

# AS4610 Series 1GbE Data Center and Enterprise Switch Bare-Metal Hardware

Design Contributed to Open Compute Project



## Product Overview

The Edgecore AS4610 series is a high-performance Gigabit Ethernet Layer 3 switch family featuring 30 or 54 ports; AS4610-30T and AS4610-54T with 24/48 10/100/1000BASE-T ports, 4 x 10G SFP+ uplink ports, and 2 x 20G QSFP+ stacking ports (Stacking capability subject to NOS implementations); AS4610-30P and AS4610-54P with 24/48 10/100/1000BASE-T ports, 4 x 10G SFP+ uplink ports, 2 x 20G QSFP+ stacking ports, plus the 24/48 10/100/1000BASE-T ports fully support IEEE 802.3at and IEEE 802.3af Power-over-Ethernet (PoE).


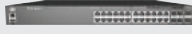
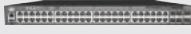

The AS4610-54T is ideal as a data center top-of-rack switch or IPMI (Intelligent Platform Management Interface) switch, it includes a fan-less design, redundant hot-swappable AC PSUs, and port-to-power airflow. The AS4610-30T, AS4610-30P, and AS4610-54P are ideal for campus networking, with the AS4610-30P and AS4610-54P able to provide up to 30 Watts of power per port to attached devices (eight ports support UPoE up to 60W per port), such as VoIP phones, wireless access points, surveillance cameras etc, fully utilizing existing Cat. 5 cable infrastructure.

## Key Features and Benefits

- Cost-effective, bare-metal infrastructure for data center racks.
- 1 GbE connections to server and storage nodes in rack, with 10 GbE uplinks to spine network.
- PoE models ideal for enterprise, hospitality, warehouse applications interconnecting security, camera, WiFi devices.
- 24/48 x 10/100/1000BASE-T RJ-45 ports.
- 4 x SFP+ uplink ports, supporting 10 GbE (DAC, 10GBASE-SR/LR/ER/LRM) or 1 GbE (1000BASE-T/SX/LX).
- Full line-rate L2 or L3 forwarding and switching.
- Energy efficiency: Maximum 99.1 W system power consumption excluding PoE power consumption.
- Hot-swappable, load-sharing, redundant AC PSUs.
- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings.
- Compatible with Cumulus<sup>®</sup> Linux<sup>®</sup> r2.5.4 and later version from Cumulus Networks<sup>®</sup>. (AS4610-54T and AS4610-54P only)
- All AS4610 models are compatible with PicOS<sup>™</sup> r2.6.2 and later version from Pica8 Inc.

Data Center Switch

## Features

Product Model		AS4610-30T	AS4610-30P	AS4610-54T	AS4610-54P
Product Image					
Port	RJ-45 10/100/1000 Ports	24	24	48	48
	10G SFP+ Uplink Ports	4	4	4	4
	20G QSFP+ Stacking Ports	2	2	2	2
	PoE Ports	X	24	X	48
	Micro USB Console Port	O	O	O	O
Performance	Switching Capacity	104 Gbps	104 Gbps	128 Gbps	128 Gbps
	Forwarding Capacity	156 Mpps	156 Mpps	191 Mpps	191 Mpps
	Memory	2 G	2 G	2 G	2 G
	SPI Flash	8 MB	8 MB	8 MB	8 MB
	NAND Flash	8 GB	8 GB	8 GB	8 GB
	MAC Address Table Size	96 K	96 K	96 K	96 K
	Jumbo Frames	12 KB	12 KB	12 KB	12 KB
PoE	IEEE 802.3af (15 W)	X	24	X	48
	IEEE 802.3at (30 W)	X	24	X	48
	UPoE (60 W)	X	8	X	8
	PoE Power Budget	X	960 W	X	1650 W
Mechanical	Rack Space	19"	19"	19"	19"
	Dimension (W x D x H) cm	44 x 35 x 4.5	44 x 35 x 4.5	44 x 35 x 4.5	44 x 35 x 4.5
	Weight	5.16 kg	6.02 kg	5.38 kg	6.36 kg
Power Supply	100-240 VAC, 50-60 Hz	O	O	O	O
	Max System Power Consumption (Watts)	76.1 W	81.72 W	92.2 W	99.1 W
Environmental	Operating Temperature	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C
	Operating Humidity (non-condensing)	5% to 95%	5% to 95%	5% to 95%	5% to 95%
	Environmental Regulation compliance: WEEE	O	O	O	O
	Environmental Regulation compliance: RoHS	O	O	O	O
Certification	FCC Class A	O	O	O	O
	CE	O	O	O	O
	Safety Compliance: CB	O	O	O	O
	Safety Compliance: UL	O	O	O	O
	CCC	X	X	X	O
	BSMI	O	O	O	O

## Features

### Ports

Switch Ports:  
 24/48 x RJ-45 100/1000BASE-T ports  
 4 x 10G SFP+ ports supporting 10G or 1G  
 2 x 20G QSFP+ Stacking Port (requires NOS to support hardware stacking feature)  
 Management Ports on front (port) side:  
 1 x Micro USB serial console  
 1 x RJ-45 100/1000BASE-T management port  
 1 x USB Type A storage port

### Key Components

Switch Silicon:  
 AS4610-30T/AS4610-30P: Broadcom BCM56342 Helix4  
 AS4610-54T/AS4610-54P: Broadcom BCM56340 Helix4  
 CPU: Dual-core ARM Cortex A9 1GHz  
 Memory: 2 GB DDR3 SDRAM ECC  
 Flash: 8 MB SPI Flash, 8 GB NAND Flash

### Performance

Wire Speed Forwarding: L2 and L3  
 Switching Capacity:  
 AS4610-30T/AS4610-30P: 104 Gbps  
 AS4610-54T/AS4610-54P: 128 Gbps  
 Forwarding Rate:  
 AS4610-30T/AS4610-30P: 156 Mpps  
 AS4610-54T/AS4610-54P: 191 Mpps  
 MAC Addresses: up to 96K  
 VLAN IDs: 4K  
 Jumbo Frames (9216 Bytes)  
 L3 Hosts: up to 96K  
 L3 Routes IPv4 12K, IPv6 6K  
 Packet Buffer Size: 4 MB shared buffer pool

### Supported Optics and Cables

GE RJ-45 Ports: Cat 5/5e/6 up to 100 m  
 SFP+ Ports:  
 10GBASE-CR DAC; 0.5 m to 7 m  
 10GBASE-SRL/SR; up to 100/300 m over OM3 MMF  
 10GBASE-LR; up to 10 km over SMF  
 1000BASE-SX, 1000BASE-LX, 100/1000BASE-T  
 QSFP Port on Optional Module:  
 40GBASE-CR4 DAC; 0.5 m to 7 m  
 40GBASE-SR4; up to 100 m over OM3 MMF, 150 m over OM4 MMF  
 40GBASE-SR4 to 4x10GBASE-SR; 100 m over OM3, 150 m OM4  
 40GBASE-LR4; up to 10 km over SMF

### Physical and Environmental

Dimensions (HxWxD): 4.5 x 44 x 35 cm (1.7 x 17.3 x 16.1") 1 RU  
 Weight  
 AS4610-30T: 5.16 kg (11.37 lb)  
 AS4610-30P: 6.02 kg (13.27 lb)  
 AS4610-54T: 5.38 kg (11.86 lb)  
 AS4610-54P: 6.36 kg (14.02 lb)  
 Fans:  
 AS4610-30T / AS4610-54T: Fan-less  
 AS4610-30P / AS4610-54P: 1 fixed fan  
 Operating Temperature: 0°C to 45°C  
 Storage Temperature: -40°C to 70°C  
 Operating Humidity: 5% to 95% non-condensing

### LEDs

GE RJ-45 SFP+ Port LEDs: Link Speed, Link Status, Activity  
 10G SFP+ Port LEDs: Link Speed, Link Status, Activity  
 Ethernet Management Port LED: Link Status, Activity  
 System LEDs: PRI, PSU1, PSU2, STK1, STK2, FAN, PoE

### Software

Switch is loaded with Open Network Install Environment (ONIE) software installer  
 Compatible with the following NOS options:  
 AS4610 series:  
 PicOS r2.6.2 and later version from Pica8 Inc  
 AS4610-54T and AS4610-54P:  
 Cumulus Linux r2.5.4 and later version from Cumulus Networks

### Power

PSUs: 2 redundant, load-sharing, hot-swappable AC  
 Input Voltage: 90 to 264 VAC at 50-60 Hz. -48 to -72 VDC.  
 Input Current: Max 13 A@100/120 VAC, 3 A@200/240 VAC, 10 A@-72 VDC, 12 VDC power input option  
 12 VDC power input option  
 Typical Power consumption (under line-rate, 48 x 1 GbE Cat 6, 4 x 10GBASE-SR test condition):  
 AS4610-30T/AS4610-30P: 100 W  
 AS4610-54T/AS4610-54P: 117 W

### Regulatory

EMI:  
 CE Mark (EN55022 Class A)  
 FCC Part 15 Class A  
 VCCI Class A  
 CCC GB9254-2008 (AS4610-54P only)  
 BSMI (CNS13438)  
 Environmental:  
 Temperature: IEC 68-2-14  
 Shock: IEC 68-2-29  
 Vibration: IEC 68-2-36, IEC 68-2-6  
 Drop: ISTA 2A  
 RoHS-6 Compliant  
 Safety:  
 UL (CSA 22.2 No 60950-1 & UL 60950-1)  
 CB (IEC/EN60950-1)  
 CCC GB4943-2011 (AS4610-54P only)  
 BSMI (CNS14336)  
 Country of Origin: Taiwan (TAA Compliant)

### Warranty

Please check [www.edge-core.com](http://www.edge-core.com) for the warranty terms in your country. The warranty provides return-to-factory hardware replacement for a three year period in North America.

### For More Information

To find out more about Edgecore Networks Corporation products and solutions, visit [www.edge-core.com](http://www.edge-core.com).

### About Edgecore Networks Corporation

Edgecore Networks Corporation is in the business of providing innovative network solutions. In the service provider network, in the data center or in the cloud, Edgecore Networks Corporation delivers the software and systems that transform the way the world connects. Edgecore Networks Corporation serves customers and partners worldwide. Additional information can be found at [www.edge-core.com](http://www.edge-core.com).

Edgecore Networks Corporation is a subsidiary of Accton Technology Corporation, the leading network ODM company. The Edgecore Data Center switches are developed and manufactured by Accton.

To purchase Edgecore Networks solutions, please contact your Edgecore Networks Corporation representatives at +886 3 563 8888 (HQ) or +1 (877) 828-CORE (877-828-2673) or authorized resellers.

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## Ordering Information

<b>Base Model: AS4610 Series with ONIE software Installer</b>			
<b>Model Number</b>	<b>PSU</b>	<b>Airflow</b>	<b>Region (power cord)</b>
4610-54T-O-AC-F-US	dual AC PSUs	port-to-power airflow	N. America
4610-54T-O-AC-F-EU	dual AC PSUs	port-to-power airflow	Europe
4610-54T-O-AC-F-UK	dual AC PSUs	port-to-power airflow	UK
4610-54T-O-AC-F-JP	dual AC PSUs	port-to-power airflow	Japan
4610-54P-O-AC-F-US	dual AC PSUs	port-to-power airflow	N. America
4610-54P-O-AC-F-EU	dual AC PSUs	port-to-power airflow	Europe
4610-54P-O-AC-F-UK	dual AC PSUs	port-to-power airflow	UK
4610-54P-O-AC-F-JP	dual AC PSUs	port-to-power airflow	Japan
4610-30T-O-AC-F-US	dual AC PSUs	port-to-power airflow	N. America
4610-30T-O-AC-F-EU	dual AC PSUs	port-to-power airflow	Europe
4610-30T-O-AC-F-UK	dual AC PSUs	port-to-power airflow	UK
4610-30T-O-AC-F-JP	dual AC PSUs	port-to-power airflow	Japan
4610-30P-O-AC-F-US	dual AC PSUs	port-to-power airflow	N. America
4610-30P-O-AC-F-EU	dual AC PSUs	port-to-power airflow	Europe
4610-30P-O-AC-F-UK	dual AC PSUs	port-to-power airflow	UK
4610-30P-O-AC-F-JP	dual AC PSUs	port-to-power airflow	Japan
PSU-AC-150W-F	150W AC Power Supply FRU	port-to-power airflow	no power cord
PSU-AC-600W-F	600W AC Power Supply FRU	port-to-power airflow	no power cord
PSU-AC-900W-F	900W AC Power Supply FRU	port-to-power airflow	no power cord
<b>Model Number</b>	<b>Description</b>		
4610-54T-SVC-RTF	AS4610-54T Annual Hardware Service, Return-to-Factory-- option for after warranty period		
RKIT-85-4610	Rack mount kit (for AS4610-54P/ AS4610-54T/ AS4610-30P/ AS4610-30T )		
CBL-PWR-US	AC Power Cable - US (125V/13A, 1830mm) – only required with spare power supplies		
CBL-PWR-EU	AC Power Cable - Europe (250V/10A, 1830mm) – only required with spare power supplies		
CBL-PWR-UK	AC Power Cable - UK (250V/10A, 1830mm) – only required with spare power supplies		
CBL-PWR-JP	AC Power Cable - Japan – only required with spare power supplies		