

Data Sheet

Fanless 10 Gigabit Ethernet L2/L3 Switch

– 19" 1U

Overview

MICROSENS offers a new fanless 19" switch with 24 Gigabit Ethernet RJ-45 ports and 4 1/10G SFP+ fiber uplink ports. The RJ-45 ports support Power-over-Ethernet (PoE+) and deliver up to 30 W 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

- 24x 10/100/1000Base-T RJ-45 ports with PoE+
- 4x 1/10G SFP+ slots
- WEB, CLI and SNMP management interface
- Extensive Layer 2 and Layer 3 features
- Internal power supply
- Fanless design
- Intended for 19" mounting

Software Features

System Management

- WEB GUI (http)
- CLI (Telnet, console)
- SNMP v1/v2/v3
- SNMP traps
- Central management platform (NMP)
- IP interface configuration per VLAN
- MAC address table
- Configuration upload/download
- Firmware upgrade
- Factory Default Reset
- System reboot
- User right settings
- System status, history

Port Configuration

- Port enable/disable
- Individual port name
- Speed and full/half duplex settings
- Flow control
- Rate limiting
- Port isolation

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
- Limitation of total PoE power

DHCP

- DHCP Client/Server/Relay/Repeater
- DHCP Snooping

IP Routing

- Static Routing
- RIP v1/v2 (IPv4), OSPF v1/v2
- ISIS (IPv4), BGP (IPv4)
- Static ARP add, delete, burn-in –time setup/check

- Static ND add, delete, burn-in–time setup/check
- VRRP v1/v2/v3 (Virtual Redundant Route Protocol)
- PIM
- Support duplex transfer check mechanism

Virtual LANs (VLANs)

- 4k VLANs
- Access and trunk mode

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 5 groups
- Static Link Aggregation

IP Multicast

- IGMP Snooping

Reliability

- Spanning Tree (STP) according to IEEE 802.1D
- Rapid Spanning Tree (RSTP) according to IEEE 802.1w
- Multiple Spanning Tree (MSTP)
- Fast Ring protocol

Security

- RADIUS client (802.1X)
- IP-, port-, MAC-, or VLAN-based binding combinations
- Access Control List (ACL)
- Time range management

Technical Specifications

Switch

Type	10 Gigabit Ethernet L2/L3 Switch – 19" 1U, PoE+ PSE IEEE 802.3 compliant, fanless design
Performance	Store-and-forward
Switching Capacity	128 Gbps
Packet Forwarding Rate	95.2 Mpps
Packet Buffer	1.5 Mbit
MAC addresses	16 k, automatic learning and aging
Jumbo Frames	10 kBytes

Twisted-Pair Ports

Number	24
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
PoE Voltage	54 VDC
Total PoE Power	350 W
PoE Lines	1/2 (+), 3/6 (-)

Fiber Ports (SFP+ slots)

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

CLI Console

Type	RS-232
Connector	RJ-45

OoB Port

Type	10/100Base-TX
Connector	RJ-45

LEDs

Port LEDs	Link/activity, PoE status
Device LED	Power

Power Supply

Input Voltage	100..240 VAC
Frequency	50/60 Hz
Power Consumption	380 W (including PoE)
Connector	Cold device plug

Environmental Conditions

Temperature	Operation	-10..+50 °C
	Storage	-40..+85 °C
Humidity	5..95%, non-condensing	

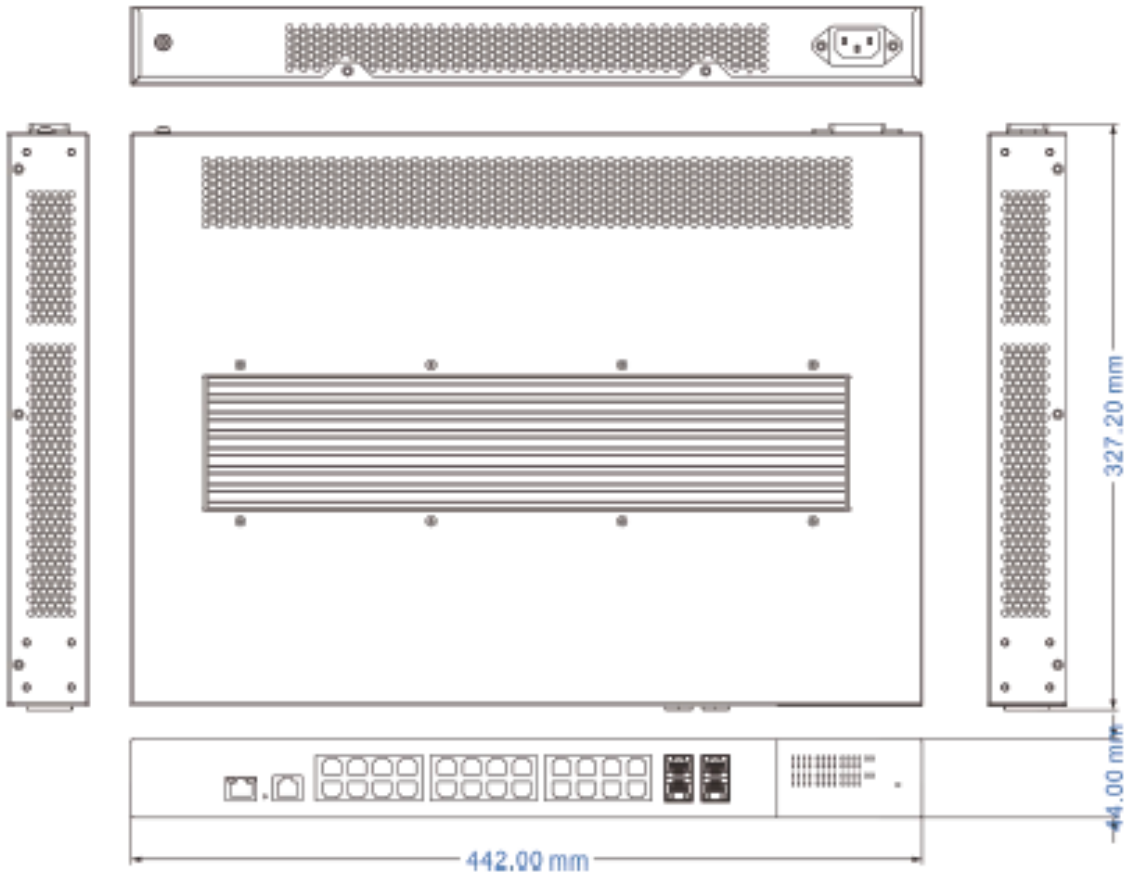
Mechanic

Dimensions (in mm)	442 x 320 x 44.5 (L x W x H, without connectors)	
Material	Aluminium alloy	
Weight	Approx. 6.5 kg	
Mounting	19" (1U)	

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	6 kV contact discharge, 8 kV air discharge (IEC 6100-4-2)	
Ethernet	IEEE 802.3 IEEE 802.3u (100Base-TX) IEEE 802.3ab (1000Base-T) IEEE 802.3z (1000Base-X) IEEE 802.3ae (10GBase-X) IEEE 802.3x (flow control) IEEE 802.3af/at (PoE/PoE+)	

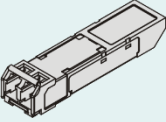
Dimensions



Order Information

	Description	Article No.:
	10 Gigabit Ethernet L2/L3 Switch – 19” 1U	
	10 Gigabit Ethernet L2/L3 Switch – 19” 1U 24x 10/100/1000Base-T PoE+ (PSE), 4x 1/10GBase-X SFP+ slots, console port, fanless design, -10..50°C, power input 100..240 VAC	MS400981M

Accessories

	Description	Article No.:
	SFP and SFP+ Transceiver (xWDM on request)	
	SFP Transceiver, Gigabit Ethernet, Digital Diagnostic 850 nm Multimode, 1000Base-SX, LC duplex	MS100200DX
	SFP Transceiver, Gigabit Ethernet, Digital Diagnostic 1310 nm Single mode, 1000Base-LX, LC duplex	MS100210DX
	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

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