HIRSCHMANN
A BELDEN BRAND

Product: BXS32-12TX-EECC-HV-2A



4xGE TX, 8x FE TX, 72-110 VDC, -40°C to +70°C, HiOS 2A, PoE+

Product Description

Managed IP40 PoE switch with optional 60 W PoE power at 70°C, HiOS software layer 2 advanced, 4 Gigabit-Ethernet M12-ports X-coded and 8 Fast-Ethernet M12-ports D-coded, suitable for use onboard trains and buses

Technical Specifications

Product description

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Part Number:	942302004
Port Type and Quantity:	12 ports in total: 4 x GE thereof 3 PoE and 8 x FE thereof 8 PoE

More Interfaces

Power supply/signaling contact:	M12 5pin K-coded

Network size - length of cable

Twisted pair (TP):	0-100 m

Network size - cascadibility

Line - / star topology:	any

Power requirements

Operating Voltage:	72-110 VDC
Power Consumption:	24.0W + 60W PoE
Power output in BTU (IT)/h:	81.8

Software

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, Queue-Shaping / Max. Queue Bandwidth, Flow Control (802.3X), Egress Interface Shaping, Ingress Storm Protection, Jumbo Frames, VLAN (802.1Q), GARP VLAN Registration Protocol (GVRP), Voice VLAN, Private VLAN, GARP Multicast Registration Protocol (GMRP), IGMP Snooping/Querier per VLAN (v1/v2/v3), Unknown Multicast Filtering, Forward unknown multicast to query ports per vlan, Multiple VLAN Registration Protocol (MVRP), Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP), TSN 802.1Qbv Support on interfaces 1/1 - 1/3.
Redundancy:	HIPER-Ring (Ring Switch), HIPER-Ring over Link Aggregation, Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2) - Redundancy Manager, Media Redundancy Protocol (MRP) (IEC62439-2) - Redundancy Client, MRP over Link Aggregation, Redundant Network Coupling, Sub Ring Manager, RSTP 802.1D-2004 (IEC62439-1), MSTP (802.1Q), RSTP Guards
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, MAC Notification, Loop Protection, 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, Port Mirroring N:2, System Information, Self-Tests on Cold Start, Copper Cable Test, 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 ACA21/22 (USB), HiDiscovery, DHCP Relay with Option 82, Interface Shutdown via Tracking, 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

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, 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, DoS Prevention Drop Counter, RADIUS Client, TACACS+ Client, LDAP, Ingress MAC-based ACL, Ingress IPv4-based ACL, Time-based ACL, VLAN-based ACL, Ingress 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, IEC61850 Protocol (MMS Server, Switch Model), Modbus TCP, PROFINET Protocol
Miscellaneous:	PoE (802.3af), PoE+ (802.3at), PoE+ Manual, Power Management, PoE Fast Startup, Manual Cable Crossing, Port Power Down

Ambient conditions

MTBF (Telcordia SR-332 Issue 3) @ 25°C:	437 460 h
Air Pressure (Operation):	Operating hight max. 3000 m
Operating temperature:	-40-+70 °C
Minimum Storage Temperature:	-40-+85 °C
Relative humidity (non-condensing):	1-95 %

Mechanical construction

Dimensions (WxHxD):	282 mm x 143,6 mm x 91 mm
Weight:	2.63 kg
Housing:	Metal
Mount Type:	Wall
IP Protection Rating:	IP40

Mechanical stability

IEC 60068-2-6 vibration:	3.5 mm, 5–8.4 Hz, 10 cycles, 1 octave/min; 1 g, 8.4–200 Hz, 10 cycles per axis, 1 octave/min operational: 5 Hz ... 150 Hz, 1,0 m/s² (rms) non operational: 5 Hz ... 150 Hz, 5,72 m/s² (rms)
IEC 60068-2-27 shock:	15 g, 11 ms duration; vertical: 30 m/s², 30 ms, horizontal: 50 m/s², 30 ms

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 (80 MHz ... 1000 MHz), 10 V/m (1.4 GHz ... 2.0 GHz), 5 V/m (2.0 GHz ... 2.7 GHz), 3 V/m (2.7 GHz ... 6,0 GHz)
EN 61000-4-4 fast transients (burst):	2 kV power line, 2 kV data line
EN 61000-4-5 surge voltage:	power line/ground ±2 kV, power line/line ±1 kV, data line/ground ±2 kV
EN 61000-4-6 Conducted Immunity:	10 V (150 kHz .. 80 MHz)

EMC emitted immunity

EN 55032:	EN 55032 Class A
EMV 06:	Rev. 2.0 - Class S1
FCC CFR47 Part 15:	FCC 47CFR Part 15, Class A

Approvals

Basis Standard:	CE, FCC, EN 61131-2
Transportation:	EN 50155, EN 45545 HL3, EN 50121-4, NEMA TS2
Industrial Security:	IEC 62443-4-2 Security Level 2

Reliability

Guarantee:	60 months (please refer to the ""terms of guarantee or detailed information)

Scope of delivery and accessories

Accessories to Order Separately:	ACA22-M12-C (EEC) Adapter cable M12 5-pin to USB (for configuring BXS devices)
Scope of delivery:	Switch, safety instructions, power supply connector, dust cover clips mounted on all M12 connectors

Further Instructions

Product Documentation:	https://www.doc.hirschmann.com
Certificates:	https://www.doc.hirschmann.com/certificates.html
Software Download:	https://www.doc.hirschmann.com/releasemap.html

History

Update and Revision:	Revision Number: 0.155 Revision Date: 03-03-2026

Variants

Item #	Type
942302004	BXS32-12TX-EECC-HV-2A

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