Product Overview
The Edge-Core white-box AS5600-52X switch meets the high-performance, availability, and network scaling requirements of enterprise and cloud data centers. The AS5600-52X provides full line-rate switching at Layer 2 or Layer 3 across 64 x 10 GbE ports, or 48 x 10 GbE ports with 4 x 40 GbE uplinks. The switch can be deployed either as a Top-of-Rack switch, or as part of a 10 GbE or 40 GbE distributed spine forming a folded CLOS data center fabric.

AS5600-52X hardware is designed for data centers with a high port density of 64 x 10 GbE in a 1 RU enclosure; redundant, hot-swappable, load-sharing AC or 48VDC* PSUs; fan tray with n+1 redundant fans; and port-to-power or power-to-port airflow options.

DCSS switching software is designed for data center fabrics with up to tens of thousands of dual stack IPv4/IPv6 servers. The switch provides a full set of Layer 2 switching features used for aggregating servers within a rack, or across an easily managed medium sized data center fabric. A full set of IPv4/IPv6 routing features, including ECMP, OSPF, and BGP, supports large Layer 3 fabrics.

Software Defined Networks
The AS5600-52X includes an Open-Flow v1.3 agent, enabling it to operate as an OpenFlow-controlled or hybrid switch. The AS5600-52X forms a scalable L3 transport network for use with third-party virtualization overlay software solutions. The DCSS software provides an open API for scripts and applications to run on the switch in a Linux user space. Applications can be written in Python, Ruby, C, cURL, OpenSSH, or OpenSSL with the DCSS Application Development Kit.

Key Features and Benefits
■ Cost effective, white-box infrastructure.
■ 48 x SFP+ switch ports, supporting 10 GbE (DAC, 10GBASE-SR/LR/ER/LRM) or 1 GbE (1000Base-T/SX/LX).
■ 4 x 40G QSFP switch ports, supporting 40 GbE (DAC, 40GBASE-SR4/LR4) or 4 x 10 GbE (DAC or fiber breakout cable).
■ Port Grouping to group 4 x 10G ports into 40G port at physical layer for maximum bandwidth utilization, and 300m optical reach over MMF.
■ Full line-rate Layer 2 or Layer 3 forwarding of 1.28 Tbps
■ Support hot/cold aisle with port-to-power and power-to-port airflow SKUs.
■ All ports on front; PSUs, fan tray on rear.
■ Hot swappable, load sharing, redundant AC or 48VDC* PSUs
■ Swappable fan tray with 3:1 fans.
■ Energy Efficiency. 196W typical power consumption at full line rate forwarding over 48 x 10 GbE DAC and 4 x 40GBASE-SR4, with AC PSU.
■ Layer 2 Switching: VLANs, COS, LAG.
■ Converged Enhanced Ethernet: DCBX, 802.1Qbb PFC, 802.1Qau QCN, 802.1Qaz ETS, FCOE forwarder.
■ QoS: 802.1p, DiffServ, ACLs, SP/WRR/WFQ scheduling, WRED.
■ Management: Ethernet and console RJ45 ports; USB storage port. Industry standard CLI, SNMPv1/2/3, AAA.
Key Features and Benefits

- Cost effective, white-box infrastructure.
- 48 x SFP+ switch ports, supporting 10 GbE (DAC, 10GBASE-SR/LR/ER/LRM) or 1 GbE (1000Base-T/SX/LX).
- 4 x 40G QSFP switch ports, supporting 40 GbE (DAC, 40GBASE-SR4/LR4) or 4 x 10 GbE (DAC or fiber breakout cable).
- Port Grouping to group 4 x 10G ports into 40G port at physical layer for maximum bandwidth utilization, and 300m optical reach over MMF.
- Full line-rate Layer 2 or Layer 3 forwarding of 1.28 Tbps.
- Support hot/cold aisle with port-to-power and power-to-port airflow SKUs.
- All ports on front; PSUs, fan tray on rear.
- Hot swappable, load sharing, redundant AC or 48VDC* PSUs.
- Swappable fan tray with 3:1 fans.
- Energy Efficiency. 196W typical power consumption at full line rate forwarding over 48 x 10 GbE DAC and 4 x 40GBASE-SR4, with AC PSU.
- Layer 2 Switching: VLANs, COS, LAG.
- Converged Enhanced Ethernet: DCBX, 802.1Qbb PFC, 802.1Qau QCN, 802.1Qaz ETS, FCOE forwarder.
- QoS: 802.1p, DiffServ, ACLs, SP/WRR/WFQ scheduling, WRED.
- Management: Ethernet and console RJ45 ports; USB storage port. Industry standard CLI, SNMPv1/2/3, AAA.

Supported Optics and Cables

- 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
  - 10GBASE-ER: Up to 40 km over SMF
  - 10GBASE-LRM: Up to 220 m over OM1/2/3 MMF
  - 1000BASE-SX, 1000BASE-LX, 100/1000BASE-T
- QSFP Ports:
  - 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 4 x10 GBASE-SR: 100 m over OM3, 150 m OM4
  - 40GBASE-LR4: Up to 10 km over SMF

L3 Routing Features (Require L3 Software License)

- RFC 826 ARP
- RFC 1519 CIDR
- RFC 1812 IPv4 Routers
- RFC 2711 IPv6 Router Alert
- Static Routing
- VLAN and Port Based Routing
- Route Redistribution
- ECMP: 32-way, enhanced hash
- RFC 3056: IPv4 to v6 tunnels
- RFC 3768 VRRP
- OSPF:
  - RFC 1765 OSPF Database Overflow
  - RFC 2328 OSPFv2
  - RFC 2740 OSPFv3
  - RFC 3101 OSPF NSSA Option
- BGP:
  - RFC 2385 MD5
  - RFC 2918 Route Refresh
  - RFC 4271 BGP-4
  - RFC 4486 BGP Cease Notification
  - RFC 5492 Capabilities Advertisement

Physical and Environmental

- Dimensions (WxDxH): 438.4 x 473 x 43.4 mm (17.26 x 18.62 x 1.71 inches)
- Weight: 8.5 kg (18.74 lbs), with two installed power supply modules
- Fan Tray: hot-swappable tray with 3+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

Power

- PSUs: 2 redundant, load-sharing, hot-swappable AC or 48VDC* Input Voltage: 90 to 264VAC at 50-60 Hz. -48 to -72 VDC.
- Input Current: Max 6A @100/120 VAC, 3 A @200/240 VAC, 10A @-72VDC
- Max Power: 244 W, line-rate, 48 x 10GBASE-SR, 4 x 40GBASE-SR4, AC
- Typical Power: 196 W, no traffic, 48 x 10G DAC, 4 x 40GBASE-SR4, AC

QoS Features

- Up to 8 queues per port
- IEEE 802.1p COS
- DSCP/TOS Classification, Remark
- SP, WRR, WFO Queuing, WRED
- Per port bandwidth mgmt, shaping
- DCBX Data Center Bridging
- 802.1Qau QCN
- 802.1Qz ETS
- 802.1Qbb PFC
- ACLs: L2, L3, L4
### Features

#### Management
- OpenFlow v1.3
- Programmable API
- Industry Standard CLI
- SSH v1.5, v2
- SNMP v1, v2, v3
- Dual firmware images
- RFC 783 TFTP firmware upgrade
- Multiple Configuration Files
- RFC 951/1534/ BOOTP
- RFC 2131/2132 DHCP
- RFC 3315/3736 DHCPv6
- RFC 2030 SNTP
- RFC 3046 DHCP/BOOTP Relay
- RFC 3579 RADIUS: TACACS+
- Port Mirroring, Flow-based Mirroring
- sFlow, Traceroute
- Event and Error Logging
- Buffer Usage and Traffic Monitoring
- RFC 1213 MIBII
- RFC 1493 Bridge MIB
- RFC 1643 Ethernet-like MIB
- RFC 2233 Interfaces SMIV2
- RFC 2618 RADIUS Authentication
- RFC 2620 RADIUS Accounting
- RFC 2674 VLAN MIB
- RFC 2737 Entity MIB v2
- RFC 2819 RMON 1,2,3,9
- RFC 3291 Network Addresses
- IEEE 802.1AD MIB
- MIBs with L3 License:
  - RFC 3289 Diff Services MIB
  - RFC 2465 IPv6 MIB
  - RFC 2466 ICMPv6 MIB
  - RFC 2787 VRRP MIB
  - RFC 3419 Transport Addresses
  - RFC 4273 BGP-4 MIB

*Future Release

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

### 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 Edge-Core Networks products and solutions, visit www.edge-core.com

### About Edge-Core Networks
Edge-Core Networks is in the business of providing innovative network solutions. In the service provider network, in the data center or in the cloud, Edge-Core Networks delivers the software and systems that transform the way the world connects. Edge-Core Networks serves customers and partners worldwide. Additional information can be found at www.edge-core.com.

EdgeCore Networks 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 solutions, please contact your Edge-Core Network representatives at +886 3 563 8888 (HQ) or +1 (877) 828-CORE (877-828-2673) or authorized resellers.

### Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5600-52X-D2-AC-F-US</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 2 software, dual AC PSUs, port-to-power airflow, N. America</td>
</tr>
<tr>
<td>5600-52X-D2-AC-B-US</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 2 software, dual AC PSUs, power-to-port airflow, N. America</td>
</tr>
<tr>
<td>5600-52X-D3-AC-F-US</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 3 software, dual AC PSUs, port-to-power airflow, N. America</td>
</tr>
<tr>
<td>5600-52X-D3-AC-B-US</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 3 software, dual AC PSUs, power-to-port airflow, N. America</td>
</tr>
</tbody>
</table>

© Copyright 2013 Edge-Core Networks Corp. The information contained herein is subject to change without notice. This document is for informational purposes only and does not set forth any warranty, expressed or implied, concerning any equipment, equipment feature, or service offered by Edge-Core Networks. Edge-Core Networks shall not be liable for technical or editorial errors or omissions contained herein.
## Ordering Information

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5600-52X-D2-AC-F-EU</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 2 software, dual AC PSUs, port-to-power airflow, Europe</td>
</tr>
<tr>
<td>5600-52X-D2-AC-B-EU</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 2 software, dual AC PSUs, power-to-port airflow, Europe</td>
</tr>
<tr>
<td>5600-52X-D3-AC-F-EU</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 3 software, dual AC PSUs, port-to-power airflow, Europe</td>
</tr>
<tr>
<td>5600-52X-D3-AC-B-EU</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 3 software, dual AC PSUs, power-to-port airflow, Europe</td>
</tr>
<tr>
<td>5600-52X-D2-AC-F-UK</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 2 software, dual AC PSUs, port-to-power airflow, UK</td>
</tr>
<tr>
<td>5600-52X-D2-AC-B-UK</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 2 software, dual AC PSUs, power-to-port airflow, UK</td>
</tr>
<tr>
<td>5600-52X-D3-AC-F-UK</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 3 software, dual AC PSUs, port-to-power airflow, UK</td>
</tr>
<tr>
<td>5600-52X-D3-AC-B-UK</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 3 software, dual AC PSUs, power-to-port airflow, UK</td>
</tr>
<tr>
<td>5600-52X-D2-AC-F-JP</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 2 software, dual AC PSUs, port-to-power airflow, Japan</td>
</tr>
<tr>
<td>5600-52X-D2-AC-B-JP</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 2 software, dual AC PSUs, power-to-port airflow, Japan</td>
</tr>
<tr>
<td>5600-52X-D3-AC-F-JP</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 3 software, dual AC PSUs, port-to-power airflow, Japan</td>
</tr>
<tr>
<td>5600-52X-D3-AC-B-JP</td>
<td>AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, DCSS Layer 3 software, dual AC PSUs, power-to-port airflow, Japan</td>
</tr>
<tr>
<td>PSU-AC-400-F</td>
<td>400W AC Power Supply FRU, port-to-power airflow, no power cord</td>
</tr>
<tr>
<td>PSU-AC-400-B</td>
<td>400W AC Power Supply FRU, power-to-port airflow, no power cord</td>
</tr>
<tr>
<td>FAN-1U-1x4-F</td>
<td>Fan Tray FRU, port-to-power airflow</td>
</tr>
<tr>
<td>FAN-1U-1x4-B</td>
<td>Fan Tray FRU, power-to-port airflow</td>
</tr>
<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>5600-52X-UPG-D23</td>
<td>AS5600-52X Software Upgrade, DCSS Layer 2 to Layer 3</td>
</tr>
<tr>
<td>5600-52X-SVC-D2</td>
<td>AS5600-52X Annual Software Maintenance, Technical Support and Upgrades, DCSS Layer 2 software</td>
</tr>
<tr>
<td>5600-52X-SVC-D3</td>
<td>AS5600-52X Annual Software Maintenance, Technical Support and Upgrades, DCSS Layer 3 software</td>
</tr>
<tr>
<td>5600-52X-SVC-RTF</td>
<td>AS5600-52X Annual Hardware Service, Return-to-Factory</td>
</tr>
</tbody>
</table>