





# Edge Switch und

Managed Gigabit Switches with SFP

Models: ES-24-Lite, ES-48-Lite

Non-Blocking Throughput Switching Performance

Gigabit Ethernet RJ45 Ports

SFP+/SFP Fiber Connectivity Options





#### Advanced Switching Technology for the Masses

Build and expand your network with Ubiquiti Networks® EdgeSwitch® Lite, part of the EdgeMAX® line of products. The EdgeSwitch Lite is a fully managed, Gigabit switch, delivering robust performance and intelligent switching for growing networks.

The EdgeSwitch Lite offers an extensive suite of advanced Layer 2 switching features and protocols, and also provides Layer 3 routing capability.

#### **Switching Performance**

The EdgeSwitch Lite offers the forwarding capacity to simultaneously process traffic on all ports at line rate without any packet loss.

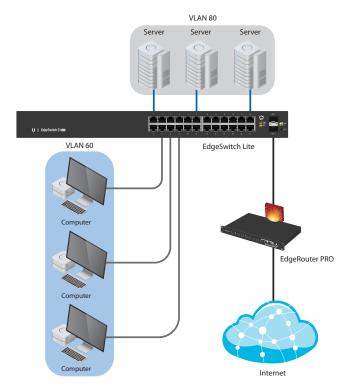
For its total, non-blocking throughput, the 24-port models support up to 26 Gbps, while the 48-port models support up to 70 Gbps.

#### **Fiber Connectivity**

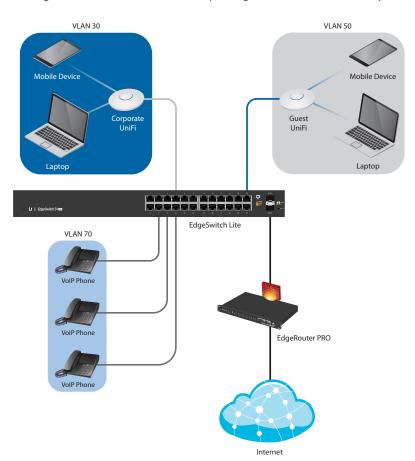
The EdgeSwitch Lite provides fiber connectivity options for your growing networks. The 24-port models include two SFP ports, providing up to 1 Gbps uplinks.

For high-capacity uplinks, the 48-port models include two SFP and two SFP+ ports, providing up to 10 Gbps uplinks.

#### **Deployment Examples**



VLANs for Servers and Computers
The EdgeSwitch Lite connects to the Ubiquiti EdgeRouter™ PRO via an SFP uplink.



VLANs for Corporate Wireless, Guest Wireless, and VoIP For wireless access, two Ubiquiti UniFi®Access Points connect to the EdgeSwitch Lite.

### Comprehensive User Interface

Designed for convenient management, the EdgeSwitch Lite Configuration Interface allows administrators to configure and monitor switch features in a graphical user interface.

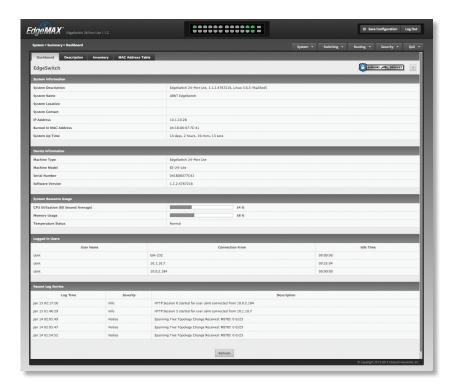
For advanced users, an industry-standard command-line interface (CLI) is available through the serial console port, telnet, and SSH.

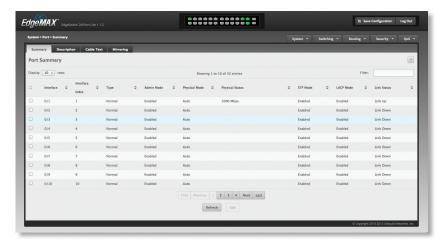


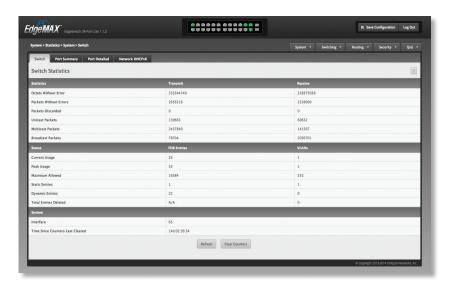
#### **Powerful Functionality**

The EdgeSwitch Lite uses a sophisticated operating system that provides basic switching features, and a variety of advanced features including:

- MSTP/RSTP/STP
- · VLAN, Private VLAN, Voice VLAN
- · Link Aggregation
- DHCP Snooping, IGMP Snooping
- TACACS+, RADIUS, 802.1X, MAC Filtering, ACL
- · DiffServ, CoS
- · Static Routing







### **Models**

#### **EdgeSwitch 24 Lite**

Model: ES-24-Lite

- (24) Gigabit RJ45 Ports
- (2) SFP Ports
- (1) Serial Console Port
- Non-Blocking Throughput: 26 Gbps
- Switching Capacity: 52 Gbps
- Forwarding Rate: 38.69 Mpps
- Maximum Power Consumption: 25W
- · Rack- or Wall-Mountable
- DC Input Option (Redundant or Stand-Alone)



Front Panel



Back Panel

### **EdgeSwitch 48 Lite**

Model: ES-48-Lite

- (48) Gigabit RJ45 Ports
- (2) SFP+ Ports
- (2) SFP Ports
- (1) Serial Console Port
- Non-Blocking Throughput: 70 Gbps
- Switching Capacity: 140 Gbps
- Forwarding Rate: 104.16 Mpps
- Maximum Power Consumption: 56W
- Rack- or Wall-Mountable
- DC Input Option (Redundant or Stand-Alone)



Front Panel



Back Panel

# Edge Switch 24 **Exercise** Edge Switch 24 **Ex**

### **Hardware Specifications**

ES-24-Lite		
Dimensions	443 x 43 x 221 mm (17.44 x 1.69 x 8.70")	
Weight Rack-Mount Brackets Included Rack-Mount Brackets Excluded	2.6 kg (5.7 lb) 2.51 kg (5.53 lb)	
Total Non-Blocking Throughput	26 Gbps	
Switching Capacity	52 Gbps	
Forwarding Rate	38.69 Mpps	
Max. AC Power Consumption	25W	
Power Method AC DC	100-240VAC/50-60 Hz, Universal Input DC 25W, 25 to 16V, with 2.5 mm DC Power Inline Connector	
Power Supply	AC/DC, Internal, 25W DC	
LEDs Per Port Serial Console Port RJ45 Data Ports SFP Data Ports	N/A Speed/Link/Activity Speed/Link/Activity	
Networking Interfaces	(24) 10/100/1000 Mbps RJ45 Ethernet Ports (2) 1 Gbps SFP Ethernet Ports	
Management Interface	(1) RJ45 Serial Port, Ethernet In/Out Band	
Certifications	CE, FCC, IC	
Rackmount	Yes, 1U High	
ESD/EMP Protection	Air: ±24 kV, Contact: ±24 kV	
Operating Temperature	-5 to 40° C (23 to 104° F)	
Operating Humidity	5 to 95% Noncondensing	
Shock and Vibration	ETSI300-019-1.4 Standard	

# Edge Switch 48 III

# **Hardware Specifications**

ES-48-Lite	
Dimensions	443 x 43 x 286 mm (17.44 x 1.69 x 11.26")
Weight Rack-Mount Brackets Included Rack-Mount Brackets Excluded	3.65 kg (8.05 lb) 3.56 kg (7.85 lb)
Total Non-Blocking Throughput	70 Gbps
Switching Capacity	140 Gbps
Forwarding Rate	104.16 Mpps
Max. AC Power Consumption	56W
Power Method AC DC	100-240VAC/50-60 Hz, Universal Input DC 56W, 25 to 16V, with 2.5 mm DC Power Inline Connector
Power Supply	AC/DC, Internal, 56W DC
LEDs Per Port Serial Console Port RJ45 Data Ports SFP+/SFP Data Ports	N/A Speed/Link/Activity Speed/Link/Activity
Networking Interfaces	(48) 10/100/1000 Mbps RJ45 Ethernet Ports (2) 1/10 Gbps SFP+ Ethernet Ports (2) 1 Gbps SFP Ethernet Ports
Management Interface	(1) RJ45 Serial Port, Ethernet In/Out Band
Certifications	CE, FCC, IC
Rackmount	Yes, 1U High
ESD/EMP Protection	Air: ±24 kV, Contact: ±24 kV
Operating Temperature	-5 to 40° C (23 to 104° F)
Operating Humidity	5 to 95% Noncondensing
Shock and Vibration	ETSI300-019-1.4 Standard



## **Software Specifications**

Software Information		
Core Switching Features	<ul> <li>ANSI/TIA-1057: LLDP-Media Endpoint Discovery (MED)</li> <li>IEEE 802.1AB: Link Layer Discovery Protocol (LLDP)</li> <li>IEEE 802.1D: Spanning Tree Compatibility</li> <li>IEEE 802.1S: Multiple Spanning Tree Compatibility</li> <li>IEEE 802.1W: Rapid Spanning Tree Compatibility</li> <li>IEEE 802.1Q: Virtual LANs with Port-Based VLANs</li> <li>IEEE 802.1p: Ethernet Priority with User Provisioning and Mapping</li> <li>IEEE 802.1X: Port-Based Authentication with Guest VLAN Support</li> <li>IEEE 802.3: 10BASE-T</li> <li>IEEE 802.3u: 100BASE-T</li> <li>IEEE 802.3ab: 1000BASE-T</li> <li>IEEE 802.1ak: Virtual Bridged Local Area Networks - Amendment 07: Multiple Registration Protocol</li> <li>IEEE 802.3ac: VLAN Tagging</li> <li>IEEE 802.3ad: Link Aggregation</li> <li>IEEE 802.3x: Flow Control</li> <li>IEEE 802.1D-2004: Generic Attribute Registration Protocol: Clause 12 (GARP)</li> <li>IEEE 802.1D-2004: Dynamic L2 multicast registration: Clause 10 (GMRP)</li> <li>IEEE 802.1Q-2003: Dynamic VLAN registration: Clause 11.2 (GVRP)</li> <li>RFC 4541: Considerations for Internet Group Management Protocol (IGMP) Snooping Switches</li> </ul>	
Advanced Layer 2 Features	<ul> <li>Broadcast Storm Recovery</li> <li>Broadcast/Multicast/Unknown Unicast Storm Recovery</li> <li>DHCP Snooping</li> <li>IGMP Snooping Querier</li> <li>Independent VLAN Learning (IVL) Support</li> <li>Jumbo Ethernet Frame Support</li> <li>Port MAC Locking</li> <li>Port Mirroring</li> <li>Protected Ports</li> <li>Static MAC Filtering</li> <li>TACACS+</li> <li>Voice VLANs</li> <li>Unauthenticated VLAN</li> </ul>	

• Internal 802.1X Authentication Server

Software Information		
Platform Specifications	<ul> <li>DHCP Server</li> <li>Maximum Number of Pools: 128</li> <li>Maximum Number of Leases (Total): 2048</li> <li>Routing</li> <li>Number of Routes: 16</li> <li>Number of Routing Interfaces: 15</li> <li>VLANs: 4093</li> <li>MAC Addresses: 16,384</li> <li>MSTP Instances: 4</li> <li>LAGs: 6</li> <li>ACLs: 100 with 10 Rules per Port</li> <li>Traffic Classes (Queues): 8</li> </ul>	
System Facilities	<ul> <li>Event and Error Logging Facility</li> <li>Run-Time and Configuration Download Capability</li> <li>PING Utility</li> <li>FTP/TFTP Transfers via IPv4/IPv6</li> <li>Malicious Code Detection</li> <li>BootP and DHCP</li> <li>RFC 2021: Remote Network Monitoring Management Information Base Version 2</li> <li>RFC 2030: Simple Network Time Protocol (SNTP)</li> <li>RFC 2819: Remote Network Monitoring Management Information Base</li> <li>RFC 2865: RADIUS Client</li> <li>RFC 2866: RADIUS Accounting</li> <li>RFC 2868: RADIUS Attributes for Tunnel Protocol Support</li> <li>RFC 2869: RADIUS Extensions</li> <li>RFC 3579: RADIUS Support for EAP</li> <li>RFC 3580: IEEE 802.1X RADIUS Usage Guidelines</li> <li>RFC 3164: BSD Syslog Protocol</li> </ul>	
Management	<ul> <li>Web UI</li> <li>Industry-Standard CLI</li> <li>IPv6 Management</li> <li>Password Management</li> <li>Autoinstall Support for Firmware Images and Configuration Files</li> <li>SNMP v1, v2, and v3</li> <li>SSH 1.5 and 2.0</li> <li>SSL 3.0 and TLS 1.0</li> <li>Secure Copy (SCP)</li> <li>Telnet (Multi-Session Support)</li> </ul>	
Layer 3 Routing	Static Routing	

#### Software Information

#### QoS

- · Access Control Lists (ACLs), Permit/Deny Actions for Inbound IP and Layer 2 Traffic Classification Based on:
  - Time-Based ACL
  - Source/Destination IP Address
  - TCP/UDP Source/Destination Port
  - IP Protocol Type
  - Type of Service (ToS) or Differentiated Services (DSCP) Field
  - Source/Destination MAC Address
  - EtherType
  - IEEE 802.1p User Priority
  - VLAN ID
  - RFC 1858: Security Considerations for IP Fragment Filtering
- Optional ACL Rule Attributes
  - · Assign Flow to a Specific Class of Service (CoS) Queue
  - · Redirect Matching Traffic Flows
- Differentiated Services (DiffServ)
  - · Classify Traffic Based on Same Criteria as ACLs
  - Mark the IP DSCP or Precedence Header Fields, Optional
  - Police the Flow to a Specific Rate with Two-Color Aware Support
  - RFC 2474: Definition of the Differentiated Services Field (DS field) in the IPv4 and IPv6 Headers
  - RFC 2475: An Architecture for Differentiated Services
  - RFC 2597: Assured Forwarding Per-Hop Behavior (PHB) Group
  - RFC 3246: An Expedited Forwarding PHB
  - RFC 3260: New Terminology and Clarifications for DiffServ
- · Class of Service (CoS) Queue Mapping Configuration
  - · AutoVoIP: Automatic CoS Settings for VoIP
  - IP DSCP-to-Queue Mapping
  - Configurable Interface Trust Mode (IEEE 802.1p, DSCP, or Untrusted)
  - Interface Egress Shaping Rate
  - · Strict Priority versus Weighted Scheduling per Queue



Specifications are subject to change. Ubiquiti products are sold with a limited warranty described at: www.ui.com/support/warranty
The limited warranty requires the use of arbitration to resolve disputes on an individual basis, and, where applicable, specify arbitration instead of jury
trials or class actions.



