– **Bandwidth up to 24 Gbps**
– **Non-blocking architecture**
– **L3 switches**
– **Stacking up to 8 devices**
– **Multicast support (IGMP Snooping, MVR)**
– **Advanced security functions (L2-L4 ACL, IP Source Guard, Dynamic ARP Inspection, etc.)**

MES2300-08P

The new generation of MES2300-08 and MES2300-08P access switches with PoE support provide end users connection to networks of large enterprises, small and middle-sized business and service providers via 1G. The MES2300-08P switches support PoE/PoE+.

The switches functionality includes physical stacking, VLAN support, multicast groups, and advanced security features.

Technical features

	MES2300-08	MES2300-08P
Interfaces		
10/100/1000BASE-T (RJ-45)	10	2
10/100/1000BASE-T (RJ-45) PoE/PoE+	—	8
1000BASE-X (SFP)	2	
Console port RS-232 (RJ-45)	1	
Performance		
Bandwidth	24 Gbps	
Throughoutput for 64 bytes[1]	17.86 MPPS	
Buffer memory	1.5 MB	
RAM (DDR4)	2 GB	
ROM (RAW NAND)	512 MB	
MAC table	16384	
ARP table[2]	1981	
VLAN table	4094	
L2 Multicast groups	2048	
SQinQ rules	1320 (ingress), 654 (egress) / 654 (ingress), 1320 (egress)[3]	
MAC ACL rules	1974	
IPv4/IPv6 ACL rules	1974/987	
L3 IPv4 Unicast[4]	4063	
L3 IPv6 Unicast[4]	1014	
L3 IPv4 Multicast (IGMP Proxy, PIM)[4]	1981	
L3 IPv6 Multicast (IGMP Proxy, PIM)[4]	505	
VRRP routers	255	
Maximum size of ECMP groups	1024	
ECMP routes	8	

[1] Values are given for one-way transmission.
[2] For each host in the ARP table, an additional entry is created in switching table.
[3] There are 1974 rules in total. They are divided between ingress and egress rules in varying proportions, but no more than 1320 for each direction.
[4] IPv4/IPv6 Unicast/Multicast routes share hardware resources.

Technical features (continued)

	MES2300-08	MES2300-08P
VRF number	16 (including default VRF)	
L3 interfaces	2032	
Link Aggregation Groups (LAG)	32, up to 8 ports in one LAG	
Quality of Service (QoS)	8 egress queues per port	
Jumbo frames	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 per 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 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)
– PVSTP+
– RPVSTP+
– Spanning Tree Fast Link option
– STP Root Guard
– BPDU Filtering
– STP BPDU Guard
– Loopback Detection (LBD)
– ERPS (G.8032v2)
– Flex-link
– Private VLAN
– Layer 2 Protocol Tunneling (L2PT)

L3 functions
– Static routing
– Dynamic routing protocols RIPv2, OSPFv2, OSPFv3, IS-IS (IPv4 Unicast), BGP[1] (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
– VRF lite

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

IPv6 support
– IPv6 Host
– Dual stack IPv6, IPv4

Service functions
– VCT (Virtual Cable Testing)
– Optical transceiver diagnostics
– Green Ethernet

Security functions
– Protection against unauthorized DHCP servers (DHCP Snooping)
– DHCP option 82
– IP Source Guard
– Dynamic ARP Inspection
– 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 attack prevetion
– NetBIOS/NetBEUI filtering

[1] BGP support is provided under the license.

Features and capabilities (continued)

Access Control Lists (ACL)
– L2-L3-L4 ACL (Access Control List)
– 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

Quality of Service (QoS) and rate limiting
– QoS statistics
– Shaping, policing
– IEEE 802.1p Class of Service
– Storm Control for different traffic (broadcast, multicast, unknown unicast)
– Bandwidth management
– Strict priority/Weighted Round Robin (WRR) scheduling algorithms
– Three marking colors
– ACL-based traffic classification
– ACL-based CoS/DSCP mark assignment
– ACL-based VLAN mark assignment
– Setting the IEEE 802.1p priority for management VLAN
– DSCP to CoS, CoS to DSCP remarking
– 802.1p DSCP mark assignment for IGMP

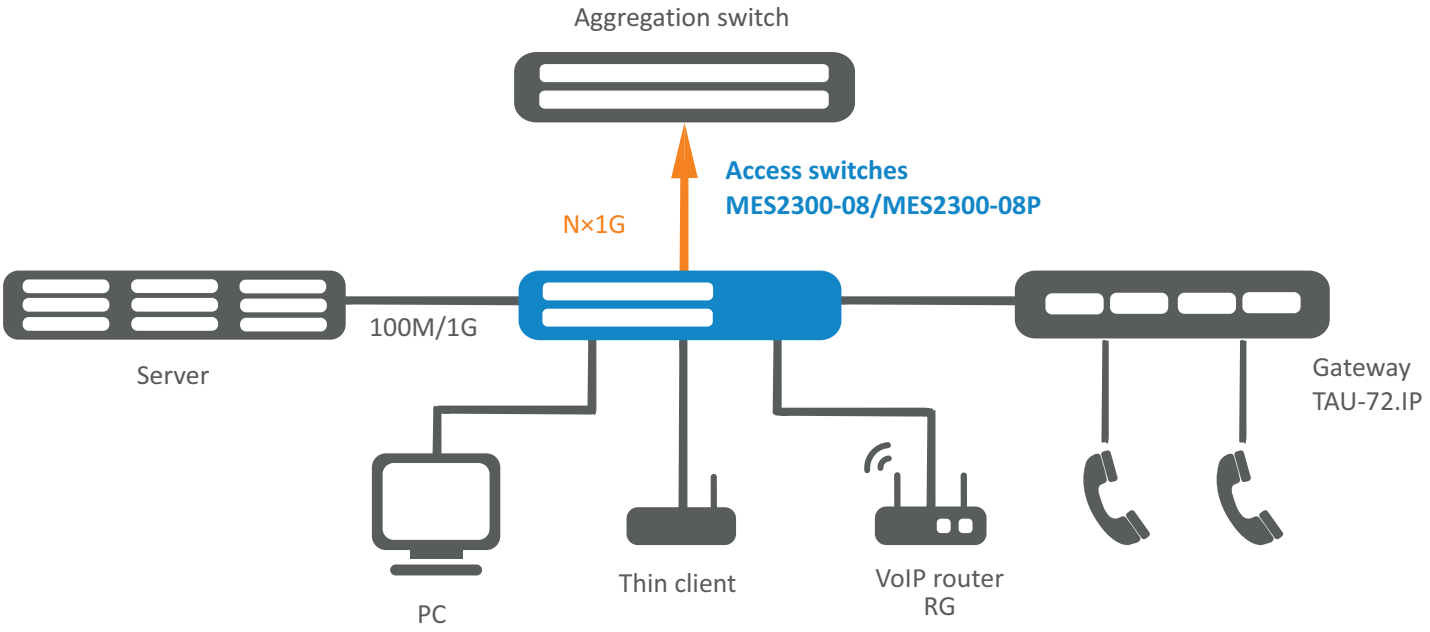
OAM
– 802.3ah Ethernet Link OAM
– 802.3ah Unidirectional Link Detection

Management functions
– Upload/download of configuration file and firmware via TFTP
– SNMP (Simple Network Management Protocol)
– CLI (Command Line Interface)
– Web interface
– Syslog
– SNTP (Simple Network Time Protocol)
– Traceroute
– LLDP (802.1ab) + LLDP MED
– TACACS+
– Switch access control — Privilege levels for users
– Management ACL
– Management interface blocking
– Local authentication
– IP addresses filtering for SNMP
– RADIUS, TACACS+ (Terminal Access Controller Access Control System) clients
– SSH, Telnet server
– SSH, Telnet client
– SSL
– Macrocommands support
– CLI commands logging
– System log
– DHCP autoprovision
– DHCP Relay (Option 82)
– DHCP Option 12
– DHCP server
– Debugging commands
– Rate limit of traffic to CPU
– Password encryption
– Password recovery
– Ping (IPv4/IPv6)

Monitoring functions
– Interface statistics
– RMON/SMON
– IP SLA
– CPU utilization monitoring per task and traffic type
– RAM (Random Access Memory)
– 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 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 3289 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 to support Multi-Part messages
– RFC 793 TCP
– RFC 2474, 3260 Definition of the Differentiated Services Field (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
– RFC 854 Telnet
– IEC 61850

Use case



Physical parameters

	MES2300-08	MES2300-08P
Physical parameters and environmental features		
Power	100–240 V AC, 50–60 Hz	200–240 V AC, 50–60 Hz
Input current	0.2–0.1 A	267 W (with PoE load 240 W) 200–240 V, 1.55–1.0 A 19 W (without PoE load) 200–240 V, 0.2–0.15 A
Maximum power consumption	13 W	267 W
PoE budget	—	240 W
Heat dissipation	13 W	27 W
Dying Gasp hardware support	yes	
Operating temperature	from -20 to +50 °C	
Storage temperature	from -50 to +70 °C	
Operating humidity	no more than 80 %	
Cooling	passive	
Form factor	19", 1U	
Dimensions (W × H × D)	310 × 44 × 159 mm	430 × 44 × 159 mm
Weight	1.61 kg	2.6 kg

Ordering information

Name	Description
MES2300-08	Ethernet switch MES2300-08, 10×10/100/1000BASE-T, 2×1000BASE-X, L3, 100–240 V AC
MES2300-08P	Ethernet switch MES2300-08P, 8×10/100/1000BASE-T (PoE/PoE+), 2×1000BASE-X, 2×10/100/1000BASE-T, L3, 200–240 V AC
Related software	
ECCM-MES2300-08	ECCM-MES2300-08 option of Eltex ECCM management system for ELTEX network elements management and monitoring: 1 network element MES2300-08
ECCM-MES2300-08P	ECCM-MES2300-08P option of Eltex ECCM management system for ELTEX network elements management and monitoring: 1 network element MES2300-08P

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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.