EdgeRouter™

DATASHEET



Advanced Network Routers

Sophisticated Routing Features

Advanced Security, Monitoring, and Management

High-Performance Gigabit Ports

Overview

Ubiquiti introduces five new routers for the EdgeMAX® platform:

- EdgeRouter™ 12P
- EdgeRouter 12
- EdgeRouter 10X
- EdgeRouter 6P
- EdgeRouter 4

They join the array of cost-effective Gigabit routers:

- 8-Port EdgeRouter Pro
- 8-Port EdgeRouter
- 5-Port EdgeRouter PoE
- 3-Port EdgeRouter Lite

High Performance

The EdgeRouters offers superior routing combined with top price/performance value for your routing applications.

The EdgeRouter 4, 6P, 12, and 12P are each capable of routing up to 3.4 million packets per second.

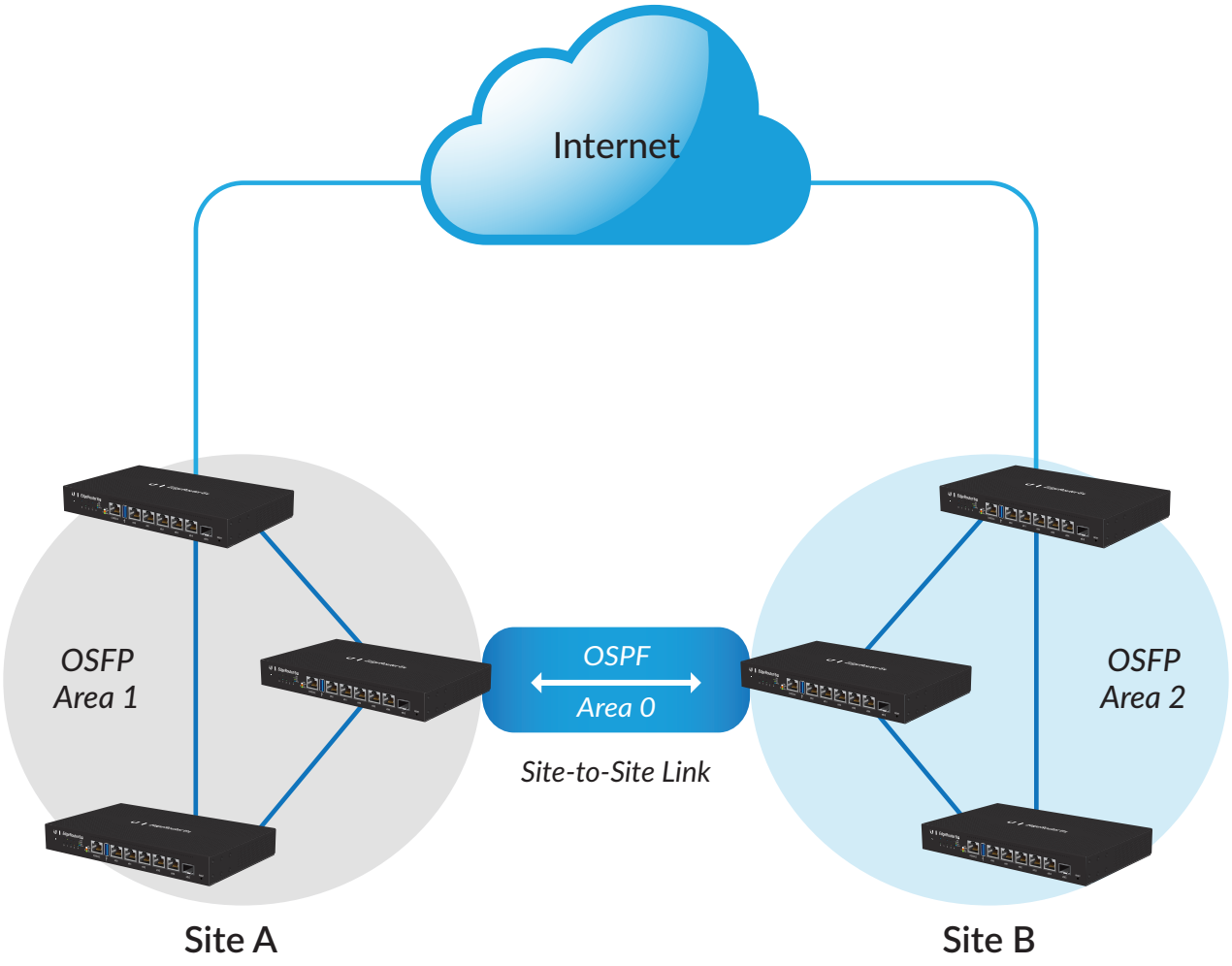
The 8-Port EdgeRouter and EdgeRouter Pro route up to 2 million+ packets per second, while the EdgeRouter Lite and EdgeRouter PoE route up to 1 million packets per second.

PoE Flexibility

The EdgeRouter 6P, PoE, and 12P include configurable PoE ports to power airMAX® products, and the EdgeRouter 12 has a PoE input port and a PoE passthrough port.

Fiber Connectivity

The EdgeRouter 4 and EdgeRouter 6P provide an SFP port. The EdgeRouter 12 and 12P feature dual SFP ports, while the 8-Port EdgeRouter offers two combination RJ45/SFP ports.



Typical Service Provider Deployment

Manage Your Network

DHCP Server Set up multiple DHCP servers to assign IP ranges in different subnets on the different interfaces.

Easily control dynamic and static IP addressing for your network devices.

Monitoring Tools Conveniently track network activity and devices from tools such as *Ping*, *Trace*, *Discover*, *Packet Capture*, and *Log Monitor*.

Secure Your Network

Firewall Policies Organize the rules you apply in the order you specify.

Firewall Groups Apply the policies to groups filtered by IP address, network address, or port number.

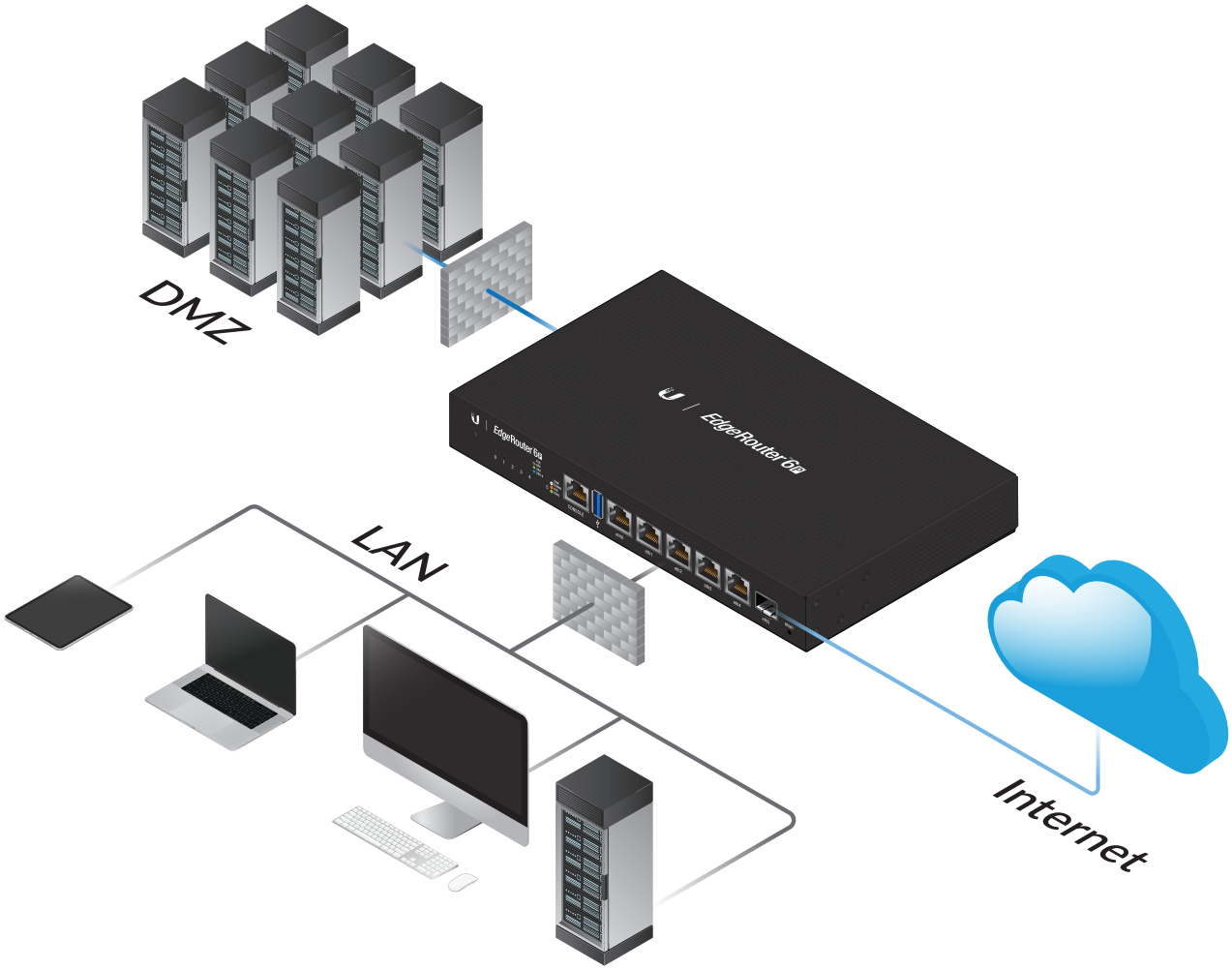
NAT Rules The EdgeRouter changes packet addressing based on your customized source and destination NAT rules.

Direct Traffic Flow

Interfaces Each port functions as an independent interface.

You can also configure Virtual Local Area Network (VLAN) interfaces for network segmentation.

Routing Configure static routes and dynamic routing protocols to effectively manage the routes used by the EdgeRouter.



Example of Enterprise Deployment with SFP Connection to the Internet

Software

Intuitive User Interface

The EdgeRouter provides a graphical user interface designed for convenient setup and control. Easily configure the routing, security, and management features required to efficiently run your network. For advanced network professionals, an integrated CLI is available for quick and direct access using familiar commands.

Even greater convenience and flexibility is provided by the UNMS™ app, which makes it possible to manage the EdgeRouter remotely from your mobile device.

Powerful Features

EdgeOS® is a sophisticated operating system loaded with robust features, including:

- VLAN interfaces for network segmentation
- Static routes and support of routing protocols: OSPF, RIP, BGP, and MPLS
- Firewall policies and NAT rules
- Application identification with Deep Packet Inspection (DPI)
- DHCP services
- Quality of Service (QoS)
- Network administration and monitoring tools
- Administrator and operator accounts
- Comprehensive IPv6 support

Configuration by CLI

The CLI provides quick and flexible configuration by command line and features the following:

- For power users, configuration and monitoring of all advanced features
- Direct access to standard Linux tools and shell commands
- CLI access through the following:
  - Serial console port
  - SSH
  - Telnet
  - Graphical user interface



The Dashboard *screen displays detailed statistics: IP information, MTU, transmit and receive speeds, and status for each interface.*



The Traffic Analysis *screen displays status information about the traffic traveling through the EdgeRouter, including the local hosts and types of network traffic.*



The Routing > Routes *screen displays static, connected, RIP, and/or OSFP routes. You can add static routes on this screen.*

Management Flexibility

In addition to the EdgeOS software, the EdgeRouter provides the following options for convenient management.

Centralized Control

The EdgeRouter is supported and managed by the Ubiquiti® Network Management System. UNMS™ is a comprehensive management controller featuring a graphic UI that is easy to navigate. You can use a single control plane to manage registered EdgeMAX devices across multiple networks and sites.

Mobile App

The UNMS app allows you to manage the EdgeRouter using your mobile device. The app can be downloaded from the App Store® (iOS) or Google Play™ (Android).

Once the UNMS app is installed on your mobile device, simply connect to a wireless network that has access to the EdgeRouter, discover the EdgeRouter, and log into its configuration interface.

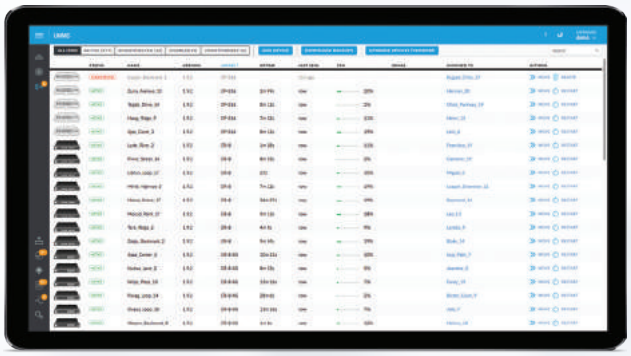
You can display and configure various settings, such as interface information, throughput per port, system settings, and more.

Optional Rack Mount

You can use the EdgeRouter Rack Mount Kit to mount the following models in a standard 1U high rack.

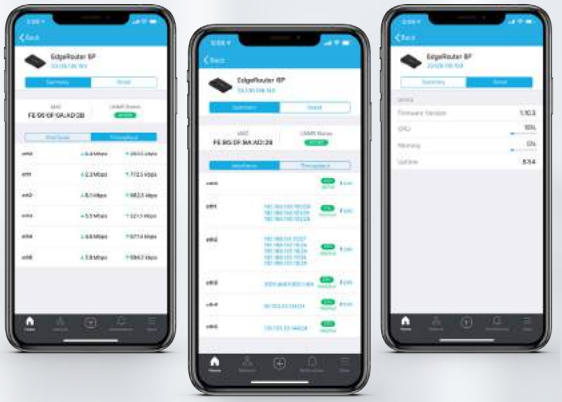
- EdgeRouter 12P
- EdgeRouter 12
- EdgeRouter 10X
- EdgeRouter 6P
- EdgeRouter 4

Ubiquiti Network Management System



Use UNMS to register and manage multiple EdgeMAX devices

UNMS Mobile App



UNMS app to manage EdgeRouter using a mobile device

Rack Mount Kit



Model: ER-RMKIT

EdgeRouter 12P

- (10) Gigabit RJ45 routing ports
- 24V PoE support on RJ45 ports
- Ports 0-7 can be configured for line-rate Layer 2 switching
- (2) Gigabit SFP ports
- 3.4 million packets per second for 64-byte packets
- 6.8 Gbps for packets 1518 bytes or larger in size
- Silent, fanless operation
- Compact, durable metal case



ER-12P

EdgeRouter 12

- (10) Gigabit RJ45 routing ports
- 24V PoE input on port 0
- 24V PoE passthrough option on port 9
- Ports 0-7 can be configured for line-rate Layer 2 switching
- (2) Gigabit SFP ports
- 3.4 million packets per second for 64-byte packets
- 6.8 Gbps for packets 1518 bytes or larger in size
- Silent, fanless operation
- Compact, durable metal case



ER-12

EdgeRouter 10X

- (10) Gigabit RJ45 routing ports
- 24V PoE input on port 0
- 24V PoE passthrough option on port 9
- Ports 0-9 can be configured for line-rate Layer 2 switching
- 260,000 packets per second for 64-byte packets
- 1 Gbps for packets 1518 bytes or larger in size
- Silent, fanless operation
- Compact, durable metal case



ER-10X

EdgeRouter PRO

- (6) Gigabit routing ports
- (2) Gigabit RJ45/SFP combination ports
- 2 million+ packets per second for 64-byte packets
- 8 Gbps for packets 512 bytes or larger in size
- Rackmountable

8-Port EdgeRouter

- (8) Gigabit routing ports
- 2 million packets per second for 64-byte packets
- 8 Gbps for packets 512 bytes or larger in size
- Rackmountable



ER-8 (Top), ERPro-8 (Bottom)

EdgeRouter 6P

- (5) Gigabit RJ45 routing ports
- 24V PoE support on RJ45 ports
- (1) Gigabit SFP port
- 3.4 million packets per second for 64-byte packets
- 6 Gbps for packets 256 bytes or larger in size
- Silent, fanless operation
- Compact, durable metal case



ER-6P



ERPoe-5

EdgeRouter PoE

- (5) Gigabit routing ports
- (5) PoE configurable ports
- Supports 24V or 48V PoE
- (3) ports configurable for switching
- 1 million packets per second for 64-byte packets

EdgeRouter 4

- (3) Gigabit RJ45 routing ports
- (1) Gigabit SFP port
- 3.4 million packets per second for 64-byte packets
- 4 Gbps for packets 128 bytes or larger in size
- Silent, fanless operation
- Compact, durable metal case



ER-4



ERLite-3

EdgeRouter Lite

- (3) Gigabit routing ports
- 1 million packets per second for 64-byte packets
- Silent, fanless operation
- Compact, durable metal case

EdgeRouter 12P (Model: ER-12P)	
Dimensions	268.1 x 136.5 x 31.1 mm (10.55 x 5.37 x 1.22")
Weight	700 g (1.54 lb)
Max. Power Consumption	20W (Excludes PoE Output)
Power Method	External AC/DC Power Adapter, 12W (24V, 2.5A) (Included)
Power Supply	External AC/DC Adapter
Supported Voltage Range	9 - 30VDC
Button	Reset
LEDs Data Ports SFP Data Port	 Speed/Link/Activity, PoE Link/Activity
Networking Interfaces Management Networking	 (1) RJ45 Serial Port (10) Ethernet Ports (Default Port 0) (10) 10/100/1000 RJ45 Ports with PoE (2) 1 Gbps SFP Ports
Layer 3 Forwarding Performance Packet Size: 64 Bytes Packet Size: 1518 Bytes or Larger	 3,400,000 pps 6.8 Gbps (Line Rate)
Processor	4-Core 1 GHz, MIPS64
System Memory	1 GB DDR3 RAM
On-Board Flash Storage	4 GB eMMC, 8 MB SPI NOR
Mounting	Wall, Rack*
Operating Temperature	-10 to 40° C (14 to 104° F)
Operating Humidity	10 - 90% Noncondensing
Certifications	CE, FCC, IC

** With optional Rack Mount Kit, model ER-RMKIT*

PoE with 24VDC Power Adapter	
PoE Interfaces	(10) 24V Passive PoE Ports, 2-pair (4, 5+; 7, 8-)
Passive PoE Max. Wattage Per Port	17W (24V)
Voltage Range Passive PoE	24V: 20 to 30V



EdgeRouter 12 (Model: ER-12)	
Dimensions	268.1 x 136.5 x 31.1 mm (10.55 x 5.37 x 1.22")
Weight	700 g (1.54 lb)
Max. Power Consumption	20W (Excludes PoE Output)
Power Method	External AC/DC Power Adapter, 24W (24V, 1A) (Included) 24V Passive PoE
Power Supply	External AC/DC Adapter
Supported Voltage Range DC 24V Passive PoE	 9 - 30VDC 20 - 30V
Button	Reset
LEDs Data Ports SFP Data Port	 Speed/Link/Activity, PoE (Port 9 Only) Link/Activity
Networking Interfaces Management Networking	 (1) RJ45 Serial Port (10) Ethernet Ports (Default Port 0) (10) 10/100/1000 RJ45 Ports (2) 1 Gbps SFP Ports
Layer 3 Forwarding Performance Packet Size: 64 Bytes Packet Size: 1518 Bytes or Larger	 3,400,000 pps 6.8 Gbps (Line Rate)
Processor	4-Core 1 GHz, MIPS64
System Memory	1 GB DDR3 RAM
On-Board Flash Storage	4 GB eMMC, 8 MB SPI NOR
Mounting	Wall, Rack*
Operating Temperature	-10 to 50° C (14 to 122° F)
Operating Humidity	10 - 90% Noncondensing
Certifications	CE, FCC, IC

** With optional Rack Mount Kit, model ER-RMKIT*

PoE	
PoE Interfaces PoE In PoE Out	 (1) 24V Passive PoE Port, 2-pair (4, 5+; 7, 8-) (1) 24V Passive PoE Port, 2-pair (4, 5+; 7, 8-)
Passive PoE Max. Wattage Per Port	20W (24V, 0.83A)
Passive PoE Output	DC/PoE Passthrough



EdgeRouter 10X (Model: ER-10X)	
Dimensions	268.1 x 136.5 x 31.1 mm (10.55 x 5.37 x 1.22")
Weight	600 g (1.32 lb)
Max. Power Consumption	8W (Excludes PoE Output)
Power Method	External AC/DC Power Adapter, 24W (24V, 1A) (Included) 24V Passive PoE
Power Supply	External AC/DC Adapter
Supported Voltage Range DC 24V Passive PoE	 9 - 30VDC 20 - 30V
Button	Reset
LEDs Data Ports	 Link/Activity, PoE (Port 9 Only)
Interfaces Management Networking	 (1) RJ45 Serial Port (10) Ethernet Ports (Default Port 0) (10) 10/100/1000 RJ45 Ports
Layer 3 Forwarding Performance Packet Size: 64 Bytes Packet Size: 1518 Bytes or Larger	 260,000 pps 1 Gbps (Line Rate)
Processor	Dual-Core 880 MHz, MIPS1004Kc
System Memory	512 MB DDR3 RAM
On-Board Flash Storage	512 MB NAND
Mounting	Wall, Rack*
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 - 90% Noncondensing
Certifications	CE, FCC, IC

** With optional Rack Mount Kit, model ER-RMKIT*

PoE	
PoE Interfaces PoE In PoE Out	 (1) 24V Passive PoE Port, 2-pair (4, 5+; 7, 8-) (1) 24V Passive PoE Port, 2-pair (4, 5+; 7, 8-)
Passive PoE Max. Wattage Per Port	15W (24V, 0.63A)
Passive PoE Output	DC/PoE Passthrough



EdgeRouter Pro (Model: ERPro-8)	
Dimensions	484 x 164 x 44 mm (19.06 x 6.46 x 1.73 in)
Weight	2.3 kg (5.07 lb)
Max. Power Consumption	40 W
Power Method	Universal AC Power Cord (C5)
Power Supply	Internal AC/DC Power Adapter, 60W (24V, 2.5A)
Supported Voltage Range	100 - 240VAC, 50/60 Hz
Button	Reset
LEDs Per Data Port	Speed/Link/Activity
Networking Interfaces Serial Console Port Data Ports	 (1) RJ45 Serial Port (6) 10/100/1000 RJ45 Ports (2) 10/100/1000 RJ45/SFP Combination Ports
Layer 3 Forwarding Performance Packet Size: 64 Bytes Packet Size: 512 Bytes or Larger	 2,400,000 pps 8 Gbps (Line Rate)
Processor	Dual-Core 1 GHz, MIPS64 with Hardware Acceleration for Packet Processing
System Memory	2 GB DDR3 RAM
On-Board Flash Storage	4 GB
Mounting	Rack
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 - 90% Noncondensing
Certifications	CE, FCC, IC



8-Port EdgeRouter (Model: ER-8)	
Dimensions	484 x 164 x 44 mm (19.06 x 6.46 x 1.73 in)
Weight	2.3 kg (5.07 lb)
Max. Power Consumption	35 W
Power Method	Universal AC Power Cord (C5)
Power Supply	Internal AC/DC Power Adapter, 60W (24V, 2.5A)
Supported Voltage Range	100 - 240VAC, 50/60 Hz
Button	Reset
LEDs Per Data Port	Speed/Link/Activity
Networking Interfaces Serial Console Port Data Ports	 (1) RJ45 Serial Port (8) 10/100/1000 Ethernet Ports
Layer 3 Forwarding Performance Packet Size: 64 Bytes Packet Size: 512 Bytes or Larger	 2,000,000 pps 8 Gbps (Line Rate)
Processor	Dual-Core 800 MHz, MIPS64 with Hardware Acceleration for Packet Processing
System Memory	2 GB DDR3 RAM
On-Board Flash Storage	4 GB
Mounting	Rack
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 - 90% Noncondensing
Certifications	CE, FCC, IC



EdgeRouter 6P (Model: ER-6P)	
Dimensions	229 x 136.5 x 31.1 mm (9.02 x 5.37 x 1.22")
Weight	730 g (1.61 lb)
Max. Power Consumption	16W (Excludes PoE Output)
Power Method	External AC/DC Power Adapter, 60W (24V, 2.5A) (Included)
Power Supply	External AC/DC Adapter
Supported Voltage Range	16 - 30VDC
Button	Reset
LEDs Data Ports SFP Data Port	 Speed/Link/Activity, PoE Link/Activity
Interfaces Management Networking	 (1) RJ45 Serial Port (6) Ethernet Ports (Default eth0) (5) 10/100/1000 RJ45 Ports with PoE (1) 1 Gbps SFP Port
Layer 3 Forwarding Performance Packet Size: 64 Bytes Packet Size: 512 Bytes or Larger	 3,400,000 pps 6 Gbps (Line Rate)
Processor	4-Core 1 GHz, MIPS64
System Memory	1 GB DDR3 RAM
On-Board Flash Storage	4 GB eMMC, 8 MB SPI NOR
Mounting	Wall, Rack*
Operating Temperature	-10 to 50° C (14 to 122° F)
Operating Humidity	10 - 90% Noncondensing
Certifications	CE, FCC, IC

** With optional Rack Mount Kit, model ER-RMKIT*

PoE with 24VDC Power Adapter	
PoE Interfaces	(5) 24V Passive PoE Ports, 2-pair (4, 5+; 7, 8-) and 4-pair
Passive PoE Max. Wattage Per Port	24W (24V, 1A, 4-pair) 12W (24V, 0.5A, 2-pair)
Voltage Range Passive PoE	24V





EdgeRouter PoE (Model: ERPoe-5)	
Dimensions	200 x 90 x 30 mm (7.87 x 3.54 x 1.18 in)
Weight	360 g (12.7 oz)
Max. Power Consumption	60W
Power Method	External AC/DC Power Adapter, 60W (48V, 1.25A) (Included)
Power Supply	External AC/DC Adapter
Supported Voltage Range	38 - 54VDC
Power Connector Size	DC Power Jack, 2.1 mm 2.1 mm ID, 5.5 mm OD
Button	Reset
LEDs Per Port Serial Console Port Data Ports	 Power PoE, Speed/Link/Activity
PoE Configurable Per Port Serial Console Port Data Ports	 N/A Off/24V/48V
Networking Interfaces Serial Console Port Data Ports	 (1) RJ45 Serial Port (2) 10/100/1000 Ethernet Router Ports (3) 10/100/1000 Ethernet Router/Switch Ports
Layer 3 Forwarding Performance Packet Size: 64 Bytes Packet Size: 512 Bytes or Larger	 1,000,000 pps 3 Gbps (Line Rate)
Processor	Dual-Core 500 MHz, MIPS64 with Hardware Acceleration for Packet Processing
System Memory	512 MB DDR2 RAM
On-Board Flash Storage	2 GB
Mounting	Wall
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 - 90% Noncondensing
Certifications	CE, FCC, IC

PoE with 48VDC Power Adapter	
PoE Out Voltage Range	22-24VDC / 45-48VDC
Max. PoE Wattage Per Data Port	12 W (24V), 24 W (48V)
Max. PoE Wattage Combined for All 5 Data Ports	50W
PoE Method	Passive





EdgeRouter 4 (Model: ER-4)	
Dimensions	229 x 136.5 x 31.1 mm (9.02 x 5.37 x 1.22")
Weight	795 g (1.75 lb)
Max. Power Consumption	13W
Power Method	Universal AC Power Cord (C13)
Power Supply	Internal AC/DC Power Adapter, 30W DC
Supported Voltage Range	100 - 240VAC, 50/60 Hz
Button	Reset
LEDs Data Ports SFP Data Port	 Speed/Link/Activity Link/Activity
Interfaces Management Networking	 (1) RJ45 Serial Port (4) Ethernet Ports (Default eth0) (3) 10/100/1000 RJ45 Ports (1) 1 Gbps SFP Port
Layer 3 Forwarding Performance Packet Size: 64 Bytes Packet Size: 512 Bytes or Larger	 3,400,000 pps 4 Gbps (Line Rate)
Processor	4-Core 1 GHz, MIPS64
System Memory	1 GB DDR3 RAM
On-Board Flash Storage	4 GB eMMC, 8 MB SPI NOR
Mounting	Wall, Rack*
Operating Temperature	-10 to 50° C (14 to 122° F)
Operating Humidity	10 - 90% Noncondensing
Certifications	CE, FCC, IC

** With optional Rack Mount Kit, model ER-RMKIT*





EdgeRouter Lite (Model: ERLite-3)	
Dimensions	200 x 90 x 30 mm (7.87 x 3.54 x 1.18 in)
Weight	345 g (12.17 oz)
Power Method	External AC/DC Power Adapter, 12W (12V, 1A) (Included)
Power Supply	External AC/DC Adapter
Supported Voltage Range	9 to 24VDC
Button	Reset
LEDs Per Port Serial Console Port Data Ports	 Power Speed/Link/Activity
Networking Interfaces Serial Console Port Data Ports	 (1) RJ45 Serial Port (3) 10/100/1000 Ethernet Ports
Layer 3 Forwarding Performance Packet Size: 64 Bytes Packet Size: 512 Bytes or Larger	 1,000,000 pps 3 Gbps (Line Rate)
Processor	Dual-Core 500 MHz, MIPS64 with Hardware Acceleration for Packet Processing
System Memory	512 MB DDR2 RAM
On-Board Flash Storage	2 GB
Mounting	Wall
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 - 90% Noncondensing
Certifications	CE, FCC, IC





EdgeOS Software	
Interface/Encapsulation	Ethernet 802.1q VLAN PPPoE GRE IP in IP Bridging Bonding (802.3ad)
Addressing	Static IPv4/IPv6 Addressing DHCP/DHCPv6
Routing	Static Routes OSPF/OSPFv3 RIP/RIPng BGP (with IPv6 Support) IGMP Proxy MPLS
Security	ACL-Based Firewall Zone-Based Firewall Application Identification with Deep Packet Inspection (DPI) NAT
VPN	IPSec Site-to-Site and Remote Access OpenVPN Site-to-Site and Remote Access PPTP Remote Access L2TP Remote Access PPTP Client
Services	DHCP/DHCPv6 Server DHCP/DHCPv6 Relay Dynamic DNS DNS Forwarding VRRP RADIUS Client Web Caching PPPoE Server
QoS	FIFO Stochastic Fairness Queueing Random Early Detection Token Bucket Filter Deficit Round Robin Hierarchical Token Bucket Ingress Policing
Management	Web UI Ubiquiti Network Management System (UNMS) CLI (GUI, Console, SSH, Telnet) SNMP NetFlow LLDP NTP UBNT Discovery Protocol Syslog



Specifications are subject to change. Ubiquiti products are sold with a limited warranty described at: 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.
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