

### Introduction

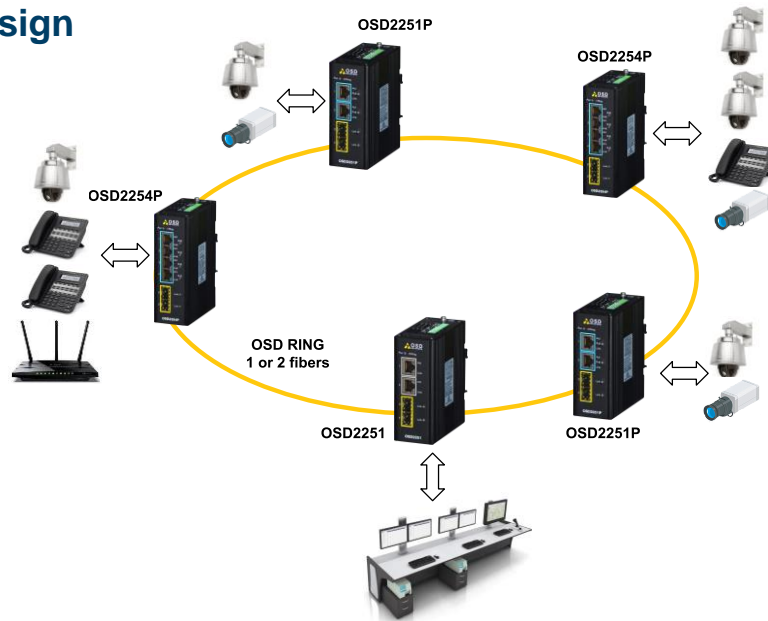
The OSD2251EP is a 4-port lite managed industrial ethernet switch with two Gigabit RJ45 ports and two Gigabit SFP uplink ports which can be used as standard ports or as a redundant fiber ring using OSD's proprietary ring protocol. Each RJ45 can provide up to 30W PoE to power a wide range of devices. 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 30W 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
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 65VA maximum (Both ports supplying 30W PoE+ power) (>52VDC recommended for PoE+)
Output PoE Vdrop per port	PoE voltage drop per port <0.5V @ 30W
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	-20 to +75°C
Relative Humidity	0 to 95% non-condensing
Dimensions	43W x 91D x 110H mm
Weight	540g

## Management

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

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 30W 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