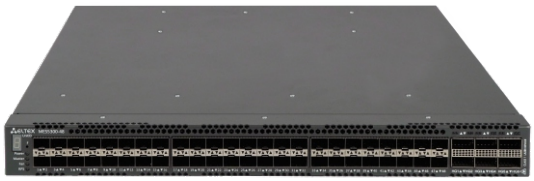
– **High performance up to 2.16 Tbps**
– **Non-blocking architecture**
– **Stacking up to 8 devices**
– **Power supply redundancy**
– **Front-to-Back cooling**

MES5300-24



MES5300-48

MES5300-24, MES5300-48, MES5305-48 switches are high performance devices with 40GBASE-R and 100GBASE-R interfaces that can be used as aggregation 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+), 40 Gbps (QSFP+) and 100 Gbps (QSFP28). In the split mode of the HG interface, operation at speeds 1 Gbps, 10 Gbps and 25 Gbps is supported. The split mode allows splitting up to 6 HG interfaces, which gives 24 TWE interfaces in total.

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

	MES5300-24	MES5300-48	MES5305-48
Interfaces			
10/100/1000BASE-T (OOB)	1		
1000BASE-X (SFP)/10GBASE-R (SFP+)	24	48	
40GBASE-R4 (QSFP+)/100GBASE-R4 (QSFP28)	6		
USB 2.0	1		
Console port RS-232 (RJ-45)	1		
Performance			
Bandwidth	1.68 Tbps	2.16 Tbps	
Throughput for 64 bytes[1]	593.7 MPPS	552.15 MPPS	575.80 MPPS
Buffer memory	6 MB		10 MB
RAM (DDR4)	8 GB		
ROM (embedded uSSD)	8 GB		
MAC table	32768	32768	131072
ARP table[2]	16317	16317	32701

[1] Values are given for one-way transmission.
[2] For each host in the ARP table, an additional entry is created in the switching table. The number of ARP with EVPN license installed is 14277 for MES5300-24, MES5300-48 and 30661 for MES5305-48.

Technical features (continued)

	MES5300-24	MES5300-48	MES5305-48
Performance			
VLAN table	4094		
L2 Multicast groups	4092		
SQinQ rules	1320 (ingress), 1320 (egress)		
Maximum number of ECMP groups	1024		
ECMP routes	64		
VRF number	251 (including default VRF)		
Maximum number of VXLAN	2478	2478	4093
Link Aggregation Groups (LAG)	128, up to 8 ports per LAG		
Quality of Service (QoS)	8 egress queues per port		
Jumbo frames size	10240 bytes		
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 (SPAN, RSPAN)
– Stacking

MAC table features
– Independent learning mode in each VLAN
– MAC Multicast Support
– Configurable MAC address aging time
– Static MAC Entries
– MAC Flapping logging

VLAN functions
– Voice VLAN
– IEEE 802.1Q
– Q-in-Q
– Selective Q-in-Q
– GVRP
– Subnet-based VLAN

L2 Multicast functions
– Multicast profiles
– Static Multicast groups
– IGMP Snooping v1,2,3
– Port/host-based IGMP Snooping Fast Leave
– PIM-Snooping
– 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)
– Flex-link
– PVSTP+
– RPVSTP+

[1] The number of MAC/IPv4/IPv6 rules with EVPN license installed for is 2505/2025/1252 for MES5300-24, MES5300-48 and is 5577/5577/2788 for MES5305-48.
[2] IPv4/IPv6 Unicast/Multicast routes share hardware resources.

Features and capabilities (continued)

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

IPv6 functions
– IPv6 Host
– Dual-stack IPv6, IPv4

Service functions
– Optical transceiver diagnostics

Quality of Service (QoS) and rate limiting
– QoS statistics
– Shaping, Policing
– IEEE 802.1p Class of Service
– Protection against broadcast storm
– Bandwidth management
– Strict Priority/Weighted Round Robin (WRR) scheduling algorithms
– Three marking colors
– Setting the IEEE 802.1p priority for management VLAN
– DSCP to CoS, CoS to DSCP remarking
– 802.1p DSCP mark assignment for IGMP

OAM
– 802.3ah Ethernet Link OAM
– 802.3ah Unidirectional Link Detection

Management functions
– Configuration and firmware download and upload via TFTP/SCP/SFTP
– SNMP
– Command Line Interface (CLI)
– Web interface
– Syslog
– SNTP (Simple Network Time Protocol)
– NTP (Network Time Protocol), NTP server, NTP peer-to-peer
– Traceroute
– LLDP (802.1ab) + LLDP MED
– LLDP (802.1ab)
– TACACS+
– Management interface blocking
– Local authentication
– IP address filtering for SNMP
– Macrocommands
– CLI command logging
– System log
– DHCP auto provisioning
– DHCP Relay (Option 82)
– DHCP Option 12
– DHCP server
– Debugging commands
– CPU traffic limiting mechanisms
– Ping (IPv4/IPv6)

[1] BGP protocol support is provided under license.
[2] EVPN protocol support is provided under license.

Features and capabilities (continued)

Monitoring functions

– Interface statistics
– Remote monitoring RMON
– Task- and traffic-based CPU utilization monitoring
– Temperature monitoring
– TCAM monitoring

MIB

– RFC 1065, 1066, 1155, 1156, 2578 MIB Structure
– RFC 1212 Concise MIB Definitions
– RFC 1213 MIB II
– RFC 1215 MIB Traps Convention
– RFC 1493, 4188 Bridge MIB
– RFC 1157, 2571-2576 SNMP MIB
– RFC 1901-1908, 3418, 3636, 1442, 2578 SNMPv2 MIB
– RFC 1271, 1757, 2819 RMON MIB
– RFC 2465 IPv6 MIB
– RFC 2466 ICMPv6 MIB
– RFC 2737 Entity MIB
– RFC 4293 IPv6 SNMP Mgmt Interface MIB
– Private MIB
– RFC 3289 DIFFSERV MIB
– RFC 2021 RMONv2 MIB
– RFC 1398, 1643, 1650, 2358, 2665, 3635 Ether-like MIB
– RFC 2668 IEEE 802.3 MAU MIB
– RFC 2674, 4363 IEEE 802.1p MIB
– RFC 2233, 2863 IF MIB
– RFC 2618 RADIUS Authentication Client MIB
– RFC 4022 MIB for TCP
– RFC 4113 MIB for UDP
– RFC 3298 MIB for Diffserv
– RFC 2620 RADIUS Accounting Client MIB
– RFC 2925 Ping & Traceroute MIB
– RFC 768 UDP
– RFC 791 IP
– RFC 792 ICMPv4
– RFC 2463, 4443 ICMPv6
– RFC 4884 Extended ICMP for Multi-Part messages support
– RFC 793 TCP
– RFC 2474, 3260 Definition of the DS field in the IPv4 and IPv6 headers
– RFC 1321, 2284, 2865, 3580, 3748 Extensible Authentication Protocol (EAP)
– RFC 2571-2574 SNMP
– RFC 826 ARP
– IEC 61850

Physical parameters

	MES5300-24	MES5300-48	MES5305-48
Physical parameters and environmental features			
Power supply	100–240 V AC, 50–60 Hz 36–72 V DC Power supply options: • 1 AC/DC power supply • 2 hot-swappable AC/DC power supplies	176–264 V AC, 50–60 Hz 36–72 V DC Power supply options: • 1 AC/DC power supply • 2 hot-swappable AC/DC power supplies	
Input current	1.2–0.5 A for AC 3–1.5 for DC	0.6–1.0 A for AC 2–4.5 for DC	0.5–1.0 A for AC 2–5 for DC
Maximum power consumption	no more than 118 W	no more than 157 W	no more than 150 W
Heat dessipation	118 W	157 W	150 W
Dying Gasp support	no		
Operating temperature	from 0 to +45 °C		
Storage temperature	from -50 to +70 °C		
Operating humidity	no more than 80 %		
Cooling	Front-to-Back, 4 fans		
Maximum acoustic noise level	from the front panel, max < 62.8 dB from the rear panel, max < 69.1 dB	from the front panel, max < 61.4 dB from the rear panel, max < 69.3 dB	
Dimensions (W × H × D)	440 × 44 × 309 mm	440 × 44 × 425 mm	440 × 44 × 425 mm
Weight	6.11 kg	8.7 kg	

Ordering information

Name	Description
MES5300-24	Ethernet switch MES5300-24, 1×10/100/1000BASE-T (OOB), 24×1000BASE-X (SFP)/10GBASE-R (SFP+), 6×40GBASE-R4 (QSFP+)/100GBASE-R4 (QSFP28), 1×USB 2.0, L3
MES5300-48	Ethernet switch MES5300-48, 1×10/100/1000BASE-T (OOB), 48×1000BASE-X (SFP)/10GBASE-R (SFP+), 6×40GBASE-R4 (QSFP+)/100GBASE-R4 (QSFP28), 1×USB 2.0, L3
MES5305-48	Ethernet switch MES5305-48, 1×10/100/1000BASE-T (OOB), 48×1000BASE-X (SFP)/10GBASE-R (SFP+), 6×40GBASE-R4 (QSFP+)/100GBASE-R4 (QSFP28), 1×USB 2.0, L3
Related products	
PM160-48/12	Power module PM160-48/12, 48 V DC, 160 W
PM160-220/12	Power module PM160-220/12, 100–240 V AC, 160 W
PM350-48/12	Power module PM350-48/12, 48 V DC, 350 W
PM350-220/12	Power module PM350-220/12, 220 V AC, 350 W
Related sortware	
ECCM-MES5300-24	ECCM-MES5300-24 option of Eltex ECCM management system for Eltex network elements management and monitoring: 1 network element MES5300-24
ECCM-MES5300-48	ECCM-MES5300-48 option of Eltex ECCM management system for Eltex network elements management and monitoring: 1 network element MES5300-48
ECCM-MES5305-48	ECCM-MES5305-48 option of Eltex ECCM management system for Eltex network elements management and monitoring: 1 network element MES5305-48

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About Eltex

Eltex Enterprise is a leading Russian developer and manufacturer of communication equipment with 30 years of history. Complete solutions and their seamless integrability into the Customer's infrastructure are the priority growth areas of the company.