

Product: [OCTOPUS 8TX-EEC-M-2A](#)



Managed IP67 Switch, 8 ports, supply voltage 24 VDC, software HiOS 2A

Product Description

Managed IP65 and IP67 switch, HiOS software layer 2 advanced, 8 Fast-Ethernet M12-ports D-coded, approved for use onboard trains and road vehicles

Technical Specifications

Product description

| | |
|-------------------------|--|
| Type: | OCTOPUS 8TX-EEC-M-2A |
| Name: | OCTOPUS 8TX-EEC-M-2A |
| Description: | Managed IP65 and IP67 switch, HiOS software layer 2 advanced, 8 Fast-Ethernet M12-ports D-coded, approved for use onboard trains and road vehicles |
| Part Number: | 942301002 |
| Port Type and Quantity: | 8 ports in total: 10/100 BASE-TX, M12 "D"-coding |

More Interfaces

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| Power supply/signaling contact: | 1 x M12 5-pin connector, A coding |
| USB interface: | 1 x M12 5-pin socket, A coding |

Network size - length of cable

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| Twisted pair (TP): | 0-100 m |
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Network size - cascadability

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| Line - / star topology: | any |
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Power requirements

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| Operating Voltage: | 24/36 V DC (16,8V DC ... 45 V DC) |
| Power consumption: | 6 W |
| Power output in BTU (IT)/h: | 20 |

Software

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| 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, Signal Contact, 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 |

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| 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: | Manual Cable Crossing, Port Power Down |

Ambient conditions

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| MTBF (Telcordia SR-332 Issue 3) @ 25°C: | 5 101 282 h |
| Operating temperature: | -40-+70 °C |
| Note: | Please note that some recommended accessory parts only support a temperature range from -25 °C to +70 °C and might limit the possible operating conditions for the entire system. |
| Minimum Storage Temperature: | -40-+85 °C |
| Relative humidity (also condensing): | 5-100 % |

Mechanical construction

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| Dimensions (WxHxD): | 201 mm x 61 mm x 46 mm |
| Weight: | 900 g |
| Mount Type: | Wall mounting |
| Protection class: | IP65, IP67 |

Mechanical stability

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| IEC 60068-2-6 vibration: | 1 mm, 2 Hz-13.2 Hz, 90 min. 0.7 g, 13.2 Hz-100 Hz, 90 min. 3.5 mm, 3 Hz-9 Hz, 10 cycles, 1 octave/min. 1 g, 9 Hz-150 Hz, 10 cycles, 1 octave/min |
| IEC 60068-2-27 shock: | 15 g, 11 ms duration, 18 shocks |

EMC interference immunity

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| EN 61000-4-2 electrostatic discharge (ESD): | 6 kV contact discharge, 8 kV air discharge |
| EN 61000-4-3 electromagnetic field: | 20 V/m (80-3000 MHz) |
| EN 61000-4-4 fast transients (burst): | 2 kV power line, 4 kV data line |
| EN 61000-4-5 surge voltage: | power line: 2 kV (line/earth), 1 kV (line/line), 2 kV data line |
| EN 61000-4-6 Conducted Immunity: | 3 V (10 kHz-150 kHz), 10 V (150 kHz-80 MHz) |

EMC emitted immunity

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| EN 55032: | EN 55032 Class A |
| FCC CFR47 Part 15: | FCC 47CFR Part 15, Class A |

Approvals

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| Basis Standard: | CE, EAC, Australian Regulatory Compliance Mark (RCM), GOST-R, CCC, KCC (pending) |
| Safety of industrial control equipment: | cUL61010-1/-2-201 |
| Safety of information technology equipment: | EN62368 |
| Hazardous locations: | ISA 12.12.01 Class 1 Div. 2 (pending) |

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| Shipbuilding: | DNV |
| Railway norm: | EN 50155, EN 45545-2, EN 50121-4, EMV06 (pending) |
| Transportation: | E1, ECE R118, EN 61850 |
| Industrial Security: | IEC 62443-4-2 Security Level 2 |

Reliability

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| Guarantee: | 60 months (please refer to the <a href="https://assets.belden.com/m/1424ddb7a3280e7a/original/Hirschmann-Automation-and-Control-GmbH-Terms-of-Guarantee.pdf" terms of guarantee for detailed information) |
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Scope of delivery and accessories

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| Accessories to Order Separately: | AutoConfiguration Adapter ACA22-M12-C (EEC) (942-306-001), Adapterkabel M12-5Pin auf USB (for configuration) (942 309-001), Connector ELWIKA 5012 PG7 (5-pin M12 socket for voltage supply) (933 175-100), Connection cable with M12 connector, D-coded (934 497-00x), Adapter M12 D-coded to RJ45 (934 498-001), OCTOPUS metal protection caps (25 pcs.) (942 057-001), OCTOPUS plastic protection caps (25 pcs.) (934 963-001), ACA2x-M12 to USB (USB 1.1/2.0 Type-A) Adapter (for ACA M12 connection to PC) (942-199-001), Industrial HiVision Network Management Software (943 156-xxx) |
| Scope of delivery: | 1 x Device, 1 x General safety instructions, 1 x M12 power connector (ELWIKA 5012 PG7), 15x plastic labels for ethernet ports and device, 7x M12 plastic protection caps for USB interface and ethernet-ports, 1x M12 plastic protection cap for power supply input |

Further Instructions

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| Product Documentation: | https://www.doc.hirschmann.com |
| Certificates: | https://www.doc.hirschmann.com/certificates.html |
| Software Download: | https://my.belden.com/s/downloads |

History

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| Update and Revision: | Revision Number: 0.163 Revision Date: 10-13-2025 |
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Variants

| Item # | Type |
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| 942301002 | OCTOPUS 8TX-EEC-M-2A |

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