

Data Sheet

Industrial 10 Gigabit Ethernet L2/L3 Switch

Overview

MICROSENS offers a new Industrial Switch with 8 Gigabit Ethernet RJ-45 ports and 4 10G SFP+ fiber uplink ports. The RJ-45 ports support Power-over-Ethernet (PoE+) and deliver up to 30W power per port.

The switch has extensive Layer 2 and Layer 3 management functions, such as VLANs, IGMP Snooping, QoS, RSTP or Layer 3 routing. It can be easily managed via a WEB GUI, CLI or SNMP.

PROPERTIES

- 8x 10/100/1000Base-T RJ-45 ports with PoE+
- 4x 1/10G SFP+ slots
- Intended for industrial environments
- Fanless design
- Wide operating temperature range
- Redundant power inputs
- DIN-rail or wall-mounting

Software Features

System Management

- WEB GUI (http, https)
- CLI (Telnet, SSH, console)
- SNMP v1/v2/v3
- SNMP traps
- Central management platform (NMP)
- IP interface configuration per VLAN
- MAC address table
- Syslog
- Configuration upload/download
- Firmware upgrade
- Factory Default Reset
- System reboot
- User right settings
- Port mirroring (TX, RX, both, 1:1 or many to 1)
- System status and traffic statistics
- NTP (Network Time Protocol)

Port Configuration

- Port enable/disable
- Individual port name
- Speed settings
- Half or full duplex
- Flow control
- Ingress or egress rate limiting
- Port isolation
- Storm control

Power-over-Ethernet PoE/PoE+

- IEEE 802.3af PoE (max. 15 W/Port)
- IEEE 802.3at PoE+ (max. 30 W/Port)
- Enabling or disabling PoE per port
- Port priority settings
- PoE schedule
- PoE watchdog
- Limitation of total PoE power

IP Service

- IPv4 or IPv6 interface per VLAN
- DHCP Client/Snooping/Server

IP Routing

- Static Routing
- RIP v1/v2 (IPv4)
- OSPF (IPv4)
- Routing table settings and status

Virtual LANs (VLANs)

- Access and trunk mode
- IEEE 802.1Q settings

Quality of Service (QoS)

- Layer 1 priority (port-based)
- Layer 2 priority based on 802.1Q VLAN tags
- Layer 3 priority based on 802.1p (DSCP)
- 8 priority levels (4 queues)
- Strict priority or WRR (Weighted Round Robin)

Link Aggregation

- Up to 8 groups
- Static Link Aggregation or LACP

IP Multicast

- IGMP Snooping

Reliability

- Spanning Tree (STP) according to IEEE 802.1D
- Rapid Spanning Tree (RSTP) according to IEEE 802.1w
- Fast Ring protocol
- Loopback protection
- VRRP v1/v2 (Virtual Redundant Route Protocol)

Security

- RADIUS Client (802.1X)
- Static MAC locking
- IP-, port-, MAC-, or VLAN-based binding combinations
- Access Control List (ACL)

Technical Specifications

Switch

Type	Industrial 10 Gigabit Ethernet L2/L3 Switch, PoE+ PSE IEEE 802.3 compliant
Performance	Store-and-forward Full wire-speed, non-blocking
Switching Capacity	112 Gbps
Packet Forwarding Rate	71.4 Mpps
Packet Buffer	12 Mbit
MAC addresses	16 k, automatic learning and aging
Jumbo Frames	max. 10 k Bytes

Twisted-Pair Ports

Number	8
Type	Gigabit Ethernet, Triple Speed 10/100/1000Base-T
Connector	RJ-45 port, shielded
Cable type	Twisted-Pair cable, Category 5e, impedance 100 Ohm, length max. 100 m
Flow Control	Pause Frames (IEEE 802.3x), configurable
Pin out	Auto MDI/MDI-X, Auto Polarity
Power-over-Ethernet	Power Sourcing Equipment (PSE) IEEE 802.3af/at Class 0-4, max. 15 W / 30 W
Total PoE Power	240 W
PoE Lines	1/2 (+), 3/6 (-)

Fiber Ports (SFP+ slots)

Number	4
Type	1/10 Gigabit Ethernet SFP+ slot, support of SFP digital diagnostics function
Connector	LC (SFP transceiver)
Flow Control	Pause Frames (IEEE 802.3x), configurable

CLI Console

Number	1
Type	RS-232
Connector	RJ-45

LED displays

Port LEDs	Link/activity, PoE status
Device LEDs	Alarm, power and status

Alarm Relay Output

Number	1 channel (2 cores)
Current	Max. 1 A
Voltage	12 VDC

Power Supply

Input	48..57 VDC (54 VDC typ.)
Power Consumption	< 20 W (without PoE)
Connectors	2x 2 pin screw connector

Environmental Conditions

Temperature	Operation	-40..+75 °C
	Storage	-40..+85 °C
Humidity	5..95%, non-condensing	

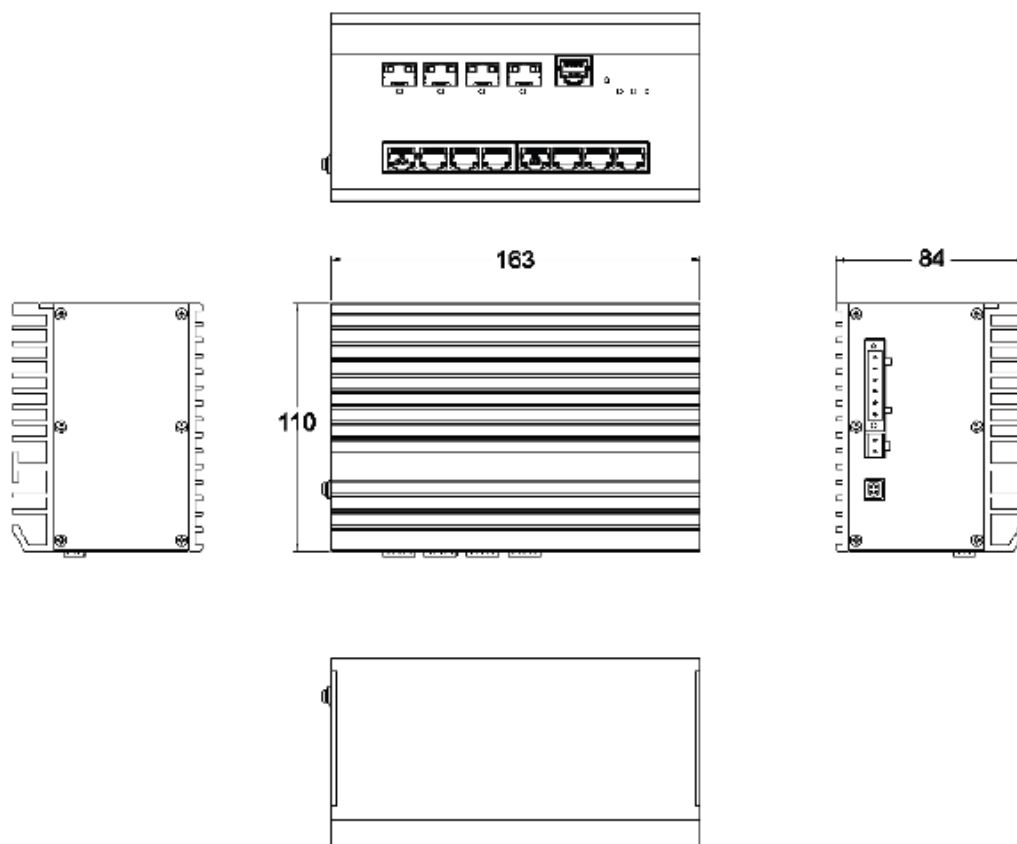
Mechanic

Dimensions	163 x 110 x 84 mm (W x D x H, without connectors)
Material	Aluminium alloy
Weight	Approx. 1900 g (without SFPs)
Mounting	DIN-rail or wall mounting
IP Grade	IP40

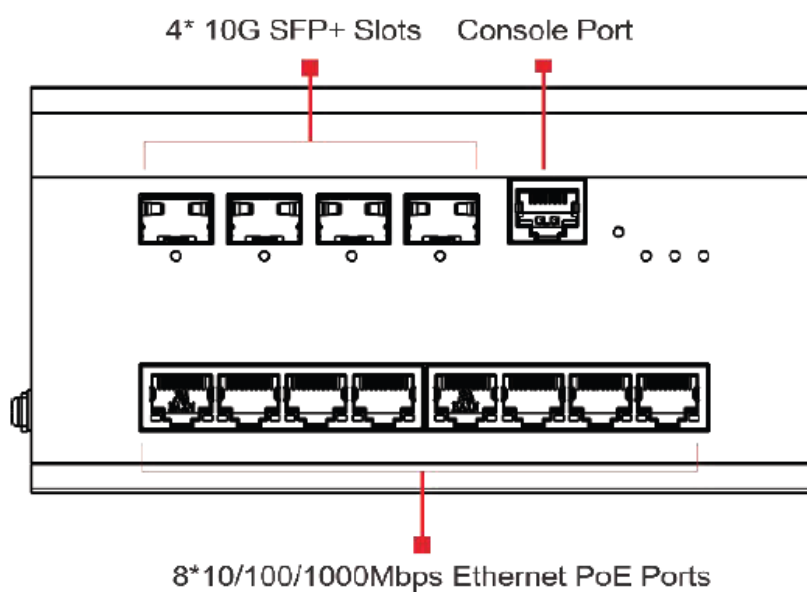
Standards

CE	2014/30/EU (EMC) 2014/35/EU (Low voltage) 2011/65/EU (RoHS)
Safety	EN 62368-1
Emitted interference	EN 55032:2015
Immunity	EN 55035:2017
Surge Immunity	6 kV (IEC61000-4-5)
ESD Immunity	8 kV (contact discharge, 15 kV air discharge (IEC 6100-4-2)
Ethernet	IEEE 802.3 IEEE 802.3u (100Base-TX) IEEE802.3ab (1000Base-T) IEEE 802.3z (1000Base-X) IEEE 802.3ae (10GBase-X) IEEE 802.3x (flow control) IEEE 802.3af/at (PoE/PoE+)

Dimensions



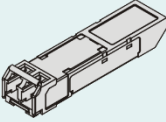
Front View



Order Information

	Description	Article No.:
	Industrial 10 Gigabit Ethernet L2/L3 Switch	
	Industrial 10 Gigabit Ethernet L2/L3 Switch, 8x 10/100/1000Base-T PoE+ (PSE), 4x 1/10GBase-X SFP+ slots, DIN-rail mounting, alarm output, console port, -40..75° C, Power supply input 48..57 VDC	MS657308PMX

Accessories

	Description	Article No.:
	SFP+ 10G Transceiver (xWDM on request)	
	SFP+ Transceiver, 10 Gigabit Ethernet, Digital Diagnostic, -40..85° C, 850 nm Multimode, 10GBase-SX, LC duplex, 300m	MS100700DX
	SFP+ Transceiver, 10 Gigabit Ethernet, Digital Diagnostic, -40..85° C, 1310 nm single mode, 10GBase-LX, LC duplex, 10 km	MS100702DX
	Industrial Power Supplies	
	DIN-Rail Power Supply 120 Watt 48 V / 2.5 A, Wide Range Input 127-264 VAC	MS700446
	DIN-Rail Power Supply 240 Watt 48 V / 5 A, Wide Range Input 127-264 VAC	MS700447

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