



MES33xx Series Ethernet Aggregation Switches

- Bandwidth up to 128 Gbps
- Non-blocking switching fabric
- 4 × 10G ports in basic configuration
- L3 functions
- Stacking up to 8 devices
- Hot-swappable redundant power supplies
- Dual ventilation system
- Front-to-Back cooling

MES33xx series switches can be used in service provider networks as aggregation or transport switches. They ensure high performance due to the interfaces operating at speeds of 10 Gbps or 1 Gbps.

MES aggregation switches' feature set includes advanced L2 functions, static routing, dynamic routing, 4 SFP+ 10 Gbps interfaces, stacking of up to 8 devices, redundant and hot swappable power supplies.

The switches comply with CE requirements.

Technical Features

	MES3308F	MES3316F	MES3324F	MES3324
Interfaces				
1000BASE-X/100BASE-FX (SFP)	4	12	20	—
10/100/1000BASE-T	—	—	—	20
10/100/1000BASE-T/ 1000BASE-X/100BASE-FX Combo	4			
10GBASE-R (SFP+)/1000BASE-X(SFP)	4			
10/100/1000BASE-T (OOB)	1			
Console port RS-232 (RJ-45)	1			
Performance				
Bandwidth	96 Gbps	112 Gbps	128 Gbps	128 Gbps
Throughput for 64 bytes ¹	71 MPPS	83 MPPS	95 MPPS	95 MPPS
Buffer memory	1.5 MB			
RAM (DDR3)	512 MB			
ROM (RAW NAND)	512 MB			
MAC table	16384			
ARP table	4023			
VLAN table	4094			
L2 Multicast groups	4091			
SQinQ rules	3006 (ingress/egress)			
ACL rules	3006			
L3 IPv4 Unicast routes ³	12866			
L3 IPv6 Unicast routes ³	3222			
L3 IPv4 Multicast routes (IGMP Proxy, PIM)	3876			
L3 IPv6 Multicast routes (IGMP Proxy, PIM)	1006			
Power supply	100–240 V AC, 50–60 Hz; 36–72 V DC Power options: one DC or AC power source two hot-swappable DC or AC power sources			
Maximum power consumption (including PoE)	27W	35 W	45 W	35 W
Dimensions (W × H × D)	430 × 44 × 275 mm			



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Features and Capabilities

Interfaces Functions

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

MAC Table Functions

- Independent learning mode per VLAN
- MAC Multicast Support
- Configurable aging time of MAC addresses
- Static MAC Entries
- MAC Flapping logging

VLAN Functions

- 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
- Pim-Snooping
- IGMP proxy-report
- IGMP authorization via RADIUS
- MLD Snooping v1,2
- IGMP Querier
- MVR

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)
- STP Multiprocess
- PVSTP+
- RPVSTP+
- Spanning Tree Fast Link option
- STP Root Guard
- STP Loop Guard
- BPDU Filtering
- STP BPDU Guard
- VLAN-based Loopback Detection (LBD)
- ERPS (G.8032v2)
- Flex-link
- Private VLAN Trunk
- Layer 2 Protocol Tunneling (L2PT)

L3 Functions

- Static IP routes
- Dynamic routing protocols RIPv2, OSPFv2, OSPFv3, IS-IS (IPv4 Unicast), BGP1 (IPv4 Unicast, IPv4 Multicast)
- BFD (for BGP)
- Address Resolution Protocol (ARP)
- Proxy ARP
- Policy-Based Routing (IPv4)
- VRRP
- PIM SM, PIM DM, IGMP Proxy, MSDP
- ECMP Load Balancing
- IP Unnumbered
- GRE
- VRF

IPv6 Functions

- IPv6 Host
- Dual stack

Link Aggregation Functions

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

Service Functions

- Virtual Cable Testing (VCT)
- Optical transceiver diagnostics
- Green Ethernet

Security Functions

- Protection against unauthorized DHCP servers (DHCP Snooping)
- DHCP Option 82
- IP Source Guard
- Dynamic ARP Inspection
- First Hop Security
- sFlow
- MAC-based authentication, Port Security, Static MAC entries
- Port-based authentication IEEE 802.1x
- Guest VLAN
- DoS attack prevention
- Traffic segmentation
- DHCP clients filtering
- BPDU attacks prevention
- NetBIOS/NetBEUI filtering
- PPPoE Intermediate Agent

Quality of Service (QoS)

- QoS statistics
- Shaping, Policing
- IEEE 802.1p Class of Service (CoS)
- Storm Control for different types of traffic (broadcast, multicast, unknown unicast)
- Bandwidth management
- Scheduling algorithms: Strict Priority/Weighted Round Robin (WRR)
- Three marking colors
- ACL-based CoS/DSCP mark assignment
- ACL-based VLAN assignment
- Setting the IEEE 802.1p priority for management VLAN
- DSCP to CoS/CoS to DSCP remarking
- 802.1p, DSCP mark assignment for IGMP

OAM

- IEEE 802.3ah Ethernet OAM
- Dying Gasp
- IEEE 802.1ag Connectivity Fault Management (CFM)
- IEEE 802.3ah Unidirectional Link Detection (UDLD)

ACL (Access Control Lists)

- 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
 - User Defined Bytes