

# Hirschmann BOBCAT Switch

## Next Generation Compact Managed Switch

Get ready for the next generation network with the first industrial switch to provide advanced security and real-time communication through time-sensitive networking (TSN) technology on all ports for standardized Ethernet usage in any application.

-  **Simultaneously support multiple services** on one network through TSN technology
-  **Limit downtime and ensure network protection** through advanced security features
-  **Prepare for future network growth** with increased bandwidth and speed capabilities

### Key Features

- Real-time TSN Ethernet support for precise data transmission
- Advanced security features, including wire-speed access control lists (ACL) and automatic denial-of-service (DoS) prevention
- Increased bandwidth capabilities, supporting tri-speed fiber SFP slots with 100MB/s, 1 Gig and 2.5 Gigabit speeds
- Hardware-supported time synchronization in accordance with IEEE 1588v2 Precision Time Protocol
- Interoperability with legacy systems for simplified migration
- Additional interface options through digital input for more flexibility
- Robust industrial design reinforces the switch's resistance against harsh conditions



The Hirschmann BOBCAT Switch offers enhanced flexibility and interoperability for simple maintenance and future-proof operation due to tri-speed SFP ports and downwards compatibility for existing infrastructure.

**Be certain.  
Belden.**



## Real-Time Communication and Advanced Industrial Security

Today's robust and high-performance operations benefit from the Industrial Internet of Things (IIoT) by connecting their devices through a centralized, local cloud. The Hirschmann BOBCAT Switch is the first of its kind to enable real-time communication using TSN. Industrial applications require this capability to maximize performance and security, especially when under demanding conditions.

To effectively support the increasing real-time communication requirements in industrial settings, a strong Ethernet network backbone is essential. This compact managed switch allows for expanded bandwidth capabilities by adjusting your SFPs from 1 to 2.5 Gigabit – requiring no change to the appliance.

Enhanced network security is another critical component of any future-facing network. The Hirschmann BOBCAT Switch supports HiOS software and features several compelling security elements, including:

- IEEE 802.1x port-based access control
- Varying privilege levels
- Configurable password policies
- Security status monitor
- Audit trail

These capabilities deliver more network reliability to reduce latency and ensure an uninterrupted production process.

## Applications

The Hirschmann BOBCAT Switch is an ideal solution for classic automation applications that require real-time communication, low latency, and the simultaneous synchronization of data and information to control operations. The appliance is best for engineers, system integrators and machine builders looking for a powerful and future-proof device.

## Markets

This compact managed switch is an essential appliance relevant to many industrial markets, including automotive, manufacturing, machine building, water management, security, consumer packaged goods, and oil and gas. The Hirschmann BOBCAT Switch is also applicable to the transportation and power and energy industries, helping to deliver critical real-time information, like deterministic signaling and energy flow.



The Hirschmann BOBCAT Switch is a cost-effective and high-performance solution that enables increased bandwidth and improved network reliability.

## Technical Information

Product Description Switch				
Type	BRS20	BRS30	BRS40	BRS50
Description	Managed, Industrial Ethernet Switch DIN Rail, fanless design, up to 12 ports and up to 4 fiber ports			
Port Type and Quantity	Fast Ethernet with up to 3 SC/ST fiber ports or 4 SFP ports	Fast Ethernet with up to 4 dual-speed 100/1000 Mbit/s SFP ports	All Gigabit with up to 4 dual-speed 100/1000 Mbit/s SFP ports	All Gigabit with up to 4 tri-speed 100/1000/2500 Mbit/s SFP ports
Additional Interfaces				
Local Management and Device Replacement	USB-C			
Digital Input	1 x plug-in terminal block, 2-pin			
Power Requirements				
Operating Voltage*	12 - 48 V DC and 24 V AC (redundant)			
Power Consumption	5 up to 12 W			
Mechanical Construction				
Dimensions (W x H x D) mm	69/85 mm* x 140 mm x 110 mm metal housing 57/73 mm* x 138 mm x 109 mm plastic housing			
Housing	plastic or metal (later release)			
Weight	up to 570 g (plastic); up to 950 g (metal)			
Protection class	IP30, IP40 (metal housing)			
Software				
Supported HiOS Software Levels	Layer 2 Standard (L2S) or Layer 2 Advanced (L2A)			
Software Layer 2				
Management	TFTP; SFTP; SCP; SSHv2; HTTP; HTTPS; Traps; SNMP v1/v2/v3			
Diagnostics	MAC Notification; Signal Contact; Device Status Indication; LEDs; RMON (1,2,3,9); System Information; Self-Tests on Cold Start; SFP Management; Configuration Check Dialog; Switch Dump			
Configuration	Configuration Fingerprint; Text-based Configuration File (XML); BOOTP/DHCP Client with Auto-Configuration; AutoConfiguration Adapter ACA22-USB-C; Command Line Interface (CLI); CLI Scripting; Full-featured MIB Support; Web-based Management; Context-sensitive Help; Automatic configuration undo (roll-back)			
Security	MAC based port security; Access to Management restricted by VLAN; Device Security Indication; Audit Trail; CLI Logging; HTTPS Certificate Management; 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			
Redundancy Functions	Link Aggregation with LACP (later release); RSTP 802.1D-2004 (IEC62439-1); RSTP Guards; MRP (Media Redundancy Protocol IEC62439-2); HIPER-Ring client			
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); IGMP snooping querier (v1, v2, v3)			
Standardized Real-Time Ethernet	TSN, Time Sensitive Network (later release)			
Time Synchronization	SNTP server and client; IEEE1588v2 PTP TC (later release); Buffered RTC			
Miscellaneous	Port power down, manual cable crossing			
Additional Software Information	Please note that the feature set available at product launch can be different.			
Ambient Conditions				
Operating Temperature	0 °C to 60 °C, or -40 °C to +70 °C, optional conformal coating			
Relative Humidity (non-condensing)	1% to 95%			
Approvals Configurable				
Safety of Industrial Control Equipment*	EN62368-1, EN 61131-2, UL61010-2-201 **			
Ship*	GL/DNV **			
Hazardous Locations*	ANSI/UL 121201**, ATEX (2014/34/EU) **, IECEx**			
Transportation*	NEMA TS2, EN50121-4**			
Accessories				
Device Replacement and Logging	ACA22-USB-C (EEC)			

\* Depending on the selected variant

\*\*Approvals pending

**NOTE:** These are the prominent technical specifications. For complete technical specifications visit: [www.hirschmann.com](http://www.hirschmann.com)



### BRS20/BRS30/BRS40/BRS50 BOBCAT Switch Configurations

**BRS50-00122Q2Q-STCZ99HHSSESXX.X.**

#### Design

BRS20 = 100 Mbit/s Ports  
BRS30 = 100/1000 Mbit/s Ports  
BRS40 = 1000 Mbit/s Ports  
BRS50 = 1000/2500 Mbit/s Ports

#### Number of Fast Ethernet Ports

00 = 0 x 100 Mbit/s Ports	04 = 4 x 100 Mbit/s Ports
05 = 5 x 100 Mbit/s Ports	06 = 6 x 100 Mbit/s Ports
08 = 8 x 100 Mbit/s Ports	09 = 9 x 100 Mbit/s Ports
10 = 10 x 100 Mbit/s Ports	11 = 11 x 100 Mbit/s Ports
12 = 12 x 100 Mbit/s Ports	

#### Number of Gigabit Ethernet Ports

00 = 0 x 1000 Mbit/s Ports	04 = 4 x 1000 Mbit/s Ports
08 = 8 x 1000 Mbit/s Ports	12 = 12 x 1000 Mbit/s Ports
12 = 8 x 1000 Mbit/s Ports + 4 x 2500 Mbit/s Ports	

#### Type 1 Uplink Ports

99 = None	TT = 2 x TX (100 Mbit/s)
2T = 2 x TX (1000 Mbit/s)	QT = 2 x TX (2500 Mbit/s)
M2 = 1 x Multimode SC (100 Mbit/s)	M4 = 1 x Multimode ST (100 Mbit/s)
S2 = 1 x Singlemode SC (100 Mbit/s)	S4 = 1 x Singlemode ST (100 Mbit/s)
E2 = 1 x Singlemode + SC (100 Mbit/s)	L2 = 1 x Singlemode LH/SC (100 Mbit/s)
G2 = 1 x Singlemode LH+ SC (100 Mbit/s)	MM = 2 x Multimode SC (100 Mbit/s)
NN = 2 x Multimode ST (100 Mbit/s)	VV = 2 x Singlemode SC (100 Mbit/s)
UU = 2 x Singlemode ST (100 Mbit/s)	EE = 2 x Singlemode + SC (100 Mbit/s)
LL = 2 x Singlemode LH SC (100 Mbit/s)	GG = 2 x Singlemode LH+ SC (100 Mbit/s)
ZZ = 2 x SFP Slot (100 Mbit/s)	OO = 2 x SFP Slot (100/1000 Mbit/s)
Z6 = 1 x SFP Slot (100 Mbit/s)	2Q = 2 x SFP Slot (100/1000/2500 Mbit/s)

#### Type 2 Uplink Ports

99 = None	2T = 2 x TX (1000 Mbit/s)
QT = 2 x TX (2500 Mbit/s)	M2 = 1 x Multimode SC (100 Mbit/s)
M4 = 1 x Multimode ST (100 Mbit/s)	S2 = 1 x Singlemode SC (100 Mbit/s)
S4 = 1 x Singlemode ST (100 Mbit/s)	E2 = 1 x Singlemode + (100 Mbit/s)
L2 = 1 x Singlemode LH SC (100 Mbit/s)	G2 = 1 x Singlemode LH+ (100 Mbit/s)
ZZ = 2 x SFP Slot (100 Mbit/s)	OO = 2 x SFP Slot (100/1000 Mbit/s)
Z6 = 1 x SFP Slot (100 Mbit/s)	2Q = 2 x SFP Slot (100/1000/2500 Mbit/s)

#### Temperature Range

S = 0 °C to +60 °C	C = 0 °C to +60 °C, conformal coating
T = -40 °C to +70 °C	E = -40 °C to +70 °C, conformal coating

#### Voltage Range

T = 2 x (12 to 24 V DC)	F = 2 x (24 to 48 V DC + 24 V AC)
-------------------------	-----------------------------------

#### Housing

C = IP20 plastic	E = IP40 metal
------------------	----------------

#### Approvals Part 1

Z = CE, FCC, EN61131, EN62368-1  
 Y = CE, FCC, EN61131, EN62368-1, cUL61010  
 X = CE, FCC, EN61131, EN62368-1, cUL61010, ISA12.12.01  
 U = CE, FCC, EN61131, EN62368-1, DNVGL  
 W = CE, FCC, EN61131, EN62368-1, ATEX/IEEx  
 T = CE, FCC, EN61131, EN62368-1, EN50121

#### Approvals Part 2

9 = None	U = DNVGL
Y = cUL61010	W = ATEX/IEEx
X = cUL61010, ISA12.12.01	T = EN50121

#### Software Packages

9 = No software packages

#### OEM Type

HH = Standard

#### Technology

S = Standard

#### Software Configuration

E = Hirschmann Standard Configuration

#### Software Version

S = HiOS Layer 2 Standard	A = HiOS Layer 2 Advanced
---------------------------	---------------------------

#### Software Release

XX.X. = Current Software Release