

Introduction

The OSD2251EP is a 4-port lite managed industrial ethernet switch with two Gigabit RJ45 ports and two Gigabit SFP uplink ports which can be used as standard ports or as a redundant fiber ring using OSD's proprietary ring protocol. Each RJ45 can provide up to 60W PoE to power a wide range of devices. Along with higher level features including SNMP, VLAN and IGMP snooping the OSD2251EP is suitable for use in critical networks. A rugged IP30 casing, fan-less design and wide operating temperature range from -40 to +75°C make it suitable for use in a wide range of harsh industrial environments.



Features and Benefits

- ▲ Complies with IEEE802.3i/802.3u/802.3ab 10/100/1000Base-T, IEEE802.3u 100Base-Fx, IEEE802.3z 1000Base-Lx/Sx standards
- ▲ Has a total of four ports: two fixed copper ports for 10/100/1000Base-T and two SFP ports for the fibre ring or non-ring (100Base-Fx or 1000Base-X)
- ▲ Ring reconfiguration in the case of cable or switch failures takes less than two milliseconds per hop
- ▲ MDI/MDIX Crossover: no need for crossover cables
- ▲ Can be used with either 1 or 2 singlemode or multimode fiber over a variety of link budgets via plug in SFP module (sold separately)
- ▲ Supports IEEE802.3af/at Alternative A and B cable wiring
- ▲ Complies with IEEE802.3af/at standard including compliant powered device (PD) signature detection and classification
- ▲ Provides up to 60W to each RJ45 port. Single and Dual signature PD detection with PoE configuration via DIP switch or GUI
- ▲ Auto-Negotiation for half or full duplex operation
- ▲ Powered by non-critical 46 to 57VDC supplies with dual power supply inputs
- ▲ Integrates with third party NMS system via industry standard SNMP v1, v2c, v3
- ▲ Supports 10KB jumbo frames
- ▲ Supports VLAN and IGMP v1, v2, v3 snooping
- ▲ Port security guaranteed with MAC binding function
- ▲ Remote PoE on/off control and status monitoring
- ▲ Redundant ring operation is compatible with all OSD225* series Gigabit Ethernet switches
- ▲ Operates over the temperature range of -40 to +75°C
- ▲ DIN rail or wall mounting
- ▲ Available for operation in ring, bus or point-to-point configuration

Typical System Design



Specifications

Hardware

| | |
|---------------------------------|---|
| Ethernet | 2 x 10/100/1000Base-T RJ45, IEEE802.3i/802.3u/802.3ab |
| Data Rate | 10, 100, 1000Mbps, auto negotiate, auto MDIX |
| Jumbo Frame Support | 10KB |
| SFP | 2 x Gigabit SFP ports (100Mbps or 1000Mbps user selectable) |
| Optical Data Interface | IEEE802.3z 1000Base-Lx/Sx, IEEE802.3u 100Base-Fx |
| PoE (user configurable via GUI) | IEEE802.3af/at, PoE++ 60W via GUI |
| Enclosure Protection Class | IP30 |
| Installation | DIN rail, wall mount or desktop |
| Alarm (ring version only) | Ring to Bus, High Temperature |
| Alarm Interface | Opto isolated MOSFET rated at 100mA @ 46V maximum |
| Alarm Connector | 4 way 3.5mm terminal block |
| DIP Switch | 8 way DIP switch for configuration |
| Power Requirements | 46 to 57VDC @ 5VA maximum (no PoE in use) to 125VA maximum (Both ports supplying 60W PoE++ power) (>52VDC recommended for PoE+ or ≥55VDC for PoE++ (60W)) |
| Output PoE Vdrop per port | PoE voltage drop per port <0.5V @ 30W, <1V @ 60W |
| Power Connector | 4 way 5.08mm terminal block |
| Indicators | 2 x Copper Link on each RJ45 2 x Copper Activity on each RJ45 2 x PoE Operation on each RJ45 2 x SFP Speed/Activity/Link on each SFP 1 x Initialise/Ring/Bus 1 x Power |
| Environmental | -40 to +75°C |
| Relative Humidity | 0 to 95% non-condensing |
| Dimensions | 43W x 91D x 110H mm |
| Weight | 540g |

Management

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|---------------------|--|
| Interfaces | Command Line Interface (CLI) (mini USB) Web browser based Graphical User Interface (GUI) (Chrome or Edge browser) SNMP v1, v2c, v3 |
| Port Configuration | Port enable/disable, Auto negotiation |
| Port Status | Speed, duplex mode, link status |
| Port Security | MAC address binding |
| VLAN | 802.1Q VLAN |
| Multicast Protocol | RFC 2236 IGMP snooping v1, v2, v3 |
| Ethernet Redundancy | OSD-Ring |
| SNMP MIBs | RFC 1213 MIB Private MIB Framework Contact OSD for full list of available MIB's |

Warranty

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| Warranty Period | 5 years |
| MTBF (Ground Benign Environment, 30°C) | 610,000 hours |

Ordering Information

| Part No. | Description |
|-----------|--|
| OSD2251EP | Lite managed 2 x 10/100/1000BaseT + 2 x SFP Gigabit Ethernet Switch with up to 60W PoE on each RJ45 port |
| OSD2251E | Lite managed 2 x 10/100/1000BaseT + 2 x SFP Gigabit Ethernet Switch (non PoE version. See datasheet 1022251**) |
| SFP | See OSD SFP datasheets #102100XX and #10210000XX |