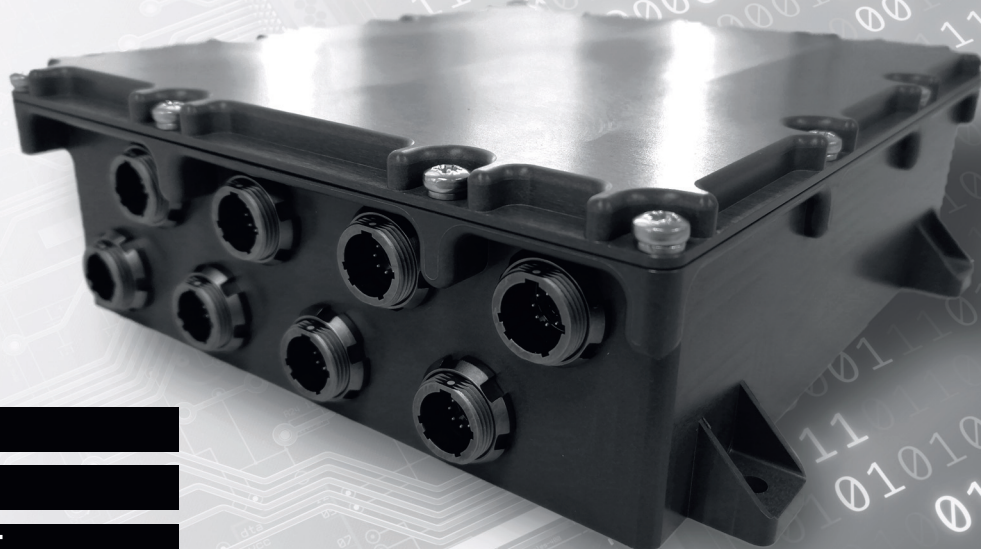


FISCHER MANAGED SWITCH with TSN TECHNOLOGY

DATASHEET



8 x GIGABIT PORTS

RUGGED DESIGN

COMPACT & LIGHTWEIGHT

TIME SENSITIVE NETWORKING (TSN)

The Fischer Managed Switch with TSN Technology is an 8 port, full gigabit managed ethernet switch that enables real-time communication through next generation Time Sensitive Networking (TSN) technology on all ports. The switch is able to implement most standard management protocols.

The switch has multiple management options which can be defined via its settings that are easily accessed through either an internet web browser, SSH, Telnet or Network Management Software such as Industrial HiVision. The TSN is essential for optimal performance of the Switch, especially when operating in demanding conditions or time-critical applications.

The compact and lightweight design of the switch is ideal for applications where reduced size and weight of equipment is critical, saving space and maximising installation possibilities without compromising performance.

Designed to excel in even the most demanding environments the rugged, aluminium housing is waterproof and IP68 sealed (down to 2m/24hours) as well as complying with rigorous shock, vibration and EMC standards.

Fischer UltiMate™ and MiniMax™ Series connectors provide ethernet connectivity (8 x Fischer UltiMate UR02W11 connectors) and power (1 x Fischer MiniMax MR11WL06 connector). They have been selected for their rugged, compact design and ability to meet the demands of the switch and environments in which they will be used. The 8 x ethernet ports are IP68 rated and sealed

even when unmated which offers additional reliability in the field as there no risk of water ingress should it be necessary to unmate them in the field.

Enhanced network security is a critical component of any future facing network. The Fischer Managed Switch with TSN Technology supports HiOS software and features several compelling security elements.

Each switch can support up to 100m cable length.

APPLICATIONS

The Fischer Managed Switch with TSN Technology is ideal for use in harsh environments and suitable for land or maritime applications where the Switch may be mounted externally and subject to shock, vibration or limited submersion:

VEHICLE MOUNT

The rugged construction, simple mounting and set up allows the switch to offer flexibility and speed of installation. The Time Sensitive Networking (TSN) technology enables real time communication to enhance data collection and critical system operation.

MARITIME

The switch offers a waterproof, robust, compact and lightweight solution for networking which is ideal for use in marine applications whether onboard a vessel or any other areas which may be exposed to similar maritime conditions, such as ports and marinas.

KEY SPECIFICATIONS

PHYSICAL

- Housing Material: Aluminium 6082 , Hard anodised, Natural
- Overall Dimensions: 188 x 190 x 61mm (L x W x H)
- Weight: 0.95kg
- Mounting Holes: M6 (in 130 x 174mm hole pattern)

CONNECTORS*

- Ethernet: 8 x Fischer UR02W11 M008S BK1 E1AB
- Power: 1 x Fischer MR11WL06 0202 AN1 E1FS

ELECTRICAL

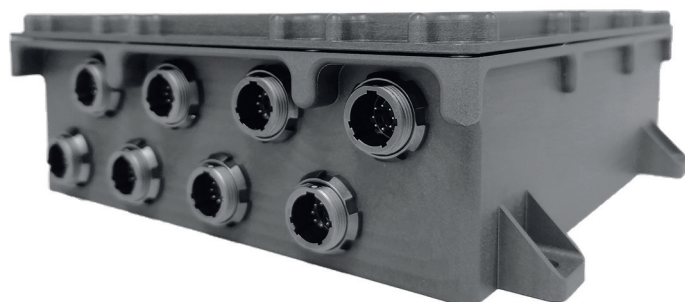
- 8 x 10/100/1000 BASE-T Ethernet Ports
- Input Voltage: 24 VDC
- Power Consumption: 8W

ENVIRONMENTAL

- Sealing: IP68 (down to 2m/24h)
- Temperature: Operating -40°C to +70°C, Storage -40°C to +70°C
- Mean Time Between Failure (MTBF): 3191748h (Telecordia)

CERTIFICATIONS & STANDARDS

- CE approved
- RoHS Compliant



NETWORK STANDARDS

- IEC 60068-2-6 Vibration: 3.5 mm, 5-8.4 Hz, 1.0 mm, 2-13.2 Hz, 1g, 8.4-200 Hz, 0.7g, 2-100 Hz
- IEC 60068-2-27 Shock: 15g, 11ms duration
- EN 61000-4-2 electrostatic discharge: 6kV contact discharge, 8kV 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: 2 kV power line, 4 kV data line
- EN 61000-4-5 surge voltage: 2 kV line/earth, 2 kV line/line, 1 kV data line
- EN 61000-4-6 Conducted Immunity: 10V (150 kHz – 80 MHz)
- EN55032 Class A
- FCC 47CFR Part 15, Class A

FEATURES

- **Switching Features:** 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, GARP Multicast Registration Protocol (GMRP), IGMP Snooping/Querier per VLAN (v1/v2/v3), Unknown Multicast Filtering, Multiple VLAN Registration Protocol (MVRP), Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP)
- **Redundancy Features:** HIPER-Ring (Ring Switch), Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2), Redundant Network Coupling, RSTP 802.1D-2004 (IEC62439-1), RSTP Guards
- **Management Features:** Dual Software Image Support, TFTP, SFTP, SCP, LLDP (802.1AB), LLDP-MED, SSHv2, HTTP, HTTPS, Traps, SNMP v1/v2/v3, Telnet
- **Diagnostic Features:** Management Address Conflict Detection, MAC Notification, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, Persistent Logging on ACA, 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, Port Mirroring N:2, System Information, Self-Tests on Cold Start, SFP Management, Configuration Check Dialog, Switch Dump
- **Configuration Features:** Automatic Configuration Undo (roll-back), Configuration Fingerprint, Text-based Configuration File (XML), 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, HiDiscovery, Command Line Interface (CLI), CLI Scripting, CLI script handling over ENVm at boot, Full-featured MIB Support, Context-sensitive Help, HTML5 based Management
- **Security Features:** MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, Integrated Authentication Server (IAS), RADIUS VLAN Assignment, Denial-of-Service Prevention, DoS Prevention Drop Counter, VLAN-based ACL, Ingress VLAN-based ACL, Basic ACL, Access to Management restricted by VLAN, Device Security Indication, Audit Trail, 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 Features:** Buffered Real Time Clock, SNTP Client, SNTP Server
- **Miscellaneous Features:** Digital IO Management, Manual Cable Crossing, Port Power Down

* Devices connecting to the Fischer Managed Switch with TSN Technology will require compatible Fischer Connectors plugs, such as the UP01L11 F008S BK1 Z1ZB and MP11ZL06 0202 AN1 Z1MS - please contact us for full details of compatible plugs and to discuss Cable Assembly options.

For more information connect with your **Fischer Connectors Account Manager**

fischerconnectors.com

fischer[®]
CONNECTORS