PRODUCT DATASHEET · ELECTRA NETWORK SWITCHES

ELECTRA-M12-10GB-FIBER

12-port 10G SFP+ managed Layer 3 fibre aggregation switch



12	10G	240G	L3	1U	5 YR
SFP+ PORTS	MAX PORT SPEED	SWITCHING CAPACITY	MANAGED	19″ RACK	WARRANTY

Product overview

The **Ernitec ELECTRA-M12-10GB-FIBER** is a 12-port 10G SFP+ managed switch built for the core and aggregation layer of surveillance and enterprise networks. It gathers traffic from PoE access switches, recording servers and storage into one high-capacity fibre backbone, with wire-speed 240 Gbps switching and full Layer 3 routing.

Every port is multi-rate, from 100 Mbps to 10 Gbps, so existing fibre equipment connects alongside new 10G links and the network can be upgraded at its own pace. ERPS ring protection, link aggregation and a dual firmware image keep video flowing around the clock.

Key features

- **Multi-rate SFP+ ports** run 100 Mbps, 1, 2.5 and 10 Gbps, so legacy and new fibre links share one switch.
- **Wire-speed switching** with 240 Gbps capacity and 178.56 Mpps forwarding on all ports.
- **Layer 3 routing** with IPv4/IPv6 static routes, RIP v1/v2 and OSPFv2.
- **Ring redundancy** via ERPS plus STP/RSTP/MSTP for self-healing fibre topologies.
- **Link aggregation** with LACP, up to 8 groups for resilient high-bandwidth uplinks.
- **Video-ready multicast and QoS** with IGMP snooping, MVR, surveillance VLAN and 8 queues per port.

Security & management

- **Access control** with 802.1X, RADIUS and TACACS+ authentication.
- **Network protection** through DHCP snooping, IP Source Guard, ARP inspection and DoS defence.
- **MAC, IPv4 and IPv6 ACLs** to control traffic between cameras, servers and clients.
- **Flexible management** by web (HTTPS), CLI over console, SSHv2 or Telnet.
- **Monitoring** with SNMP v1/v2c/v3, RMON, LLDP and remote syslog.
- **Dual firmware image** for safe upgrades with instant rollback.

Typical applications

Surveillance network core · Aggregation of PoE access switches · Recording server and storage backbones · Campus and multi-building fibre networks · Critical infrastructure.

Technical specification

Switch	ELECTRA-M12-10GB-FIBER
Interfaces	12 × multi-rate SFP+ (100 Mbps/1/2.5/10 Gbps) 1 × RJ45 console port
Switching capacity	240 Gbps
Forwarding rate	178.56 Mpps
Packet buffer	16 Mbit
MAC address table	32K
Jumbo frame	10K
VLAN	4K active (VLAN ID 1–4094)
Transmission method	Store and forward
Standards	IEEE 802.3u/ab/z/ae/x/az/ad, 802.1D/w/s/Q/p/X/AB

Layer 3 & Layer 2	
Routing	IPv4/IPv6 static, RIP v1/v2, OSPFv2
VLAN	802.1Q, Q-in-Q, voice, surveillance, MAC and protocol VLAN
Redundancy	STP/RSTP/MSTP, ERPS
Link aggregation	LACP, up to 8 groups
Multicast	IGMP v1/v2/v3 snooping, MLD, MVR
QoS	8 queues per port, SP/WRR

Security & management	
Authentication	802.1X, RADIUS, TACACS+
Protection	DHCP snooping, IPSG, DAI, DoS
ACL	MAC, IPv4, IPv6
Management	Web (HTTP/HTTPS), console, Telnet, SSHv2
Monitoring	SNMP v1/v2c/v3, RMON, LLDP, syslog
Firmware	Dual image with rollback

Technical specification (continued)

Power & environment	
Power supply	AC 100–240 V, 50/60 Hz DC 12 V, 8 A
Power consumption	29.6 W
Operating temperature	0 to 40 °C
Storage temperature	−40 to 70 °C
Operating humidity	10–90 %, non-condensing
ESD protection	Air 8 kV, contact 6 kV

Mechanical & general	
Dimensions (W × D × H)	440 × 205 × 44 mm
Weight	2.5 kg
Installation	Desktop or 19″ rack (1U)
Cooling	1 fan
Included accessories	Power cord, rack-mount kit, manual

Ordering information

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ELECTRA-M12-10GB-FIBER	12-port 10G SFP+ managed L3 switch
Warranty	5 years

Compatible SFP modules	
ELECTRA-S-SFP-10G	10G single-mode, 20 km, LC
ELECTRA-S-SFP-L	1G single-mode, 10 km, LC
ELECTRA-S-SFP-S	1G multimode, 550 m, LC

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