– **Advanced L2 features**
– **Support for Multicast (IGMP Snooping, MVR)**
– **Uninterruptible power supply from rechargeable battery**[1]

MES2424

MES2448B

The switches provide end users connection to networks of large enterprises, small and mid-sized businesses and service providers via 1G/10G interfaces.

The switches support Virtual Local Area Networks (VLAN), multicast groups and advanced security functions.

Uninterruptible power[1]

MES2424B, MES2448B and MES2448E switches can be equipped with a rechargeable battery to ensure power supply in case of the primary network connection loss. The switch is also equipped with a power supply unit which allows the battery to be charged when AC power is available. Power supply redundancy makes it possible to monitor the state of the primary network and notify of a power type switching.

Technical features

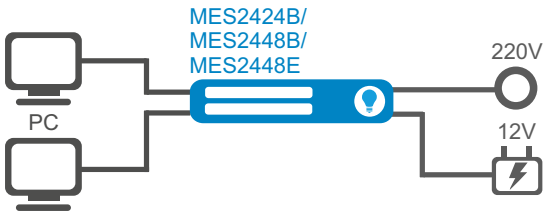
	MES2424 AC	MES2424 DC	MES2424B	MES2448 DC	MES2448B	MES2448E
Packet processor	Realtek RTL9301	Realtek RTL9301	Realtek RTL9301	Realtek RTL9311	Realtek RTL9311	Realtek RTL9311
Interfaces						
10/100/1000BASE-T (RJ-45)	24	24	24	48	48	48
1000BASE-X(SFP)/ 10GBASE-R(SFP+)	4	4	4	4	4	6
Console port RS-232 (RJ-45)	1					
Performance						
Bandwidth	128 Gbps	128 Gbps	128 Gbps	176 Gbps	176 Gbps	216 Gbps
Throughput on 64-byte packets	95.2 MPPS	95.2 MPPS	95.2 MPPS	130.9 MPPS	130.9 MPPS	160.7 MPPS
Buffer memory	1.5 MB	1.5 MB	1.5 MB	2 MB	2 MB	2 MB
RAM (DDR3)	512 MB					
ROM (SPI Flash)	64 MB					
MAC table	16K	16K	16K	32K	32K	32K
TCAM table	2K	2K	2K	4K	4K	4K
L2 Multicast groups (IGMP Snooping)	1K	1K	1K	4K	4K	4K
VLAN table	4094					
Quality of service (QoS)	8 output queues per port					
Link Aggregation Groups (LAG)	24 groups					
Jumbo frame size	the maximum packet size is 12 288 bytes					

[1] *Only for MES2424B, MES2448B and MES2448E*

– equipment is under development

Technical features of battery power supply*

	Battery capacity, Ah	Battery life, h	Battery charge time, h
MES2424B	12	≈6	≈9
	17	≈10	≈13
	20	≈13	≈15
MES2448B MES2448E	20	≈6	≈7
	26	≈8	≈9
	40	≈13	≈13



** Note:*
- *Parameters are given for environment temperature +25°C;*
- *For MES2424B the use of a rechargeable battery with a capacity of at least 12Ah is recommended;*
- *For MES2448B, MES2448E the use of a rechargeable battery with a capacity at least 20Ah is recommended.*

Features and capabilities

Interface features
– Head-of-line blocking (HOL) protection
– Auto MDI/MDIX
– Jumbo frames
– Flow Control IEEE 802.3X
– Port mirroring
– RSPAN

MAC table
– Independent learning mode per VLAN
– MAC Multicast Support
– Configurable aging time of MAC addresses
– Static MAC Entries
– MAC change events monitoring per ports

VLAN features
– IEEE 802.1Q
– Q-in-Q

L2 Multicast features
– Multicast profiles
– Static Multicast groups
– IGMP Snooping v1,2,3
– Port-based IGMP Snooping Fast Leave
– IGMP proxy-report features
– IGMP Querier
– MVR

L2 features
– STP (Spanning Tree Protocol, IEEE 802.1d)
– RSTP (Rapid Spanning Tree Protocol, IEEE 802.1d)
– MSTP (Multiple Spanning Tree Protocol, IEEE 802.1s)
– STP Root Guard
– STP Loop Guard
– STP BPDU Guard
– BPDU Filtering
– Spanning Tree Fast Link option
– Loopback Detection (LBD)
– Port isolation
– Storm Control for different types of traffic (broadcast, multicast, unknown unicast)
– Layer 2 Protocol Tunneling

Link Aggregation functions
– Static LAG
– Dynamic LAG (LACP)
– LAG Balancing Algorithm

Service functions
– Virtual cable testing (VCT)
– Optical transceiver diagnostics

Security functions
– DHCP Snooping
– DHCP Option 82
– MAC-based authentication, Port Security, static MAC entries
– Traffic segmentation
– DHCP clients filtering
– BPDU attacks prevention

Access control lists (ACL)
– L2-L3-L4 ACL (Access Control List)
– IPv6 ACL
– ACL based on:
  – Switch port
  – IEEE 802.1p priority
  – VLAN ID
  – EtherType
  – DSCP
  – IP type
  – TCP/UDP port number
  – User Defined Bytes

Quality of service (QoS) and rate limiting
– Shaping, policing
– Support for IEEE 802.1p Class of Service
– Scheduling algorithms: Strict Priority/Weighted Round Robin (WRR)
– IEEE 802.1p priority for management VLAN
– ACL-based traffic classification
– ACL-based CoS/DSCP mark assignment
– CoS to DSCP remarking
– DSCP to CoS remarking

– MES2448B, MES2448E are under development

Features and capabilities

Main management functions

– Download and upload of configuration file via TFTP/SFTP
– Automated backup of configuration file via TFTP/SFTP
– Simple Network Management Protocol (SNMP)
– Command Line Interface (CLI)
– Syslog
– Simple Network Time Protocol (SNTP)
– Traceroute
– LLDP (IEEE 802.1ab) + LLDP MED
– Access management – privilege levels for users
– Management interface blocking
– Local authentication
– IP addresses filtering for SNMP
– RADIUS and TACACS+ clients
– Telnet client
– Telnet server, SSH server
– Macro commands
– Input commands logging via TACACS+
– DHCP autoprovision
– DHCP Relay (support for IPv4)
– DHCP Relay Option 82
– PPPoE Circuit-ID tag adding
– Flash File System
– Debugging commands
– Limiting of traffic to CPU
– Password encryption
– Ping (support for IPv4/IPv6)
– IPv4/IPv6 static routes support
– Support for several versions of configuration file

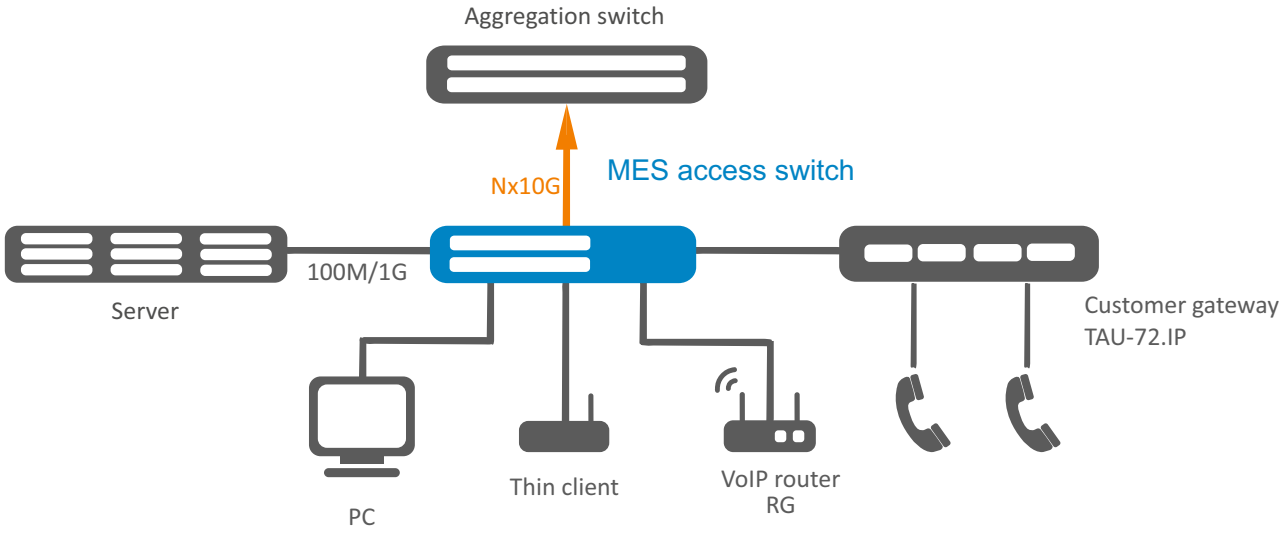
Monitoring functions

– Interface statistics
– CPU utilization monitoring per task and per queue
– RAM utilization monitoring
– Temperature monitoring
– TCAM monitoring

Uninterruptible power supply provision[1]

– Automatic switching to and from the rechargeable battery (12 V) in case of the primary (220 V) network fail
– Battery charge (12 V) when primary network (220 V) is available
– Power supply type monitoring (SNMP)
– Notification of a power supply type switching
– Battery connection indication
– Low battery alarm
– Short-circuit protection

Use case



[1] *Only for MES2424B, MES2448B and MES2448E*

	MES2424 AC	MES2424 DC	MES2424B	MES2448 DC	MES2448B	MES2448E
Physical specifications and environmental parameters						
Power supply	110–250 V AC, 60/50 Hz	18–72 V DC	110–250 V AC, 60/50 Hz; 12 V DC	36–72 V DC	110–250 V AC, 60/50 Hz; 12 V DC	110–250 V AC, 60/50 Hz; 12 V DC
Input current	0.23–0.10 A	1.39–0.35 A	0.45–0.20 A; 2.5 A	1.25–0.63 A	0.78–0.34 A; 4.5 A	0.80–0.35 A; 4.5 A
Output current	no	no	1.7 A	no	2.7 A	2.7 A
Maximum power consumption	25 W	25 W	50 W (including battery charge)	45 W	86 W (including battery charge)	88 W (including battery charge)
Hardware support for Dying Gasp	yes	no	no	no	no	no
Operating temperature	from -20 to +50 °C					
Storage temperature	from -40 to +70 °C					
Operating humidity	no more than 80%					
Cooling	passive				active, 2 fans	
Dimensions (WxHxD), mm	430x44x203	430x44x203	430x44x203	430x44x280	430x44x280	430x44x280
Weight	2.44 kg	2.42 kg	2.54 kg	3.98 kg	3.98 kg	4.02 kg

Ordering information

Name	Description
MES2424	Ethernet switch MES2424, 24 ports of 10/100/1000BASE-T, 4 ports of 1000BASE-X/10GBASE-R, L2, 110–250 V AC
MES2424 DC	Ethernet switch MES2424 DC, 24 ports of 10/100/1000BASE-T, 4 ports of 1000BASE-X/10GBASE-R, L2, 18–72 V DC
MES2424B	Ethernet switch MES2424B, 24 ports of 10/100/1000BASE-T, 4 ports of 1000BASE-X/10GBASE-R, L2, 110–250 V AC, 12 V DC
MES2448 DC	Ethernet switch MES2448 DC, 48 ports of 10/100/1000BASE-T, 4 ports of 1000BASE-X/10GBASE-R, L2, 36–72 V DC
MES2448B	Ethernet switch MES2448B, 48 ports of 10/100/1000BASE-T, 4 ports of 1000BASE-X/10GBASE-R, L2, 110–250 V AC, 12 V DC
MES2448E	Ethernet switch MES2448E, 48 ports of 10/100/1000BASE-T, 4 ports of 1000BASE-X/10GBASE-R, L2, 110–250 V AC, 12 V DC

– equipment is under development

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About Eltex

Eltex company is a leading Russian developer and manufacturer of telecommunication equipment with 28 years of history. Integrity of solutions and seamless integration capability into Customer infrastructure is a priority area of company development.