



Data Center Switches MES5400-24, MES5400-48, MES5410-48, MES5500-32

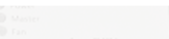
- High performance (up to 6.4 Tbps)
- Non-blocking architecture
- Front-to-Back cooling
- Stacking up to 8 devices
- Hot-swappable redundant power supplies
- Redundant ventilation system

MES5400-24, MES5400-48, MES5410-48 and MES5500-32 switches are high performance devices with 40GBASE-R/ 100GBASE-R interfaces that can be used as aggregation or transport switches in carrier networks and as Top-of-Rack or End-of-Row switches for data centers.

The devices' ports support operation at rates of 1 Gbps (SFP), 10 Gbps (SFP+), 25 Gbps (QSFP28), 40 Gbps (QSFP+) and 100 Gbps (QSFP28).

The non-blocking architecture guarantees lossless packet forwarding at wire speed with minimum and predictable delays for all types of traffic. The front-to-back cooling provides effective cooldown in modern data centers. The redundant and hot-swappable fans and AC/DC power supplies along with advanced hardware monitoring functions provide high reliability and uninterrupted services. The devices support EVPN/VXLAN technology to create networks with simple, high-performance and scalable data center architecture.

Technical Features

	MES5400-24	MES5400-48	MES5410-48	MES5500-32
Interfaces				
10/100/1000BASE-T (OOB)	1			
10GBASE-R (SFP+)	—	—	—	2
1000BASE-X (SFP)/10GBASE-R (SFP+)	24	48	—	—
1000BASE-X (SFP)/10GBASE-R (SFP+)/ 25GBASE-R (SFP28)	—	—	48	—
40GBASE-R (QSFP+)/100GBASE-R (QSFP28)	6	6	6	32
USB 2.0	1			
Console port RS-232 (RJ-45)	1			
General features				
Bandwidth	1.68 Tbps	2.16 Tbps	3.6 Tbps	6.4 Tbps
Throughput for 64 bytes	1050 MPPS	1050 MPPS	2380 MPPS	2380 MPPS
Buffer memory	12 MB	12 MB	24 MB	24 MB
RAM (DDR3)	1 GB			
ROM (NAND Flash)	1 GB			
 MAC table ¹	64K	256K	up to 256K ²	up to 256K ²
VLAN table	4K			
 L2 Multicast groups	4K			
ARP table	64K	256K	up to 128K ²	up to 128K ²
Routing table	32K IPv4, 16K IPv6	128K IPv4, 64K IPv6	up to 512K IPv4 , up to 256K IPv6 ²	up to 512K IPv4, up to 256K IPv6 ²
TCAM for traffic processing	6K x 30B	12K x 30B	12K x 30B	12K x 30B
Power supply	AC: 176–240 V, 50–60 Hz DC: 36–72 V Power supply options: one AC/DC power source • two AC/DC hot-swappable power source •		AC: 100–240 V, 50–60 Hz Power supply options: one AC power source • two AC hot-swappable power sources •	
Maximum power consumption	145 W	165 W	300 W	420 W
Dimensions (W x H x D)	440 x 44 x 425 mm	440 x 44 x 425 mm	440 x 44 x 509 mm	440 x 44 x 509 mm
Stacking	up to 8 devices			

Features and Capabilities

Interface Features

- Head-of-line blocking (HOL) protection
- Back Pressure
- Auto MDI/MDIX
- Jumbo Frames
- Flow Control (IEEE 802.3X)
- Port Mirroring
- Stacking

MAC Table Features

- Independent learning in each VLAN
- MAC Multicast Support
- Configurable MAC address aging time
- Static MAC Entries
- MAC Flapping logging

VLAN Features

- Voice VLAN
- IEEE 802.1Q
- Q-in-Q
- Selective Q-in-Q
- GVRP

L2 Multicast Functions

- Multicast profiles
- Static Multicast groups
- IGMP Snooping v1,2,3
- Port/host-based IGMP Snooping Fast Leave
- IGMP authorization via RADIUS
- MLD Snooping v1,2
- IGMP Querier

L2 Functions

- STP (Spanning Tree Protocol, IEEE 802.1d)
- RSTP (Rapid Spanning Tree Protocol, IEEE 802.1w)
- MSTP (Multiple Spanning Tree Protocol, IEEE 802.1s)
- Spanning Tree Fast Link option
- STP Root Guard
- BPDU Filtering
- STP BPDU Guard
- Loopback Detection (LBD)
- ERPS (G.8032v2)
- PVSTP+
- RPVSTP+

L3 Functions

- Static routing
- Dynamic routing protocols RIP, OSPFv2, OSPFv3, BGP, IS-IS
- Address Resolution Protocol (ARP)
- VRRP
- PIM SM, IGMP Proxy
- BFD
- IP Unnumbered

EVPN/VXLAN

- Support for L2VPN services
- Support for L3VPN services
- VRF lite

Link Aggregation Functions

- Link Aggregation Groups (LAG)
- LACP
- LAG Balancing Algorithm
- Multi-Switch Link Aggregation Group (MLAG)

IPv6 Support

- IPv6 Host
- IPv6/IPv4 compatibility

Service functions

- Optical transceiver diagnostics
- Green Ethernet

Security Functions

- DHCP Snooping
- DHCP Option 82
- IP Source Guard
- Dynamic ARP Inspection
- sFlow
- MAC-based authentication,
- MAC address limitation, static MAC entries
- Port-based authentication IEEE 802.1x
- Guest VLAN
- DoS attack prevention
- Traffic segmentation
- DHCP clients filtering
- BPDU attack prevention
- NetBIOS/NetBEUI filtering

Access Control Lists (ACL)

- L2-L3-L4 ACL
- Time-Based ACL
- IPv6 ACL
- ACL based on:
 - Physical port number
 - IEEE 802.1p
 - VLAN ID
 - EtherType
 - DSCP
 - Protocol type
 - TCP/UDP port number

Quality of Service (QoS) and Rate Limiting

- QoS statistics
- Shaping, Policing
- IEEE 802.1p Class of Service (CoS)
- Broadcast Storm Control
- Bandwidth management
- Strict Priority/Weighted Round Robin (WRR) scheduling algorithms
- Three marking colors
- ACL-based traffic classification