AS4600-54T
1GbE Data Center Switch
Bare-Metal Hardware

Product Overview

The Edgecore AS4600-54T is a high-performance Gigabit Ethernet Layer 3 switch, with 48 RJ-45 GbE ports, 4 x 10 GbE SFP+ ports, and two module slots each with 40 GbE bandwidth for additional uplinks. The switch provides the high-availability features required in a data center top-of-rack switch, including redundant hot-swappable AC or -48VDC PSUs, or 12VDC power input; hot-swappable redundant fans, and port-to-power or power-to-port airflow options. The two expansion module slots accept 1 x 40G QSFP modules to provide two 40G ports or eight 10G ports through breakout cables. This additional bandwidth makes the switch ideal for applications mixing 1 GbE and 10 GbE nodes in a rack, or to support 40G uplinks to a spine network.

Key Features and Benefits

- Cost-effective, bare-metal infrastructure for data center racks.

- 1 GbE connection to server and storage nodes in rack, with 10 GbE uplinks to spine network.

- 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).

- 1 x 40G QSFP port on the optional module supports 40 GbE (DAC, 40GBASE-SR4/LR4) or 4 x 10 GbE (DAC or fiber breakout cable).

- Full line-rate L2 or L3 forwarding of 336 Gbps.

- Support hot/cold aisle with port-to-power and power-to-port airflow SKUs.

- Energy efficiency: 122 W typical power consumption.

- Hot-swappable, load-sharing, redundant AC PSUs or -48VDC PSUs; or 12VDC power input.

- Hot-swappable, redundant fans.

- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible independent SwitchOS software.

- Compatible with Cumulus®Linux® r2.0 and later SwitchOS software from Cumulus Networks®.

- Compatible with SwitchLight™ v2.1.0 or later from Big Switch Networks.

- Compatible with PicOS™ r2.5 and later version from Pica8 Inc.

Data Center Switch

Features

Ports

Switch Ports:
  48 x RJ-45 100/1000BASE-T ports
  4 x SFP+ ports supporting 10G or 1G
Management Ports on front (port) side:
  1 x RJ-45 serial console
  1 x RJ-45 100/1000BASE-T management
  1 x USB Type A storage port
  2 optional module slots on rear (power) side, each supporting
  1 x QSFP for 1 x 40 GbE or 4 x 10 GbE through breakout cables

Key Components

Switch Silicon: Broadcom BCM56540 Apollo2
CPU: Freescale P2020 dual-core 1.0 GHz
Memory: 2 GB DDR3 SDRAM ECC
Flash: 8 MB NOR Flash, 1 GB NAND Flash

Performance

Wire Speed Forwarding: L2 and L3
Switching Capacity: 336 Gbps
MAC Addresses: up to 176K
VLAN IDs: 4K
Jumbo Frames (9216 Bytes)
L3 Hosts: up to 176K
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-CR4 DAC to 4 x SFP+ 10GBASE-CR DAC; 0.5 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): 4.3 x 44 x 41cm (1.7 x 17.3 x 16.1") 1 RU
Weight: 8.5 kg (18.73 lbs)
Fans: 2 hot swappable, redundant fans
Operating Temperature: 0°C to 40°C
Storage Temperature: -40°C to 70°C
Operating Humidity: 5% to 95% non-condensing
PSUs: 2 redundant, load-sharing, hot-swappable AC or -48VDC
Input Voltage: 90 to 264 VAC at 50-60 Hz. -48 to -72 VDC.
Input Current: Max 6A @100/120 VAC, 3 A @200/240 VAC,
  10 A @-72 VDC, 12VDC power input option
12VDC power input option
Typical Power: 122 W, line-rate, 48 x 1 GbE Cat 6,
  4 x 10GBASE-SR

Regulatory

EMI:
  CE Mark (EN55022 Class A)
  FCC Part 15 Class A
  VCCI Class A
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:
  CB, EN60950
  UL/CUL
  CCC
Country of Origin: Taiwan (TAA Compliant)

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
Console Port LED: Link Status
System LEDs: PSU1, PSU2, Diagnostic, Fans, Locator

Software

Switch is loaded with Open Network Install Environment (ONIE)
  software installer
Compatible with the following switchOS software
  Cumulus Linux r2.0 or later
  SwitchLight v2.1.0 or later from Big Switch Networks
  PicOS™ r2.5 and later version from Pica8 Inc.

Warranty

Please check 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.

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.

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
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Ordering Information

Base Model: AS4600-54T 48-port GE + 4 x10GE uplinks with ONIE software Installer			
Model Number	**PSU**	**Airflow**	**Region (power cord)**
4600-54T-O-AC-F-US	dual AC PSUs	port-to-power airflow	N. America
4600-54T-O-AC-B-US	dual AC PSUs	power-to-port airflow	N. America
4600-54T-O-AC-F-EU	dual AC PSUs	port-to-power airflow	Europe
4600-54T-O-AC-B-EU	dual AC PSUs	power-to-port airflow	Europe
4600-54T-O-AC-F-UK	dual AC PSUs	port-to-power airflow	UK
4600-54T-O-AC-B-UK	dual AC PSUs	power-to-port airflow	UK
4600-54T-O-AC-F-JP	dual AC PSUs	port-to-power airflow	Japan
4600-54T-O-AC-B-JP	dual AC PSUs	power-to-port airflow	Japan
4600-54T-O-48V-F	dual 48VDC PSUs	port-to-power airflow	
4600-54T-O-48V-B	dual 48VDC PSUs	power-to-port airflow	
4600-54T-O-12V-F	one 12VDC power input	port-to-power airflow	
4600-54T-O-12V-B	one 12VDC power input	power-to-port airflow	
PSU-AC-300-F	300W AC Power Supply FRU	port-to-power airflow	no power cord
PSU-AC-300-B	300W AC Power Supply FRU	power-to-port airflow	no power cord
PSU-48V-300-F	300W -48V DC Power Supply FRU	port-to-power airflow	
PSU-48V-300-B	300W -48V DC Power Supply FRU	power-to-port airflow	
PSU-12V-300	12V DC power input unit FRU		
FAN-1U-1x1A-F	Fan Tray FRU	port-to-power airflow	
FAN-1U-1x1A-B	Fan Tray FRU	power-to-port airflow	

Model Number	Description
4600-54T-SVC-RTF	AS4600-54T Annual Hardware Service, Return-to-Factory-- option for after warranty period
4600-54T-MOD-40G	AS4600-54T Option Module, 1 x 40G QSFP port
RKIT-85-4600	Rack mount kit (for AS4600-54T)
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

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