





Hirschmann BOBCAT Switches

Next Generation Compact Managed Switches

The Hirschmann BOBCAT Managed Switches provide advanced security to help manufacturers build next generation networks. For applications in need of maximum power without device limitations, these next generation compact switches provide Power over Ethernet (PoE/PoE+) with up to 240 W and real-time communication through time-sensitive networking (TSN) technology on all ports.

-  **Increase performance with Power over Ethernet (PoE/PoE+)** for greater power to more devices
-  **Supports up to 240 W across 8 ports without load sharing** to ensure maximum power output
-  **Simultaneously support multiple services** on one network through TSN technology
-  **Prepare for future network growth** with increased bandwidth and speed capabilities

Key Features

- Benefit from up to 8 available PoE/PoE+ ports, each with up to 30 W per port
- Use in extreme environmental conditions, including wide temperature ranges and options for 24 or 48 V power input
- 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 100Mbit/s, 1 Gbit/s and 2.5 Gbit/s speeds
- Additional interface options through digital input for more flexibility
- Robust industrial design reinforces the switch's resistance against harsh conditions



The Hirschmann BOBCAT Switches including PoE variants offer 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.**



Maximum Power and Flexibility in One

Upgrade your infrastructure with compact managed switches with a unique combination of real-time capability, security and high power PoE/PoE+ support – so you can rest easy knowing your system is getting the performance its devices need.

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 Switches are the first on the market 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. These compact managed switches allow 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 Switches support HiOS software and feature 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 Switches are 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. In addition the PoE option adds the power to support the growing demand of energy-hungry devices, such as pan-tilt-zoom cameras or wireless access points. The appliance is best for engineers, system integrators and machine builders looking for a powerful and future-proof device.

Markets

The need for more PoE power is growing across many sectors, especially physical security and production automation applications. With additional security and real-time features the compact managed switches are an essential appliance relevant to many industrial markets, including automotive, manufacturing, machine building, water management and oil and gas. The Hirschmann BOBCAT Switches are also applicable in transportation and power management applications, helping to deliver critical real-time information, like deterministic signaling and energy flow.



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

Technical Information

Product Description Switch				
Type	BRS2	BRS3	BRS4	BRS5
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 over Ethernet				
Port Type and Quantity*	8 ports; PoE/PoE+ (IEEE 802.3af/at) 90 W/24 V or 240 W/54 V			
Power Requirements				
Operating Voltage*	12 - 48 V DC and 24 VAC (redundant); 24 V DC or 48/54 V DC (redundant) for PoE variants			
Power Consumption	5 up to 20 W (plus PoE power consumption)			
Mechanical Construction				
Dimensions (W x H x D) mm	71/87/123 mm* x 140 mm x 110 mm metal housing 57/73/109 mm* x 138 mm x 109 mm PC-ABS housing			
Housing	PC-ABS or metal			
Weight	380 g up to 570 g (PC-ABS); 870 g up to 1450 g (metal)			
Protection class	IP30 (PC-ABS), IP30 (metal housing), IP40 (metal housing)			
Software				
Supported HiOS Software Levels	Layer 2 Standard (L2S) or Layer 2 Advanced (L2A) (later software release)			
Software Layer 2				
Management	TFTP; SFTP; SCP; SSHv2; HTTP; HTTPS; Traps; SNMP v1/v2/v3; LLDP (802.1AB); LLDP-MED; Telnet			
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; Port Mirroring 1:1 and N:1			
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); DHCP Server per Port and Pools per VLAN			
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; Access Control Lists (ACL), Ingress VLAN-based ACL			
Redundancy Functions	Link Aggregation with LACP; RSTP 802.1D-2004 (IEC62439-1); RSTP Guards; MRP (Media Redundancy Protocol IEC62439-2); HIPER-Ring Client; Redundant Network Coupling			
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); Multiple Registration Protocol (MRP); GARP VLAN (GVRP); Voice VLAN; GARP Multicast (GMRP); Multiple VLAN (MVRP); Multiple MAC (MMRP)			
Standardized Real-Time Ethernet	TSN, Time Sensitive Network (later software release)			
Time Synchronization	Buffered Real Time Clock; SNTP Server and Client: PTPv2 TC (later software release)			
Miscellaneous	Port power down, manual cable crossing; digital IO management			
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: catalog.belden.com



BOBCAT Rail Switch Configurations

BRS52-00122Q2Q-SPCZ99HHSSESXX.X.

Design

BRS2 = 100 Mbit/s Ports
 BRS3 = 100/1000 Mbit/s Ports
 BRS4 = 1000 Mbit/s Ports
BRS5 = 1000/2500 Mbit/s Ports

Hardware Type

0 = Standard
2 = PoE/PoE+ support

Number of Fast Ethernet Ports

00 = 0 x 100 Mbit/s Ports
 05 = 5 x 100 Mbit/s Ports
 08 = 8 x 100 Mbit/s Ports
 10 = 10 x 100 Mbit/s Ports
 12 = 12 x 100 Mbit/s Ports

04 = 4 x 100 Mbit/s Ports
 06 = 6 x 100 Mbit/s Ports
 09 = 9 x 100 Mbit/s Ports
 11 = 11 x 100 Mbit/s Ports

Number of Gigabit Ethernet Ports

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

04 = 4 x 1000 Mbit/s Ports
 12 = 12 x 1000 Mbit/s Ports

Type 1 Uplink Ports

99 = None
 2T = 2 x TX (1000 Mbit/s)
 M2 = 1 x Multimode SC (100 Mbit/s)
 S2 = 1 x Singlemode SC (100 Mbit/s)
 E2 = 1 x Singlemode + SC (100 Mbit/s)
 G2 = 1 x Singlemode LH+ SC (100 Mbit/s)
 NN = 2 x Multimode ST (100 Mbit/s)
 UU = 2 x Singlemode ST (100 Mbit/s)
 LL = 2 x Singlemode LH SC (100 Mbit/s)
 ZZ = 2 x SFP Slot (100 Mbit/s)
 Z6 = 1 x SFP Slot (100 Mbit/s)

TT = 2 x TX (100 Mbit/s)
 QT = 2 x TX (2500 Mbit/s)
 M4 = 1 x Multimode ST (100 Mbit/s)
 S4 = 1 x Singlemode ST (100 Mbit/s)
 L2 = 1 x Singlemode LH/SC (100 Mbit/s)
 MM = 2 x Multimode SC (100 Mbit/s)
 VV = 2 x Singlemode SC (100 Mbit/s)
 EE = 2 x Singlemode + SC (100 Mbit/s)
 GG = 2 x Singlemode LH+ SC (100 Mbit/s)
 OO = 2 x SFP Slot (100/1000 Mbit/s)
2Q = 2 x SFP Slot (100/1000/2500 Mbit/s)*
 * PoE variants

Type 2 Uplink Ports

99 = None
 QT = 2 x TX (2500 Mbit/s)
 M4 = 1 x Multimode ST (100 Mbit/s)
 S4 = 1 x Singlemode ST (100 Mbit/s)
 L2 = 1 x Singlemode LH SC (100 Mbit/s)
 ZZ = 2 x SFP Slot (100 Mbit/s)
 Z6 = 1 x SFP Slot (100 Mbit/s)

2T = 2 x TX (1000 Mbit/s)
 M2 = 1 x Multimode SC (100 Mbit/s)
 S2 = 1 x Singlemode SC (100 Mbit/s)
 E2 = 1 x Singlemode + (100 Mbit/s)
 G2 = 1 x Singlemode LH+ (100 Mbit/s)
 OO = 2 x SFP Slot (100/1000 Mbit/s)
2Q = 2 x SFP Slot (100/1000/2500 Mbit/s)*
 * PoE variants

Temperature Range

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

Voltage Range

T = 2 x 12 - 24 V DC
 U = 2 x 24 V DC (PoE variants)
 F = 2 x 24 - 48 V DC + 24 V AC
P = 2 x 48 V DC (PoE variants) / 54 V DC (PoE+ variants)

Housing

C = IP30
 D = IP30 metal
 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/IEXEx
 T = CE, FCC, EN61131, EN62368-1, EN50121-3, NEMA TS2

Approvals Part 2

9 = None
 Y = cUL61010
 X = cUL61010, ISA12.12.01
 U = DNVGL
 W = ATEX/IEXEx
 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