

# L2+/L3 10G Ethernet Aggregation/TOR Switch with 6 100G Uplinks

## AS5835-54X-EC



The AS5835-54X-EC switch contains 48 10GbE SFP+ ports and 6 100GbE uplink ports, and it is designed for carrier and enterprise aggregation and data center Top of Rack. The AS5835-EC is an ideal solution for traditional three-tier aggregation or core and folded-Clos architectures, serving with no oversubscription. The AS5835-54X-EC switch is packed with features that bring high availability, comprehensive security, robust multicast control, and advance QoS to network aggregation, while maintaining simple management. The switch also supports the most advance IPv6 management, IPv6 security, and IPv6 multicast control in accordance with the growth of IPv6 deployment. ISPs can expand their services from home to business users by providing a more reliable and resilient network (ITU-T G.8032 ERPS), L2 VPNs, and advanced OAM (Operations, Administration, and Maintenance) functions to ensure service-level agreements.

## Key Features and Benefits

- Ideal as aggregation high-performance Gigabit access switch with 10 Gigabit uplinks, enterprise core switch, or Top of Rack switch
- 10 Gigabit Ethernet L2+/Lite L3 managed switch with 2.16 Tbps switching capacity. The switch delivers wire-speed switching performance on all 10 Gigabit and 100 Gigabit ports
- 6 built-in 100G QSFP28 ports provide up to 6 100Gbps high-speed and non-oversubscribed uplinks to core or spine switches, reducing bottlenecks and increasing the performance of the access network.
- The 100G QSFP28 ports provide flexibility for backward compatibility with 40G and allowing breakout to 4 10G SFP+ ports.
- The 100G QSFP28 ports provide flexibility for breakout to 4 25G SFP28 ports
- Dual hot-swappable, load sharing power supplies ensures the reliability of the switch
- Hot-swappable 4+1 redundant fans ensures the reliability of the switch
- Temperature sensor for fan speed control to reduce noise and save energy
- In-house EdgeCOS NOS with full L2+/Lite L3 feature set

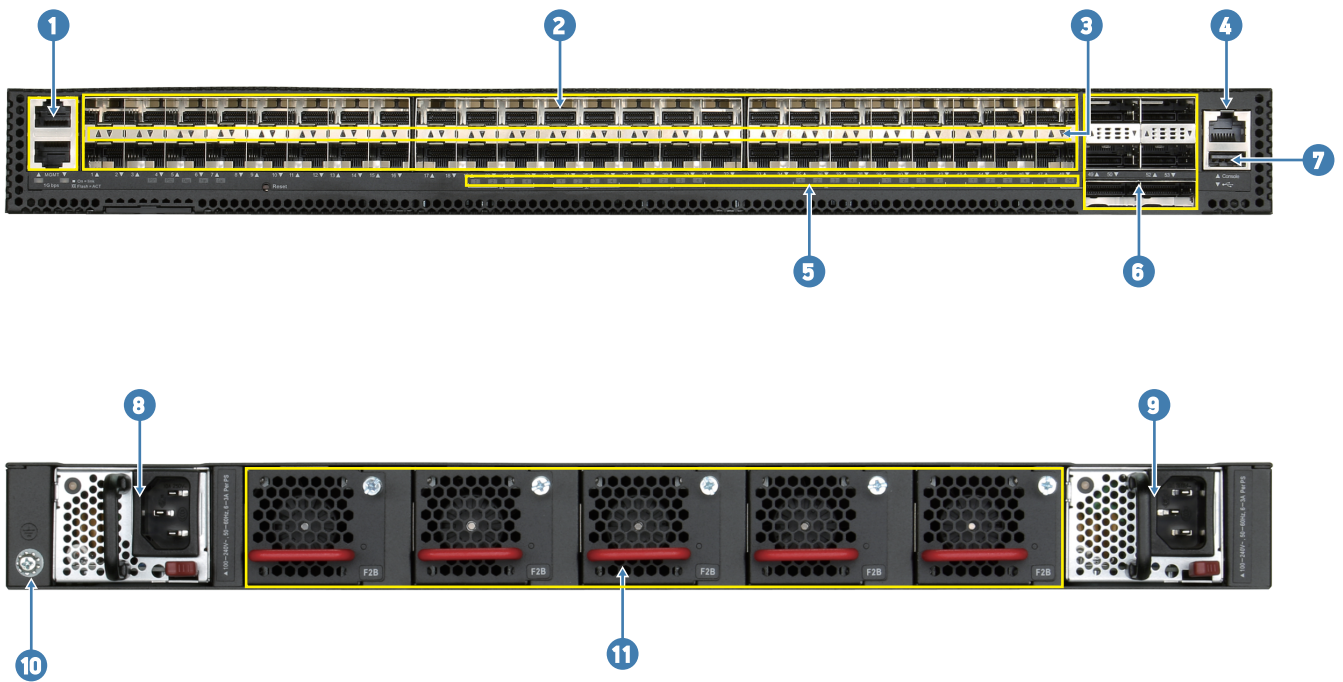


## Supported Software



onie

## Interfaces



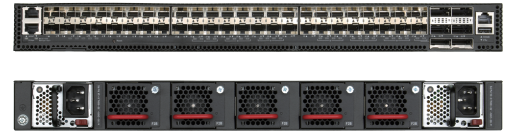
### Description

1	2 x management ports (MGMT)	7	USB storage port
2	48 x 10G SFP+ ports	8	PSU 2
3	Port LED indicators	9	PSU 1
4	Console port	10	Grounding point
5	40/100 Breakout mode LEDs	11	Hot-swappable 4+1 redundant fans
6	6 x QSFP28 ports		

**Product Model**

**AS5835-54X-EC**

**Product Image**



<b>Port</b>	10G SFP+ Ports	48
	10GBASE-T Ports	0
	100G QSFP28 Ports	6
	GE Out-of-Band Management Port	Yes
	RJ-45 Console Port	1
	USB Port	1
<b>Performance</b>	Switching Capacity	2.16 Tbps
	Forwarding Rate	1 Bpps
	CPU Module	Intel Atom/Denverton C3558 2.2GHz 4 core x86 processor
	Packet Buffer	32MB
	Flash Memory	32MB SPI NOR, M.2 32GB MLC
	DRAM	16 GB S0-DIMM DDR4
	MAC Address Table Size	160 K
	Jumbo Frames	Up to 9416 Bytes
	Auto-negotiation, Auto-MDI/MDIX (Copper port)	No
<b>Mechanical</b>	Rack Space	19"
	Dimension (W x D x H)	442.2 x 473.3 x 43.95 mm
	Weight	8.815 kg
<b>Power Supply</b>	AC power supply module (100-240 VAC, 50/60 Hz)	2 Redundant Power Modules
	DC power module (-48- -72 VDC)	Yes (Optional)
	Max System Power Consumption (Watts)	356 W
<b>Environmental</b>	Operating Temperature	0 ~ 40°C
	Storage Temperature	-40 ~ 70°C
	Operating Humidity (non-condensing)	5% to 90%
	Storage Temperature (non-condensing)	5% to 90%
	WEEE	Yes
	RoHS	Yes
<b>Certification</b>	FCC Class A	Yes
	CE	Yes
	Safety Compliance: CB	Yes
	Safety Compliance: UL	Yes

**L2 Features**

- Dual-speed (1G and 10G) fiber interfaces
- SFP+ ports support:
  - IEEE 802.3ae (10GBASE-SR/LR/ZR/ER),
  - 10G DAC/AOC
  - IEEE 802.3z (1000BASE-SX/LX/LHX/ZX)
  - Digital Diagnostic Monitoring (DDM) on 10G SFP+ port only
- 100G QSFP28 fiber interface
  - 100G DAC
  - 100GBASE-SR4/LR4
  - 4 25G DAC or Fiber breakout cable
- Flow Control:
  - IEEE 802.3x for full duplex mode
  - Back-Pressure for half duplex mode
- Jumbo frames: 9 KB
- Broadcast/Multicast/Unknown Unicast Storm Control
- Spanning Tree Protocol:
  - IEEE 802.1D Spanning Tree Protocol (STP)
  - IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
  - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP), 64 instances
  - BPDU Guard
  - BPDU filtering
  - Root Guard
  - Loopback detection
- Non-Spanning Tree Loopback detection
- ITU-T G.8032 Ethernet Ring Protection
  - Sub 50 msec convergence
  - Revertive operation mode
  - Multiple-ring network
- VLANs:
  - Supports 4K VLAN
  - Port-based VLAN
  - IEEE 802.1Q VLAN
  - GVRP
  - VLAN Trunking
  - IEEE 802.1v Protocol-based VLAN
  - IP Subnet-based VLAN
  - MAC-based VLAN
  - Traffic Segmentation
- L2 Virtual Private VLAN
  - Q-in-Q
  - L2 Protocol tunneling (xSTP, CDP, VTP & PVST+)
  - CDP/PVST+ Filtering
- Link Aggregation:
  - Static Trunk
  - IEEE 802.3ad Link Aggregation Control Protocol
  - Trunk groups: 12 up to 8 10G/ 2 40G ports per group
  - Load Balancing: SA+DA, SA, DA, SIP+DIP, SIP, DIP

**L2 Features-continued**

- MLAG
- IGMP Snooping:
  - IGMP v1/v2/v3 snooping
  - IGMP Proxy reporting
  - IGMP Filtering
  - IGMP Throttling
  - IGMP Immediate Leave
  - IGMP Querier
- MVR (Multicast VLAN Registration)
  - Supports 5 multicast VLANs
- Port mirroring
- Remote port mirror (RSPAN)

**QoS Features**

- Priority Queues: 8 hardware queues per port
- Traffic classification
  - IEEE 802.1p CoS
  - IP Precedence
  - DSCP
  - MAC Access control list (Source/Destination MAC, Ether type, Priority ID/ VLAN ID)
  - IP Standard access control list (Source IP)
  - IP extended access control list (Source/Destination IP, Protocol, TCP/UDP port number)
- Traffic Scheduling
  - Strict Priority
  - Weighted Round Robin
  - Strict + WRR
- Single/ Two rate Three color marker
- Ingress policy map
- Egress policy map
- Rate Limiting (Ingress and Egress, per port base)
  - 10G: Resolution 64Kbps ~ 10,000Mbps
- Auto Traffic Control

**OAM**

- IEEE 802.3ah Link\*
- IEEE 802.1ag Connectivity Fault Management\*
  - Connectivity check
  - Loopback
  - Linktrace
- ITU-T Y.1731 Performance and Throughput Management\*
  - Frame Delay
  - Frame Delay variation

**Security**

- User Security for Enterprise
  - IEEE 802.1X port based and MAC based authentication
  - Dynamic VLAN Assignment, Auto QoS
  - MAC authentication
  - Web authentication
  - Voice VLAN
  - Guest VLAN
- User Security for ISP/MSO
  - DHCP Snooping
  - DHCP Option 82
  - IP Source Guard
  - PPPoE IA
  - L2/L3/L4 Access Control List
  - MAC Access control list (Source/Destination MAC, Ether type, Priority ID/ VLAN ID )
  - IP standard access control list (Source IP)
  - IP extended access control list (Source/Destination IP, Protocol, TCP/UDP port number)
  - IPv6 ACL
- Network Security
  - Port security
  - Dynamic ARP Inspection
  - Denial of Service Protection
  - CPU Guard
  - CPU/Memory threshold and alarm
- Management Security
  - Login Security
  - RADIUS authentication
  - RADIUS accounting
  - RADIUS authorization
  - TACACS + authentication
  - TACACS + accounting
  - TACACS + authorization
  - Management Interface Access Filtering (SNMP, Web, Telnet)
  - SSH (v2.0) for security Telnet
  - SSL for HTTPS
  - SNMPv3

**IPv6 Features**

- IPv4/IPv6 Dual Protocol stack
- IPv6 Address Types Stack: Unicast
- IPv6 Neighbor Discovery
  - Duplicate address
  - Address resolution
  - Unreachable neighbor detection
- Stateless auto-configuration
- Manual configuration
- Remote IPv6 ping
- IPv6 Telnet support
- IPv6 DNS Resolver
- HTTP over IPv6
- SNMP over IPv6
- SSH over IPv6
- IPv6 Syslog support
- IPv6 SMTP support
- IPv6 TFTP support
- RA Guard
- IPv6 ND Snooping
- MLD Snooping v1/v2
- IPv6 source guard
- DHCPv6 snooping
- DHCPv6 option 37\*

**Management**

- Switch Management:
  - CLI via console port or Telnet
  - Web management
  - SNMP v1, v2c, v3
- Firmware & Configuration:
  - Firmware upgrade via TFTP/HTTP/FTP server
  - Multiple configuration files
  - Configuration file upload/download via TFTP/HTTP/FTP server
- RMON (groups 1, 2, 3 and 9)
- DHCP client for IP address assignment
- DHCP dynamic provision option 66,67
- SMTP
- Event/Error Log
- Syslog
- SMTP
- Supports LLDP (802.1ab)
- IP clustering
- sFlow v4, v5

### Routing

- L3 Features IPv4
- Multi-netting
- CIDR (Classless Inter-Domain Routing)
- Unicast Routing:
  - Static Routes (1 K)
  - RIPv1/v2\*
  - OSPFv2 (include RFC2328 PDC Encryption, RFC1370 Virtual Link, RFC3101 Route Aggregation, RFC1365 Route Filtering)\*
  - BGP4+\*
  - Equal Cost multipath routing (ECMP)\*
  - IP Redundancy: VRRP RFC3768\*
  - DHCP Relay\*
- L3 Features IPv6
- IPv6 Unicast Routing:
  - Static Routes (1 K)
  - OSPFv3\*
  - Equal Cost multipath routing (ECMP)\*
  - DHCPv6 Relay\*

### Safety

- UL (CSA 22.2. NO 60950-1 & UL60950-1)
- CB (IEC60950-1)

### Electromagnetic Compatibility

- CE Mark
- FCC Class A
- CISPR Class A
- VCCI Class A
- BSMI
- CCC

### Environmental Specifications

- Temperature:
  - 0°C to 40°C (Standard Operating)
  - 40°C to 70°C (Non-Operating)

### Power Supply

- Power input
  - AC power supply module (100 to 240 VAC, 50/60 Hz)
  - DC power supply module (-36 to -72 VDC)

### Warranty

Please check [www.edge-core.com](http://www.edge-core.com) for the warranty terms in your country.

### 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 (949)-336-6801 or authorized resellers.

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## Ordering Information

Optional Accessories	Product Description
GW-T150WV12	150 W AC power supply module (100 to 240 VAC, 50/60 Hz)
YM-1151E	150 W DC power supply module (-36 to -72 VDC)
ET4201-SX	1Gbps, Small Form Factor Pluggable (Distance: 550 m; Wavelength: 850 nm)
ET4201-LX	1Gbps, Small Form Factor Pluggable (Distance: 10 km; Wavelength: 1310 nm)
ET4201-LHX	1Gbps, Small Form Factor Pluggable (Distance: 40 km; Wavelength: 1310 nm)
ET4201-ZX	1Gbps, Small Form Factor Pluggable (Distance: 80 km; Wavelength: 1550 nm)
ET4201-RJ45	1000BASE-T RJ45 transceiver, 100 m
ET4202-SX	1Gbps, Small Form Factor Pluggable (Distance: 500 m; Wavelength: 850 nm, DDM)
ET4202-LX	1Gbps, Small Form Factor Pluggable (Distance: 10 km; Wavelength: 1310 nm, DDM)
ET4203-BX20	1Gbps, SFP (Distance: 20 km; Wavelength: Tx1310 nm / Rx1490 nm)
ET4203-BX20D	1Gbps, SFP (Distance: 20 km; Wavelength: Tx1490 nm / Rx13100 nm)
ET5402-SR	10Gbps, Small Form Factor Pluggable (Distance: 300 m; Wavelength: 850 nm)
ET5402-LR	10Gbps, Small Form Factor Pluggable (Distance: 10 km; Wavelength: 1310 nm)
ET5402-ER	10Gbps, Small Form Factor Pluggable (Distance: 40 km; Wavelength: 1550 nm)
ET5402-RJ45	10GBASE-T SFP, RJ45 transceiver, 30 m
ET5303-BX10	10Gbps, SFP (Distance: 10 km; Wavelength: Tx1270 nm / Rx1330 nm)
ET5303-BX10D	10Gbps, SFP (Distance: 10 km; Wavelength: Tx1330 nm / Rx12700 nm)
ET5402-DAC-1M	10 Gigabit SFP+ DAC 1 m cable
ET5402-DAC-3M	10 Gigabit SFP+ DAC 3 m cable
ET5402-DAC-5M	10 Gigabit SFP+ DAC 5 m cable
ET5402-AOC-3M	10 Gigabit SFP+ AOC 3 m cable
ET5402-AOC-5M	10 Gigabit SFP+ AOC 5 m cable
ET5402-AOC-7M	10 Gigabit SFP+ AOC 7 m cable
ET5402-AOC-10M	10 Gigabit SFP+ AOC 10 m cable
ET6401-SR4	40G QSFP+ short range transceiver 100 m
ET6402-40DAC-1M	40G to 40G DAC cable, QSFP+ DAC cable, 1m
ET6402-40DAC-3M	40G to 40G DAC cable, QSFP+ DAC cable, 3 m
ET6402-10DAC-1M	40G to 4 10G DAC cable, QSFP+ DAC- 4*SFP+DAC Cable, 1 m
ET6402-40AOC-3M	40G to 40G AOC cable, QSFP+ AOC cable, 3 m
ET6402-10AOC-3M	40G to 4 10G SFP+ AOC cable, QSFP+ AOC breakout cable, 3 m
ET7402-100DAC-1M	100 Gbps to 100 Gbps DAC cable with 1M 30AWG
ET7402-SR4	100Gbps short reach transceiver, 100GBASE-SR4
ET7402-PSM4	100Gbps QSFP28 PSM4 Single Mode 1310 nm 2 km MPO DDM
ET7402-LR4	100Gbps long reach transceiver, 100GBASE-LR4 DML
ET7402-25AOC-3M	100 Gbps to 4 x 25 Gbps AOC cable with 3 m