



Product: BRS40-0012OOOO-STEYV9HHSEAXX.X.XX

Configurator: BOBCAT configurator

## **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**

Description	Managed Industrial Switch for DIN Rail, fanless design All Gigabit type
Configurator Part Number	942170999
Port Type and Quantity	12 Ports in total: 8x 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**

any		
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## **Power requirements**

Operating Voltage	2 x 12 VDC 24 VDC
Power consumption	11 W
Power output in BTU (IT)/h	38

## Software

		CoS Queue Management, Egress Interface Shaping, Fast Aging, Flow Control (802.3X), Forward unknown multicast to query ports per vlan, 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,
5	Switching	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, TSN 802.1Qbv Support on interfaces 1/1 - 1/3., Unknown Multicast Filtering, VLAN (802.1Q),
		Voice VLAN, Private VLAN

Redundancy	HIPER-Ring (Ring Switch), Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2) - Redundancy Client, Media Redundancy Protocol (MRP) (IEC62439-2) - Redundancy Manager, Redundant Network Coupling, RSTP 802.1D-2004 (IEC62439-1), RSTP Guards, HIPER-Ring over Link Aggregation, MRP over Link Aggregation, MSTP (802.1Q), Sub Ring Manager
Management	Dual Software Image Support, TFTP, SFTP, SCP, LLDP (802.1AB), LLDP-MED, SSHv2, HTTP, HTTPS, IPv6 Management, Traps, SNMP v1/v2/v3, SNMPv3 Traps, Telnet, DNS Client, ITxPT Module Inventory, OPC-UA Server, Service Discovery (bonjour), SNMPv1/v2 Read-Only
Diagnostics	Configuration Check Dialog, Copper Cable Test, Device Status Indication, Duplex Mismatch Detection, LEDs, Link Flap Detection, Link Speed and Duplex Monitoring, MAC Notification, Management Address Conflict Detection, Overload Detection, Persistent Logging on ACA, Port Mirroring 1:1, Port Mirroring 8:1, Port Mirroring N:1, Port Mirroring N:2, Port Monitoring with Auto-Disable, RMON (1,2,3,9), Self-Tests on Cold Start, SFP Management, Signal Contact, Switch Dump, Syslog, System Information, TCPDump, Email Notification, Loop Protection, RSPAN, SFLOW
Configuration	Auto Disable, AutoConfiguration Adapter ACA21/22 (USB), Automatic Configuration Undo (roll-back), Backup config on a remote server when saving, BOOTP/DHCP Client with Auto-Configuration, Clear config but keep IP settings, CLI script handling over ENVM at boot, CLI Scripting, Command Line Interface (CLI), Configuration Fingerprint, Context-sensitive Help, DHCP Relay with Option 82, DHCP Server: per Port, DHCP Server: Pools per VLAN, Full-featured MIB Support, HiDiscovery, HTML5 based Management, USB-C Management support, XML-based Configuration File, Interface Shutdown via Tracking
Security	Access to Management restricted by VLAN, Appropriate Use Banner, Audit Trail, Basic ACL, CLI Logging, Configurable Number of Login Attempts, Configurable Password Policy, Denial-of-Service Prevention, Device Security Indication, DoS Prevention Drop Counter, Guest/unauthenticated VLAN, HTTPS Certificate Management, Ingress VLAN-based ACL, Integrated Authentication Server (IAS), Local User Management, MAC-based Port Security, Multiple Privilege Levels, Password change on first login, Port-based Access Control with 802.1X, RADIUS Cleint, RADIUS VLAN Assignment, Remote Authentication via RADIUS, Ricticed Management Access, Secure Boot, Signed Firmware Images, SMPL Logging, User Account Locking, VLAN-based ACL, ACL Flow-based Limiting, DHCP Snooping, Dynamic ARP Inspection, Format options for MAC authentication bypass, Ingress IPv4-based ACL, Ingress MAC-based ACL, IP Source Guard, LDAP, MAC Authentication Bypass, MACSec Support, Multi-Client Authentication per Port, TACACS+ Client, Time-based ACL
Time synchronisation	802.1AS, 802.1AS-2020, BC with Up to 8 Sync / s, Buffered Real Time Clock, PTPv2 Boundary Clock, PTPv2 Transparent Clock two-step, 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 (Telcordia SR-332 Issue 3) @ 25°C	3 119 057 h
Operating temperature	0-+60
Minimum Storage Temperature	-40-+70 °C
Relative humidity (non-condensing)	1- 95 %

# **Mechanical construction**

Dimensions (WxHxD)	87 mm x 140 mm x 115 mm
Weight	1090 g
Housing	Metal
Mount Type	DIN Rail
Protection class	IP40

# **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

Substation	IEC 61850		

### Reliability

Guarantee	60 months (please refer to the &ltlt/a href=https://assets.belden.com/m/1424ddb7a3280e7a/original/Hirschmann-Automation-and-Control-GmbH-Terms-of-Guarantee.pdf &ltgt/terms of guarantee &ltlt//a&ltdt/ for detailed information)
	guarantee distribution and 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://www.doc.hirschmann.com/releasemap.html

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