**Product Overview**
The Edgecore AS5812-54X switch meets the high-performance, availability, and network-scaling requirements of enterprise and cloud data centers. The AS5812-54X provides full line-rate switching at Layer 2 or Layer 3 across 48 x 10GbE ports and 6 x 40GbE uplinks. The switch can be deployed either as a Top-of-Rack switch, or as part of a 10GbE or 40GbE distributed spine, forming a non-blocking folded-Clos data center fabric. The switch is rack mountable in either a standard 19 inch rack, or with the Open Rack Switch Adapter in the 21 inch Open Rack.

The AS5812-54X hardware provides the high availability features required for data center operation, including; redundant, hot-swappable AC or -48 VDC PSUs or 12 VDC power input; fan with 4+1 redundant fan modules; and port-to-power or power-to-port airflow options. The AS5812-54X is an ideal Top-of-Rack switch for virtualized data centers, with its support of VXLAN and NVGRE tunneling functions in hardware.

**Key Features and Benefits**
- Cost-effective, bare-metal switch infrastructure for data center fabric.
- 48 x SFP+ switch ports, supporting 10GbE (DAC, 10GBASE-SR/LR) or 1GbE (1000BASE-T/SX/LX).
- 6 x 40 QSFP switch ports, each supporting 40GbE (DAC, 40GBASE-SR4/LR4) or 4 x 10GbE (DAC or fiber breakout cable).
- Port Grouping to group 4 x 10G ports into one 40G port at the physical layer for maximum bandwidth utilization, and for 300m optical reach over MMF (Subject to NOS options).
- Full line-rate Layer 2 or Layer 3 forwarding of 720 Gbps.
- VXLAN and NVGRE tunneling support in hardware for network virtualization.
- Rack mountable in standard 19” racks. Mountable in 21” Open Rack with the Open Rack Switch Adapter.
- Supports hot/cold aisle with port-to-power and power-to-port airflow SKUs.
- All ports on front; PSUs, fan modules on rear.
- Hot-swappable, load sharing, redundant AC or -48 VDC PSUs. 12 VDC power input option.
- Hot swappable 4+1 redundant fan modules.
- Management: Ethernet and console RJ-45 ports; USB storage port.
- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings. Compatible with Open Network Linux (ONL), the open-source, OCP reference NOS.
- Compatible with Cumulus® Linux® r2.5.1 and later version from Cumulus Networks®.
- Compatible with OpenSwitch the open-source NOS.
- Compatible with Switch Light OS from Big Switch Networks and their Big Monitoring Fabric™ and Big Cloud Fabric™ SDN applications.
- Compatible with IP Infusion OcNOS.
AS5812-54X Product Specifications

Features

Ports
- Switch Ports: 48 x SFP+ each supporting 10GbE or 1GbE, 6 x QSFP each supporting 40GbE or 4 x 10GbE
- Management Ports on Front Panel: 1 x RJ-45 serial console, 1 x RJ-45 10/1000BASE-T management, 1 x USB Type A storage port
- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for ONIE tools
- Management: Ethernet and console RJ-45 ports; USB storage port
- Hot-swappable, load sharing, redundant AC or -48 VDC PSUs. 12 VDC power input option
- All ports on front; PSUs, fan modules on rear
- Supports hot/cold aisle with port-to-power and power-to-port airflow SKUs
- Rack mountable in standard 19" racks. Mountable in 21" Open Rack with the Open Rack Switch Adapter
- Full line-rate Layer 2 or Layer 3 forwarding of 720 Gbps
- 48 x SFP+ switch ports, supporting 10GbE (DAC, 10GBASE-SR/LR) or 1GbE (1000BASE-T/SX/LX)
- Cost-effective, bare-metal switch infrastructure for data center fabric

Key Features and Benefits
- Compatible with IP Infusion OcNOS
- SDN applications
- Compatible with Switch Light OS from Big Switch Networks and their Big Monitoring Fabric™ and Big Cloud Fabric™
- Compatible with OpenSwitch the open-source NOS
- Compatible with Open Network Linux (ONL), the open-source, OCP reference NOS
- Automation loading of compatible software

System LEDs:
- PSU1, PSU2, Diagnostic, Fans, Locator
- Ethernet Management Port LED: Link Status, Activity
- 10G SFP+ Port LEDs: Link Speed, Link Status, Activity
- 40G QSFP Port LEDs: Link Status, Activity for 40G port
- 40G QSFP Breakout LEDs: set of 24 LEDs, 4 per QSFP port, show Link, Status, Activity 10G links with 4 x 10G breakout
- Ethernet Management Port LED: Link Status, Activity
- Console Port LED: Link Status
- System LEDs: PSU1, PSU2, Diagnostic, Fans, Locator

Performance
- Wire Speed Forwarding: L2 and L3
- Switching Capacity: 720 Gbps
- Forwarding Rate: 1 Bpps
- MAC Addresses: 32 K min./288 K max.
- VLAN IDs: 4 K
- Jumbo frames support up to 9 K
- IPv4: 16K min./112K max. host entries; 16K LPM entries with TCAM-only mode
- IPv6: 8K min./56K max. host entries; IPv6/64=8K TCAM-only mode
- Support 4K ECMP group
- Packet Buffer Size: 16 MB integrated packet buffer
- Latency (RFC2544): 720 ns (L2/L3, cut-through mode, full line rate)

Supported Optics and Cables
- SFP+ Ports:
  - 10GBASE-CR DAC: up to 5 m passive; up to 10 m active
  - 10GBASE-SRL/SR: up to 100 m passive; up to 100 m active
  - 10GBASE-LR: Up to 10km over SMF 10GBASE-SRL/SR, 1000BASE-SX, 1000BASE-LX, 100/1000BASE-T
- QSFP Ports:
  - 40GBASE-CR4 DAC: 0.5 to 7 m; Passive and Active
  - 40GBASE-CR4 DAC to 4 x SFP+ 10GBASE-CR DAC; up to 5m passive; up to 10m active
  - 40GBASE-SR4: Up to 100 m over OM3 MMF, 150 m over OM4 MMF
  - 40GBASE-SR4 to 6 x 10GBASE-SR: 100 m over OM3, 150 m OM4
  - 40GBASE-LR4: Up to 10km over SMF

Physical and Environmental
- Dimensions (WxDxH): 44.3 x 47.3 x 4.34 cm (17.4 x 18.6 x 1.71 in)
- Weight: 8.5 kg (18.74 lb), with two installed PSU modules
- Fans: hot-swappable 4+1 redundant fans
- Operating Temperature: 0°C to 40°C (32°F to 104°F)
- Storage Temperature: -40°C to 70°C (-40°F to 158°F)
- Operating Humidity: 5% to 95% non-condensing

LEDs
- 10G SFP+ Port LEDs: Link Speed, Link Status, Activity
- 40G QSFP Port LEDs: Link Status, Activity for 40G port

Software
- Switch is loaded with Open Network Install Environment (ONIE) software installer
- Compatible with the following NOS options:
  - Cumulus® Linux® r2.5.1 and later version from Cumulus Networks®
  - Open Network Linux, the open-source, OCP reference NOS
  - OpenSwitch open-source NOS
  - Switch Light OS from Big Switch Networks, and their Big Tap Monitoring Fabric and Big Cloud Fabric applications

Power
- PSUs: 2 redundant, load-sharing, hot-swappable AC or -48 VDC
- Input Voltage: 90 to 264 VAC at 50-60 Hz, -48 to -72 VDC
- Input Current: Max 6 A@100/120VAC, 3 A@ 200/240VAC, 10 A@ -72 VDC
- PSU Efficiency: Up to 93% for AC PSUs
- 12 VDC power input option
- Max Power: 282 W, without pluggable optics

Regulatory
- EMI
- CE Mark (EN55022 Class A)
- FCC Part 15 Class A
- VCCI
- Safety
- CB, EN 60950
- UL/CUL
- Environmental: Temperature: IEC 68-2-14
- Drop: ISTA 2A
- RoHS-6 Compliant
- Country of Origin: Taiwan (TAA Compliant)

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 Edgecore Networks Corporation representatives at +886 3 563 8886 (HQ) or +1 (877) 828-CORE (877-828-2673) or authorized resellers.

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## AS5812-54X Product Specifications

### Ordering Information

**Base Model: AS5812-54X 48-Port 10G SFP+ with 4x40G QSFP uplinks; ONIE software installer**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>CPU Module</th>
<th>PSU</th>
<th>Airflow</th>
<th>Region (power cord)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5812-54X-O-AC-F-US</td>
<td>Intel Atom C2538 processor</td>
<td>dual AC PSUs</td>
<td>port-to-power airflow</td>
<td>N. America</td>
</tr>
<tr>
<td>5812-54X-O-AC-B-US</td>
<td>Intel Atom C2538 processor</td>
<td>dual AC PSUs</td>
<td>power-to-port airflow</td>
<td>N. America</td>
</tr>
<tr>
<td>5812-54X-O-AC-F-EU</td>
<td>Intel Atom C2538 processor</td>
<td>dual AC PSUs</td>
<td>port-to-power airflow</td>
<td>Europe</td>
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<tr>
<td>5812-54X-O-AC-B-EU</td>
<td>Intel Atom C2538 processor</td>
<td>dual AC PSUs</td>
<td>power-to-port airflow</td>
<td>Europe</td>
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<tr>
<td>5812-54X-O-AC-F-UK</td>
<td>Intel Atom C2538 processor</td>
<td>dual AC PSUs</td>
<td>port-to-power airflow</td>
<td>UK</td>
</tr>
<tr>
<td>5812-54X-O-AC-B-UK</td>
<td>Intel Atom C2538 processor</td>
<td>dual AC PSUs</td>
<td>power-to-port airflow</td>
<td>UK</td>
</tr>
<tr>
<td>5812-54X-O-AC-F-JP</td>
<td>Intel Atom C2538 processor</td>
<td>dual AC PSUs</td>
<td>port-to-power airflow</td>
<td>Japan</td>
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<tr>
<td>5812-54X-O-AC-B-JP</td>
<td>Intel Atom C2538 processor</td>
<td>dual AC PSUs</td>
<td>power-to-port airflow</td>
<td>Japan</td>
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<tr>
<td>5812-54X-O-48V-F</td>
<td>Intel Atom C2538 processor</td>
<td>dual 48VDC PSUs</td>
<td>port-to-power airflow</td>
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<tr>
<td>5812-54X-O-48V-B</td>
<td>Intel Atom C2538 processor</td>
<td>dual 48VDC PSUs</td>
<td>power-to-port airflow</td>
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<tr>
<td>5812-54X-O-12V-F</td>
<td>Intel Atom C2538 processor</td>
<td>one 12VDC power input</td>
<td>port-to-power airflow</td>
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<tr>
<td>5812-54X-O-12V-B</td>
<td>Intel Atom C2538 processor</td>
<td>one 12VDC power input</td>
<td>power-to-port airflow</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model Number</th>
<th>PSU</th>
<th>Airflow</th>
<th>Region (power cord)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSU-AC-400-F</td>
<td>400W AC Power Supply FRU</td>
<td>port-to-power airflow</td>
<td>no power cord</td>
</tr>
<tr>
<td>PSU-AC-400-B</td>
<td>400W AC Power Supply FRU</td>
<td>power-to-port airflow</td>
<td>no power cord</td>
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<tr>
<td>PSU-48V-400-F</td>
<td>400W -48V DC Power Supply FRU</td>
<td>port-to-power airflow</td>
<td>no power cord</td>
</tr>
<tr>
<td>PSU-48V-400-B</td>
<td>400W -48V DC Power Supply FRU</td>
<td>power-to-port airflow</td>
<td>no power cord</td>
</tr>
<tr>
<td>PSU-12V-400-1</td>
<td>12V DC power input unit FRU</td>
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<tr>
<td>FAN-1U-1x1D-F</td>
<td>Fan Tray FRU</td>
<td>port-to-power airflow</td>
<td></td>
</tr>
<tr>
<td>FAN-1U-1x1D-B</td>
<td>Fan Tray FRU</td>
<td>port-to-power airflow</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBL-PWR-US</td>
<td>AC Power Cable - US (125V/13A, 1830mm) – only required with spare power supplies</td>
</tr>
<tr>
<td>CBL-PWR-EU</td>
<td>AC Power Cable - Europe (250V/10A, 1830mm) – only required with spare power supplies</td>
</tr>
<tr>
<td>CBL-PWR-UK</td>
<td>AC Power Cable - UK (250V/10A, 1830mm) – only required with spare power supplies</td>
</tr>
<tr>
<td>CBL-PWR-JP</td>
<td>AC Power Cable - Japan – only required with spare power supplies</td>
</tr>
<tr>
<td>58XX-54X-SVC-RF</td>
<td>AS5810-54X Annual Hardware Service, post warranty, Return-to-Factory</td>
</tr>
<tr>
<td>ORSA-1U</td>
<td>Open Rack Switch Adapter, for mounting standard 19 inch form factor 1U switches into 21 inch Open Rack</td>
</tr>
<tr>
<td>RKIT-85-6712</td>
<td>Rack mount kit</td>
</tr>
</tbody>
</table>