

## Data Sheet

### 26-port 10 Gigabit Ethernet L3 Switch – 19" 1U



#### Layer3

Layer 3 feature set for broad application diversity



#### 40G Uplink

2x 40G uplink ports as QSFP+ version



#### Multi Gigabit Link

24x 10G fiber ports therefrom 20x 1/10G and 4x 10/25G



#### Standardized Network Redundancy (ERPS to G.8032)

Feature set for redundancy topologies (e.g. ring)



#### Multi Fiber Switch

High port density of fiber ports for cost efficient high performance networks



#### IT-Security

Feature set for high level of IT security

## Software Features

### System Management

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- WEB GUI (IPv4 and IPv6 http)
- CLI (IPv4/IPv6 Telnet, IPv4/IPv6 ssh, console)
- SNMP v1/v2/v3
- SNMP traps
- Ipv4/IPv6 DHCP client
- Syslog
- RMON 1, 2, 3, 9
- LLDP
- RSPAN
- IPv4/IPv6 FTP/TFTP
- System reboot
- IPv4/IPv6 NTP
- System status and CPU monitoring
- Temperature and power warning messages
- Flow monitoring
- OAM

### DHCP

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- IPv4 DHCP Server
- IPv4/IPv6 DHCP Client
- IPv4/IPv6 DHCP Relay
- Support option 82
- IPv4/IPv6 DHCP Snooping

### IP Routing

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- IPv4/IPv6 Static Routing
- IPv4/IPv6 RIP
- OSPF v2/v3
- BGP
- VRRP (Virtual Redundant Route Protocol)

### Energy Management

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- SFP power management

### Virtual LANs (VLANs)

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- Port-based VLAN
- 4K IEEE 802.1Q VLAN
- Private VLAN
- GVRP
- Voice VLAN
- Q-in-Q

### Quality of Service (QoS)

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- Layer 1 priority (port-based)
- Layer 2 priority based on 802.1Q VLAN tags
- Layer 3 priority based on 802.1p (DSCP)
- 8 Priority 8 queues per port
- SP, WRR, DRR, SP+WRR, SP+DRR, RED/WRED
- ACL-based streams: VLAN ID, CoS, ToS, DSCP, IPv6 flow label stream classification

### IP Multicast

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- IGMP v1/v2/v3 Snooping, IGMP proxy
- IGMP Fast Leave
- MLD Snooping
- Multicast VLAN
- PIM-DM, PIM-SM, PIM-SSM

### Reliability

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- Spanning Tree (STP) according to IEEE 802.1D
- Rapid Spanning Tree (RSTP) according to IEEE 802.1w
- Multiple Spanning Tree (MSTP), 64 instances
- Multi-process MSTP
- G.8032 ERPS (Ethernet Ring Protection Switching)
- Loopback detection
- LACP
- Static Link Aggregation

**Security**

- RADIUS client
- TACACs+
- 802.1X authentication (including extended 802.1X)
- IP-, port-, MAC-, or VLAN-based binding combinations
- MAC filtering
- ARP protection against ARP spoofing and ARP flooding
- IP Source Guard
- Dos protection
- Port speed limit
- Broadcast storm control
- ND snooping
- Access Control List (based on IP, MAC, VLAN, port, TCP/UDP source ...)
- ACL-based redirection
- Time based ACL activation

**Technical Specifications**

**Switch**

<b>Type</b>	10 Gigabit Ethernet L3 Switch – 19” 1U
<b>Performance</b>	Store-and-forward
<b>Switching Capacity</b>	2.56T (non-blocking)
<b>MAC addresses</b>	32 k

**Fiber Ports (SFP+ slots)**

<b>Number</b>	20
<b>Type</b>	1G/10G Base-X SFP+ slot,
<b>Connector</b>	LC (SFP transceiver)

**Fiber Ports (SFP28 slots)**

<b>Number</b>	4
<b>Type</b>	10G/25G Base-X SFP28 slot
<b>Connector</b>	LC (SFP28 transceiver)

**Fiber Ports (QSFP+ slots)**

<b>Number</b>	2
<b>Type</b>	40G Base-X QSFP+ slot
<b>Connector</b>	LC (QSFP+ transceiver)

**CLI Console**

<b>Type</b>	RS-232
<b>Connector</b>	RJ-45

**Mgmt Port**

<b>Type</b>	Ethernet
<b>Connector</b>	RJ-45

**USB Port**

<b>Connector</b>	USB
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**LEDs**

<b>Port LEDs</b>	Link/activity
<b>Device LED</b>	Power, Fan, diagnostic and management

**Power Supply**

<b>Type</b>	Power supply module (230 VAC)
<b>Input Voltage (AC Port)</b>	100..240 VAC
<b>Frequency</b>	50/60 Hz
<b>Power Consumption</b>	<85 W
<b>Connector</b>	Cold device plug
<b>Redundancy</b>	2 power supply slots, 1 power supply module included

**Environmental Conditions**

<b>Temperature</b>	Operation	0..+50 °C
	Storage	-40..+70 °C
<b>Humidity</b>	10..90 %, non-condensing	

**Mechanic**

<b>Dimensions (in mm)</b>	440 x 330 x 44 (L x W x H, without connectors)
<b>Mounting</b>	19” (1U)

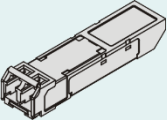
**Standards**

<b>CE</b>	2014/30/EU (EMC) 2014/35/EU (Low voltage) 2011/65/EU (RoHS)
<b>Safety</b>	EN 62368-1
<b>Emitted interference</b>	EN 55032 EN61000-3-2 EN61000-3-3
<b>Immunity</b>	EN 55035


## Order Information

	Description	Article No.:
	<b>10 Gigabit Ethernet L3 Switch – 19” 1U</b>	
	26-Port 10G L2/L3 Switch 2x 40G QSFP+ Slots, 20x 10G SFP+ Slots, 4x 10G/25GBase-X SFP28-Slots, managed, int. 100~240VAC (C14), Console port (RJ-45)	<b>MS400995M</b>
	Power Supply Module 230VAC for MS400995M prim. 100~240VAC (C14)	<b>MS400995-AC</b>

## Accessories

	Description	Article No.:
	<b>SFP and SFP+ Transceiver (xWDM on request)</b>	
	SFP Transceiver, Gigabit Ethernet, Digital Diagnostic 850 nm Multimode, 1000Base-SX, LC duplex	<b>MS100200D</b>
	SFP Transceiver, Gigabit Ethernet, Digital Diagnostic 1310 nm Single mode, 1000Base-LX, LC duplex	<b>MS100210D</b>
	SFP+ Transceiver, 10 Gigabit Ethernet, Digital Diagnostic, 850 nm Multimode, 10GBase-SX, LC duplex, 300m	<b>MS100700D</b>
	SFP+ Transceiver, 10 Gigabit Ethernet, Digital Diagnostic, 1310 nm single mode, 10GBase-LX, LC duplex, 10 km	<b>MS100702D</b>

## Convenient Micro Switches

	Description	Article No.:
	<b>10G Micro Switch</b>	
	7-Port 10GbE Micro Switch PoE+/++ 2x SFP/SFP+ Slots, 1/10GBase-R, 5 RJ-45 Ports, 1x 1/2.5/5GBase-T, PoE (PSE 802.3af/at/bt), 4x 10/100/1000T, PoE+ (PSE 802.3af/at), horizontal mounting, 50..57 VDC power supply	<b>MS440507PM</b>

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