Dual Software Image Support, TFTP, SFTP, SCP, LLDP (802.1AB), LLDP-MED, SSHv2, HTTP, HTTPS, Traps, SNMP v1/v2/v3, Telnet, IPv6 Management
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), Configuration Fingerprint, 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, AutoConfiguration Adapter ACA21/22 (USB), HiDiscovery, 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
Security	ISASecure CSA / IEC 62443-4-2 certified, 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, DoS Prevention Drop Counter, 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	PTPv2 Transparent Clock two-step, PTPv2 Boundary Clock, BC with Up to 8 Sync / s , 802.1AS, Buffered Real Time Clock, SNTP Client, SNTP Server
Industrial Profiles	EtherNet/IP Protocol, IEC61850 Protocol (MMS Server, Switch Model), Modbus TCP, PROFINET Protocol
Miscellaneous	Digital IO Management, Manual Cable Crossing, Port Power Down

Ambient conditions

MTBF (Telecordia SR-332 Issue 3) @ 25°C	1 940 000 h
Operating temperature	0-+60
Storage/transport temperature	-40-+70 °C
Relative humidity (non-condensing)	1- 95 %

Mechanical construction

Dimensions (WxHxD)	109 mm x 138 mm x 115 mm
Weight	950 g
Housing	PC-ABS
Mounting	DIN Rail
Protection class	IP30

Mechanical stability

IEC 60068-2-6 vibration	5 Hz ... 8,4 Hz with 3,5 mm amplitude; 2 Hz ... 13,2 Hz with 1 mm amplitude; 8,4 Hz ... 200 Hz with 1 g; 13,2 Hz ... 100 Hz with 0,7 g
IEC 60068-2-27 shock	15 g, 11 ms duration

EMC interference immunity

EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80-2000 MHz); 5 V/m (2000-2700 MHz); 3 V/m (5100-6000 MHz)
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) 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 55022	EN 55032 Class A
FCC CFR47 Part 15	FCC 47CFR Part 15, Class A

Approvals

Basis Standard	CE, FCC, EN61131, EN62368-1
Safety of industrial control equipment	cUL61010

Reliability

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

Scope of delivery and accessories

Accessories	AutoConfiguration Adapter ACA22-USB-C (EEC) 942239001; 6-pin terminal block with screw lock (50 pieces) 943 845-013; 2-pin terminal block with screw lock (50 pieces) 943 845-009; Industrial HiVision Network Management Software 943 156-xxx
Scope of delivery	1 × Device, 1 × Safety and general information sheet, 1 × Terminal block for supply voltage and signal contact, 1 × Terminal block for the digital input depending on device variant, 2 × Ferrites with key depending on device variant

Further Instructions

Product Documentation	https://www.doc.hirschmann.com/index.html
Certificates	https://www.doc.hirschmann.com/certificates.html
Software Download	https://hirschmann-support.belden.com/en-US/downloads

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