

Introduction

The OSD2254E is a 6-port lite managed industrial ethernet switch with four Gigabit RJ45 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. Along with higher level features including SNMPVLAN and IGMP snooping the OSD2254E 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 and IEEE802.3z 1000Base-Lx/Sx standards
- ▲ Has a total of six ports: four fixed copper ports for 10/100/1000Base-T and two SFP ports for the fibre ring or non-ring (100Base-Fx or 1000Base-X)
- ▲ A network diameter of hundreds of kilometers is practical
- ▲ 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)
- ▲ Auto-Negotiation for half or full duplex operation
- ▲ Supports 10KB jumbo frames
- ▲ Powered by non-critical 10 to 36VDC or 24VAC supplies with dual power supply inputs
- ▲ Integrates with third party NMS system via industry standard SNMP v1, v2c, v3
- ▲ Supports VLAN and IGMP v1, v2, v3 snooping
- ▲ Port security guaranteed with MAC binding function
- ▲ Operates over the temperature range of -40 to +75°C
- ▲ Web browser GUI included
- ▲ Compatible with all OSD22XX series of redundant ring Gigabit Ethernet switches
- ▲ Available for operation in ring, bus or point-to-point configuration
- ▲ DIN rail or surface mounting

Typical System Design



Specifications

Hardware

Ethernet	4 x 10/100/1000Base-T RJ45, IEEE802.3i/802.3u/802.3ab
Data Rate	10, 100, 1000Mbps with energy detect, 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
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	+10V to 36VDC or 22 to 28VAC @10VA
Power Connector	4 way 5.08mm terminal block
Indicators	4 x Copper Link on each RJ45 4 x Copper Activity on each RJ45 2 x SFP Speed/Activity/Link on each SFP 1 x Initialise/Ring/Bus 1 x Power/Temperature Alarm
Environmental	-40 to +75°C
Relative Humidity	0 to 95% non-condensing
Dimensions	43W x 91D x 130H mm
Weight	620g

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, auto negotiation status
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)	540,000 hours

Ordering Information

Part No.	Description
OSD2254E	Lite managed 4 x 10/100/1000BaseT + 2 x SFP Gigabit Ethernet Switch
OSD2254EP	Lite managed industrial 6-port Redundant Ring Gigabit Ethernet Switch with up to 30W PoE on each RJ45 port. See datasheet 1022254P**)
SFP	See OSD SFP datasheets #102100XX and #10210000X