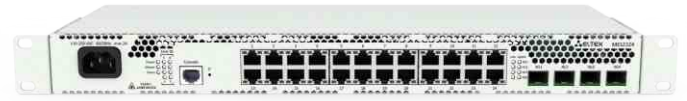


- L2+ switches
- Stacking support
- Multicast support (IGMP, IGMP snooping, MVR)
- Advanced security functions (L2-L4 ACL, IP Source address guard, Dynamic ARP Inspection and etc.)



MES2324



MES2324FB

MES Access switches are the managed L2+ switches with 24 10/100/1000Base-T ports and 4 10GBase-X (SFP+)/1000Base-X (SFP) ports.

Switches are designed to connect end user to large-scale corporate networks, small and medium business networks, and to the service provider networks using Gigabit Ethernet interfaces.

Switch functions include physical stacking, VLAN support, multicast groups and advanced security functions.

## Specification

	MES2308	MES2324 MES2324B	MES2324FB	MES2348B	MES2308P	MES2324P
<b>General options</b>						
Packet processor	Marvell 98DX3233	Marvell 98DX3236	Marvell 98DX3236	Marvell 2x98DX3236	Marvell 98DX3233	Marvell 98DX3236
<b>Interfaces</b>						
10/100/1000 Base-T (RJ-45)	8	24		48	8 (PoE/PoE+)	24 (PoE/PoE+)
1000 Base-X (SFP)	2		20		2	
1000 Base-T	2				2	
10/100/1000 Base-T/1000 Base-X Combo			4			
10G Base-X (SFP+)/1000Base-X (SFP)		4	4	4		4
Console port	RS-232/RJ-45					
<b>Productivity</b>						
Switch performance	24 Gbps	128 Gbps	128 Gbps	176 Gbps	24 Gbps	128 Gbps
Buffer memory	12 Mbit					
Table of MAC-addresses	16K					
Quality of Services (QoS)	Traffic priority, 8 tiers 8 output queues with different priorities for each port					
TCAM routing volume	for routing: 1024xIPv4 for the processing of traffic tasks: 1024x24 B					
Jumbo-frames support	Max. packet size 10K					
Stacking	up to 8 units					

## Switch functionality

### Interface functions

- HOL blocking protection
- Back pressure routing support
- Auto MDI/MDIX support
- Jumbo frames support
- IEEE 802.3X flow control
- Port mirroring
- Stacking, up to 8 devices in stack<sup>1</sup>

### MAC-address processing functions

- MAC-addresses table 16K
- Independent mode of learning for each VLAN
- MAC Multicast Support
- Automatic aging for MAC-addresses
- Static MAC Entries

### VLAN support

- Up to 4K VLAN
- Voice VLAN support
- 802.1Q support
- Q-in-Q support
- Selective Q-in-Q support
- GVRP support

### L2 Multicast functions

- 1K group support
- Multicast profiles support
- Multicast static group support
- GMP Snooping v1,2,3 support
- Port/host-based GMP Snooping Fast Leave support
- IGMP authorization support via RADIUS
- MLD Snooping v1,2 support
- GMP Querier support
- MVR support

### L2 functions

- STP (Spanning Tree Protocol, IEEE 802.1d) protocol support
- RSTP (Rapid spanning tree protocol, IEEE 802.1w) support
- MSTP (Multiple Spanning Tree, IEEE802.1s) support
- STP Multitprocess<sup>1</sup> support
- Spanning Tree Fast Link option support
- EAPS<sup>1</sup> support
- STP Root Guard support
- BPDU Filtering support
- STP BPDU Guard support
- Loopback Detection (LBD) support
- ERPS (G.8032v2)<sup>1</sup> support

### Link Aggregation functions

- LAG group creation
- Multiplexing via LACP
- LAG Balancing Algorithm support

### Ipv6 support

- IPv6 Host functionality
- Ipv4, Ipv6 shared usage

### Service function

- Virtual cable testing (VCT)
- Optical transceiver diagnostic
- Green Ethernet

### Security functions

- DHCP snooping
- DHCP protocol option 82
- IP Source address guard
- Dynamic ARP Inspection
- sFlow support
- MAC-address based authentication, MAC-addresses number limitation, Static MAC-addresses
- Port-based authentication (802.1x)
- Guest VLAN
- DoS-attack security system
- Traffic segmentation
- Protecting against nonauthorized DHCP servers
- DHCP client filtering
- BPDU attack prevention
- NetBIOS/NetBEUI filtering
- PPPoE Intermediate agent<sup>1</sup>

### ACL access control list

- L2-L3-L4 ACL (Access Control List)
- Time-Based ACL support
- IPv6 ACL
- Up to 1024 access rights
- ACL based on:
  - Switch port
  - Priority 802.1p
  - VLAN ID
  - Ether type
  - DSCP
  - Protocol type
  - TCP/UDP port number
  - User Defined Bytes<sup>1</sup>

### Quality of service (QoS) and bit rate limitation basic functions

- QoS/CoS support
- QoS statistic
- Port rate limiting (shaping, policing)
- Support up to 8 priority queues
- 802.1p class of service support
- Protection against Broadcast Storm
- Bandwidth management
- Queues processing via Strict priority/Weighted Round Robin (WRR) algorithms
- Three marking colors
- ACL-based traffic classification
- ACL-based destination of CoS/DSCP marks

### OAM/CFM<sup>1</sup>

- 802.3ah Ethernet Link OAM
- Dying Gasp
- 802.1ag Connectivity Fault Management (CFM)
- 802.3ah Unidirectional LinkDetection (Detection protocol of one-way communications)

<sup>1</sup> It is not available in the current software version 4.0.2

## Switch functionality (continuance)

### Switch control functions

- Configuration file download and upload via TFTP
- SNMP protocol
- Command line interface (CLI)
- Web-interface<sup>1</sup>
- Syslog
- SNTP (Simple Network Time Protocol)
- Traceroute
- LLDP (802.1ab) + LLDP MED
- Management of the controlled access- privilege levels
- Control interface bloking
- Local authentication
- IP-addresses filtering for SNMP
- Client RADIUS, TACACS+ (Terminal Access Controller Access Control System)
- SSH server
- SSL support
- Macrocommand support
- Input command journaling
- System log
- DHCP autoconfig
- DHCP Relay (Ipv4 support)
- DHCP Option 12
- DHCP Relay Option 82
- PPPoE Circuit-ID<sup>1</sup> tag addition
- Flash File System
- Debugging commands
- Traffic limiting mechanism in the direction of CPU<sup>1</sup>
- Password encryption
- Password reset
- Ping (IPv4/IPv6 support)
- FTP<sup>1</sup> server

### Monitoring functions

- Interface statistic
- RMON/SMON remote monitoring
- CPU load monitoring support by tasks
- Memory monitoring
- Temperature monitoring
- TCAM monitoring

<sup>1</sup> It is not available in the current software version 4.0.2

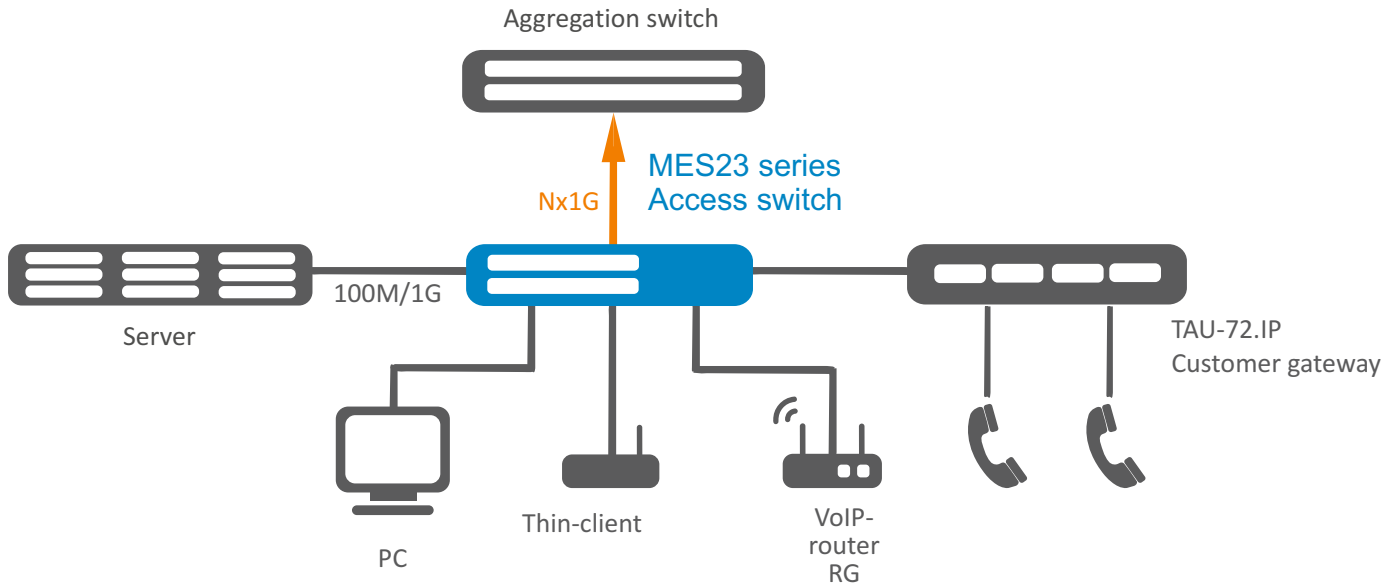
### MIB

- 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 271,1757, 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 802.3 MAU MIB
- RFC 2674, 4363 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 message support
- RFC 793 TCP
- RFC 2474, 3260 Ds field definition in IPv4 and Ipv6 headers
- RFC 1321, 2284, 2865, 3580, 3748 Extensible Authentication Protocol (EAP)
- RFC 2571, RFC2572, RFC2573, RFC2574 SNMP
- RFC 826 ARP






## Physical characteristics

	MES2308	MES2324/ MES2324B	MES2324FB	MES2348B	MES2308P	MES2324P
<b>Physical characteristics and ambient conditions</b>						
Max. power consumption	up to 20W	up to 25W/50W	up to 45W	up to 100W	up to 120W	up to 350W
Power supply	220V AC, 50 Hz	220V AC, 50 Hz / 12V DC (battery)	220V AC, 50 Hz, 12V DC (battery)	220V AC, 50 Hz, 12V DC (battery)	220V AC, 50 Hz	220V AC, 50 Hz
Ambient operating temperature	from -20 to +50°C	from -20 to +50°C	from -20 to +50°C	from -20 to +50°C	from -20 to +50°C	from -20 to +50°C
Storage temperature	from -40 to +70°C	from -40 to +70°C	from -40 to +70°C	from -40 to +70°C	from -40 to +70°C	from -40 to +70°C
Operating humidity	up to 80%	up to 80%	up to 80%	up to 80%	up to 80%	up to 80%
Ventilation	passive cooling	passive cooling	passive cooling	passive cooling	passive cooling	YES
Design	19", 1U	19", 1U	19", 1U	19", 1U	19", 1U	19", 1U
Dimensions, mm	430 x 158 x 44	430 x 158 x 44	430 x 243 x 44	440 x 280 x 44	430 x 158 x 44	440 x 280 x 44

## Application diagram



## Ordering information

Name	Description	Appearance
MES2308 AC	MES2308 Ethernet-switch, 8x10/100/1000 Base-T ports, 2x1000BASE-T ports, 2x1000BASE-X ports, L2+, 220V AC	
MES2324 AC	MES2324 Ethernet-switch, 24x10/100/1000 Base-T ports, 4x10G Base-X (SFP+)/1000Base-X (SFP) ports, L2+, 220V AC	
MES2324B AC	MES2324B Ethernet-switch, 24x10/100/1000 Base-T ports, 4x10G Base-X (SFP+)/1000Base-X (SFP) ports, L2+, 220V AC, 12V DC	
MES2324FB AC	MES2324FB Ethernet-switch, 20x1000 Base-X (SFP) ports, 4x10/100/1000 Base-T/1000Base-X Combo ports, 4x10G Base-X (SFP+)/1000Base-X (SFP) ports, L2+, 220V AC, 12V DC	
MES2348B AC	MES2348 Ethernet-switch, 48x10/100/1000 Base-T ports, 4x10G Base-X (SFP+)/1000Base-X (SFP) ports, L2+, 220V AC, 12V DC	
MES2308P AC	MES2308P Ethernet-switch, 8x10/100/1000 Base-T (PoE/PoE+) ports, 2x1000BASE-T ports, 2x1000BASE-X ports, L2+, 220V AC	
MES2324P AC	MES2324P Ethernet-switch, 24x10/100/1000 Base-T (PoE/PoE+) ports, 4x10G Base-X (SFP+)/1000Base-X (SFP) ports, L2+, 220V AC	

## Companion software

### EMS-MES-access

EMS-MES-access option of Eltex.EMS system to control and monitor Eltex network elements: 1 network element - access switch

## About Eltex Company

Eltex Company is leading Russian developer and manufacturer of telecommunications equipment with 20 years of history. Integrity of solutions and seamless integration capability into customer infrastructure is priority area of company development

## Make an order



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