

L3 10G Ethernet Switch

ECS5550-30X/ECS5550-54X

Advanced L3 routing (OSPF v2/v3, BGP4+, IGMP v2/v3, PIM-SM/SSM, VRRP, PBR, UDP help, VXLAN, Loopback interface, Null interface)



Product Highlights:

- -5°C to 50°C
- Dual power supply modules (CRPS) – AC or DC PSUs
- 3 + 1 fan redundancy
- 32K MAC address table
- 6MB packet buffer size
- 24/48-port 10G SFP+ and 6-port 100G QSFP28 uplink
- Web/CLI/SNMP/Cloud multi-management
- 3-year warranty

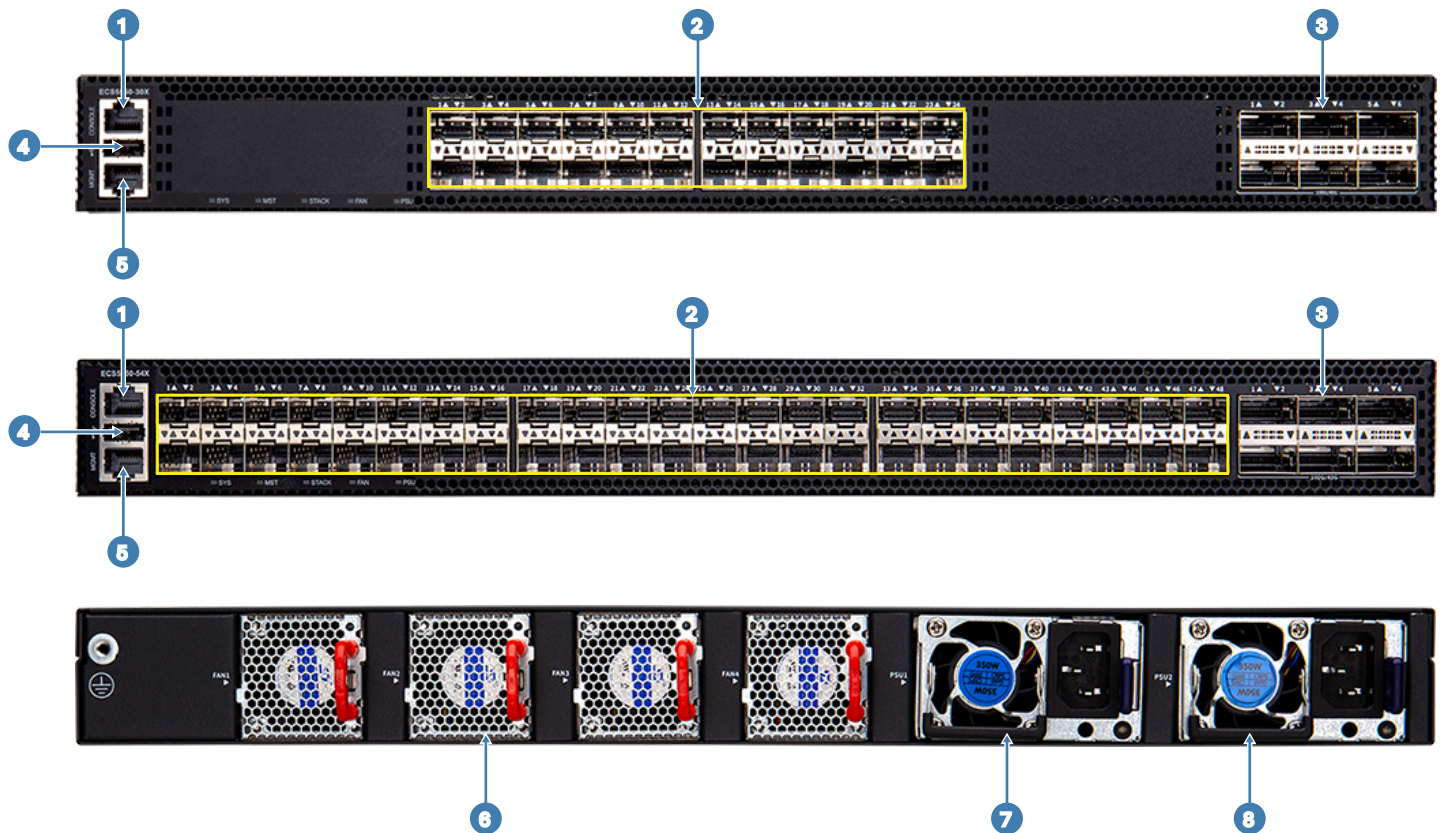
The ECS5550 series consists of two switches with 24 or 48 10GbE SFP+ ports and 6 100GbE uplink ports. The switches are designed for carrier/enterprise aggregation or small data center top-of-rack. The ECS5550 series is an ideal solution for traditional three-tier aggregation or core topologies and folded-Clos architectures without over-subscription. The ECS5550 switches are packed with features that bring high availability, comprehensive security, robust multicast control, and advanced QoS to network aggregation, while maintaining simple management. The switch also supports the most advanced 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.

The latest software version supports advanced Layer 3 routing protocols and features, including OSPF v2/v3, BGP4+, VRRP, IGMP v2/v3, PIM-SM/SSM, PBR, UDP Helper, VXLAN, Loopback interface, and Null interface, ensuring robust and versatile network performance.

Key Features and Benefits

- Best price-performance 10 Gigabit Ethernet aggregation switch with 100G uplinks
- Downlink 10G SFP+ ports support 1G/10G and 2.5G transceivers
- ITU-T G.8032 ERPS L2 ring protection with <50 ms convergence time
- Comprehensive and field-proven software features for ISPs/carriers, providing broadband access, IPTV services
- Enhanced security, IPv6, and multicast features
- Simple management (CLI, SNMP, Web, ecCLOUD, TIP OLS)
- Complete Private MIB to fully control and monitor the switch via customer's EMS

Interfaces



Description

- | | |
|---|--------------------------|
| 1. RJ-45 console port | 5. RJ-45 management port |
| 2. 24 x 10G SFP+ ports (ECS5550-30X)
48 x 10G SFP+ ports (ECS5550-54X) | 6. 3+1 fans |
| 3. 6 x 100G QSFP28 ports | 7. AC PSU 1 |
| 4. USB management port | 8. AC PSU 2 |

Product Model		ECS5550-30X	ECS5550-54X
Product image			
Port	1G/2.5G/10G SFP+ Ports	24	48
	100G/40G QSFP28/QSFP+ Uplink Ports	6	6
	RJ-45 Console Port	1	1
	RJ-45 Out-of-Band Management Port	1	1
	USB Port (Type A)	1	1
Performance	Switching Capacity	1.68 Tbps	2.16 Tbps
	Forwarding Rate	600 Mpps	600 Mpps
	Flash Memory (eMMC)	8 GB	8 GB
	DRAM	4 GB	4 GB
	Packet Buffer Size	6 MB	6 MB
	MAC Address Table	32 K	32 K
	Jumbo Frames	10 KB	10 KB
	Auto-negotiation, Auto-MDI/MDIX	X (Fiber Port)	X (Fiber Port)
	Surge Protection	X (Fiber Port)	X (Fiber Port)
	MTBF (at 25°C)	> 500,000 hrs	> 500,000 hrs
	Heat Dissipation (BTU/hr)	680	782
	Acoustic Noise (at 25°C)	< 30 dB (A)	< 50 dB (A)
Mechanical	Dimension (W x D x H) cm	44.2 x 42 x 4.36	44.2 x 42 x 4.36
	Weight	3.85 kg (8.49 lb)	4.7 kg (10.36 lb)
Power Supply	AC PSU: 100-240 VAC, 50/60 Hz	Yes	Yes
	DC PSU: 36 – 72 VDC	Yes	Yes
	Max System Power Consumption (Watts)	200 Watts	230 Watts
Environmental	Operating Temperature	-5 – 50°C	-5 – 50°C
	Storage Temperature	-40 – 70°C	-40 – 70°C
	Operating Humidity (non-condensing)	5% – 95%	5% – 95%
	Storage Humidity (non-condensing)	5% – 95%	5% – 95%
	Environmental Regulation Compliance: WEEE	Yes	Yes
	Environmental Regulation Compliance: RoHS	Yes	Yes
Certification	FCC Class A	Yes	Yes
	CE	Yes	Yes
	Safety Compliance: CB	Yes	Yes
	Safety Compliance: UL	Yes	Yes
	BSMI	Yes	Yes
Cloud Management	ecCLOUD/TIP (OLS)	Supported	Supported

Layer 3 Features

Base Layer 3 Routing

Static Route, RIPv1/v2

Advanced L3 Routing

OSPF v2/v3, BGP4+, VRRP, IGMP v2/v3, PIM-SM/SSM, PBR, VXLAN, UDP Helper, Loopback interface, Null interface

L2 Features

- 100G QSFP28/40G QSFP+ interface
 - 100GBASE-SR4/LR4
 - 100G AOC
 - 100G to 4x 25G AOC breakout cable
 - 40GBASE-SR4/LR4
 - 40G DAC/AOC
 - 40G to 4x 10G AOC breakout cable
 - 10G SFP+ fiber interfaces
 - IEEE 802.3ae (10GBASE-SR/LR)
 - IEEE 802.3z (1000BASE-SX/LX)
 - 10G DAC/AOC
- Broadcast/Multicast/Unknown Unicast storm control
- Digital Diagnostic Monitoring (DDM)
- Flow Control:
 - IEEE 802.3x for full duplex mode
- IGMP Snooping:
 - IGMP Authentication
 - IGMP Filtering
 - IGMP Immediate Leave
 - IGMP Proxy reporting
 - IGMP Querier
 - IGMP v1/v2/v3 snooping
 - IGMP Throttling
- ITU-T G.8032 Ethernet Ring Protection:
 - Multiple-ring network
 - Revertive operation mode
 - Sub 50 msec convergence
- Jumbo frames 10KB
- L2 Virtual Private VLAN:
 - CDP/PVST+ filtering
 - L2 Protocol tunneling (xSTP, CDP, VTP and PVST+, LLDP)
 - Selective Q-in-Q
 - Q-in-Q
 - VLAN Translation (VLAN mapping)
- Link Aggregation:
 - IEEE 802.3ad Link Aggregation Control Protocol
 - Load Balancing: SA+DA, SA, DA, SIP+DIP, SIP, DIP
 - Static Trunk
 - Trunk Groups: 28
- Multi-chassis Link Aggregation
- MVR (Multicast VLAN Registration): Supports 5 multicast VLANs
- Port mirroring
 - VLAN Mirror/Mac Based Mirror/ACL Mirror
- Remote port mirror (RSPAN)
- Smart Pair
- Spanning Tree Protocol:
 - BPDUGuard
 - BPDUGuard filtering
 - BPDUGuard transparent
 - 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
 - Loopback detection
 - Root Guard
- Static LACP
- UDLD
- VLANs:
 - IEEE 802.1Q VLAN
 - GVRP
 - IEEE 802.1v Protocol-based VLAN
 - IP Subnet-based VLAN
 - MAC-based VLAN
 - Port-based VLAN
 - Supports 4K VLAN
 - Traffic Segmentation (support Excluded VLANs)
- VLAN trunking

Green Ethernet

- IEEE 802.3az Energy-Efficient Ethernet (EEE)

QoS Features

- Auto Traffic Control
- Egress policy map (police rate, remark CoS/DSCP)
- Ingress policy map (police rate, remark CoS)
- Priority Queues: 8 hardware queues per port
- Rate Limiting (ingress and egress, per port base)
 - GE: Resolution 64 Kbps ~ 1,000 Mbps
 - 10G: Resolution 64 Kbps ~ 10,000 Mbps
 - 100G: Resolution 64Kbps ~ 100,000Mbps
- Traffic Classification:
 - DSCP
 - IEEE 802.1p CoS
 - IP Precedence
 - IP standard access control list (source IP)
 - IP extended access control list (source/destination IP, protocol, TCP/UDP port number)
 - MAC Access control list (source/destination MAC, Ethertype, priority ID/VLAN ID)
- Traffic Scheduling:
 - Strict Priority
 - Strict + WRR
 - Weighted Round Robin

Security

- Application Filter
- CPU Guard
- Denial of Service
- DHCP Snooping
- DHCP Info
- DHCP Option 82
- DHCP Option 82 Relay
- Dynamic ARP Inspection
- Dynamic VLAN Assignment, Auto QoS
- Guest VLAN
- IEEE 802.1X port based and MAC based authentication
- IEEE 802.1X Supplicant
- IP Source Guard
- IPv6 ACL
- L2/L3/L4 Access Control List:
 - ARP access control list (sender/target IP and MAC)
 - IP standard access control list (source IP)
 - IP extended access control list (source/destination IP, protocol, TCP/UDP port number)
 - MAC Access control list (source/destination MAC, Ethertype, priority ID/ VLAN ID)
- Login security
- MAC authentication
- Management interface access filtering (SNMP, Web, Telnet)
- Port security
- PPPoE IA
- RADIUS authentication
- RADIUS accounting
- RADIUS over TLS (RadSec)
- SNMPv3
- SSH (v2.0) for security Telnet
- SSL for HTTPS
- TACACS + authentication
- TACACS + accounting
- TACACS + authorization
- Time Range (time-based ACL)
- Voice VLAN
- Web authentication

System Capacity

- ACL Entries: 1,280
- ARP Entries: 8K
- IP Interfaces: 512
- IPv6 ND Entries: 8,189
- Link Aggregation Groups (LAG): 28
- MAC Address Table: 32K entries (shared)
- Static ARP Entries: 256
- Static IPv4 Routes: 1K
- Static IPv6 Routes: 1K
- Static MAC Entries: 1K

IPv6 Features

- DHCPv6 Snooping
- HTTP over IPv6
- IPv4/IPv6 dual protocol stack
- IPv6 Address Types Stack: Unicast
- IPv6 ND Snooping
 - Global, per-VLAN and per-port
 - ND binding and prefix tables
- IPv6 Neighbor Discovery:
 - Address resolution
 - Duplicate address
 - Unreachable neighbor detection
- IPv6 Telnet support
- IPv6 TFTP support
- IPv6 Source Guard
- IPv6 Syslog support
- Manual configuration
- MLD Filtering and Throttling
- MLD Snooping v1/v2
- MVR6
- Remote IPv6 ping
- SNMP over IPv6
- Stateless auto-configuration

Management

- DHCP client for IP address assignment
- DHCP dynamic provision Option 66,67
- DHCP Server
- File transfer (FTPS)
- Firmware and Configuration:
 - Firmware upgrade via TFTP/HTTP/FTP/SFTP/SCP server
 - Multiple configuration files
 - Configuration file upload/download via TFTP/HTTP/FTP/SFTP/SCP server
- IP Clustering (up to 36)
- IPv6 sFlow
- LLDP (IEEE 802.1ab) and LLDP-MED
 - Network Policy
 - Location Civic Address
 - Inventory TLVs
 - Fast Start
 - IEEE 802.3 TLVs
- MAC address traps
- NTP with MD5 authentication (3 servers), SNTP
- Port loopback diagnostics
- Remote log (RFC3164)
- RMON (groups 1, 2, 3 and 9)
- Scheduled system reboot
- sFlow v4, v5
- SMTP (e-mail notification)

Management-continued

- SNMP Notification Log (RFC 3014)
- Software watchdog
- Statistical history
- Summer time/DST, 80 time zones
- Switch Management:
 - CLI via console port or Telnet
 - Web management
 - SNMP v1, v2c, v3
- Syslog (local Flash)
- Thermal thresholds and fan control
- Transceiver threshold config (DDM)
- Zero Touch Provisioning

Safety

- BSMI (CNS 15598-1)
- CB (IEC62368-1)
- UL (CSA 22.2 NO 62368-1 and UL62638-1)

Power Supply

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

Supported Transceivers and Cables

- 1000BASE-SX/LX/EX/ZX/RJ45
- 2.5GBASE-LX/EX
- 10GBASE-SR/LR/ER/RJ45
- 10GBASE-DAC/AOC Cable
- 40GBASE-SR4/LR4
- 40GBASE-DAC/AOC Cable
- 40G to 4 x 10G AOC Cable
- 100GBASE-SR4/LR4
- 100GBASE-AOC Cable
- 100G to 4 x 25G AOC Cable
 - Note: More optics and detailed cabling information can be found at www.edge-core.com.

Base L3 Routing

- ARP (Address Resolution Protocol)
 - ARP cache: 8k entries
 - ARP statistics and entry display
 - Configurable ARP aging timeout
 - Dynamic ARP learning
 - Proxy ARP
 - Static ARP entries (256)
- DNS (Domain Name Service)
 - DNS client and proxy service
 - Up to 6 name servers (IPv4/IPv6)
 - Domain name list and default domain
 - Static host table (16 entries, IPv4/IPv6)
 - DNS cache display and clear
 - Multicast DNS (mDNS)
- ECMP
- L3 Features IPv4
 - CIDR (Classless Inter-Domain Routing)
 - DHCP Relay
 - Multi-netting
 - RIPv1/v2
 - Static routes (1 K)
 - Unicast routing
- L3 Features IPv6
 - DHCPv6 Relay
 - IPv6 unicast routing
 - Static routes (1 K)

Advanced L3 Routing

- BGP4+
- IGMP v2/v3
- Loopback interface, null interface
- OSPF v2/v3
- PBR
- PIM-SM/SSM
- RIPng
- UDP Helper
- VRRP
- VXLAN

Electromagnetic Compatibility

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

Environmental Specifications

- Humidity: 5% to 95% (non-condensing)
- Temperature:
 - 5°C to 50°C
 - 40°C to 70°C (non-operating)

OAM

- Dying Gasp (via MGMT port)
- IEEE 802.3ah EFM (Ethernet in the First Mile)
- IEEE 802.1ag Connectivity Fault Management
 - AIS (Alarm Indication Signal)
 - Cross check
 - Link Trace
 - Loopback
 - Two-way delay measurement
- ITU-T Y.1731 ETH OAM Performance Monitor
- TWAMP (RFC 5357) reflector

Timing and Synchronization

- IEEE 1588v2 PTP Transparent Clock (TC) mode

Warranty

Please check 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.

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 8888 (HQ) or +1 (949)-336-6801 or authorized resellers.

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Ordering Information

Optional Accessories	Product Description
ET4202-SX	1 Gbps, (Distance: 500 m; Wavelength: 850 nm, DDM)
ET4202-LX	1 Gbps, (Distance: 10 km; Wavelength: 1310 nm, DDM)
ET4202-EX	1 Gbps, (Distance: 40 km; Wavelength: 1310 nm, DDM)
ET4202-ZX	1 Gbps, (Distance: 80 km; Wavelength: 1550 nm, DDM)
ET4202-RJ45	1 Gbps, (Distance:100 m)
ET4251-LX	2.5 Gbps, (Distance: 10 km; Wavelength: 1310 nm, DDM)
ET4251-EX	2.5 Gbps, (Distance: 40 km; Wavelength: 1310 nm, DDM)
ET5402-SR	10 Gbps, (Distance: 300 m; Wavelength: 850 nm, DDM)
ET5402-LR	10 Gbps, (Distance: 10 km; Wavelength: 1310 nm, DDM)
ET5402-ER	10 Gbps, (Distance: 40 km; Wavelength: 1550 nm, DDM)
ET5402-RJ45	10 Gbps, (Distance:100 m)
ET5402-DAC-xM	10 Gbps, SFP+ DAC xM cable (x=1, 3, 5)
ET5402-AOC-xM	10 Gbps, SFP+ AOC xM cable (x=3, 5, 7, 10)
ET6401-SR4	40G QSFP+ short reach transceiver 100/150-m link length via OM3/OM4 (MMF) with MPO optical connector
ET6401-LR4	40G QSFP+ long reach transceiver SM 10KM with LC Optical Connector
ET6402-AOC-xM	40G QSFP+ to 40G AOC cable with xM (x=3, 5, 7, 10, 15, 30, 100)
ET6402-10AOC-xM	40G QSFP+ to 4 x 10G SFP+ AOC breakout cable with xM (x=1, 2, 3, 5, 7, 10, 15, 30, 100)
ET6402-DAC-xM	40G QSFP+ to 40G QSFP+ DAC cable with xM (x=1, 3, 5)
ET7402-SR4	100G SR4 QSFP28 850 nm MM 100 m transceiver
ET7402-LR4	100G LR4 QSFP28 1310 nm SM 10 km transceiver
ET7402-AOC-xM	100 Gbps to 100 Gbps AOC cable with xM (x=1, 2, 3, 5, 7, 10, 15, 30, 50, 100)
ET7402-25AOC-xM	100 Gbps QSFP28 to 4 x 25G SFP28 AOC cable with xM (x=1, 2, 3, 5, 7, 10, 15, 30)
ET7402-CWDM4	100G CWDM4 QSFP28 1310 nm SM 2KM Transceiver
Fan module FRU	P/N: F0OE16800002S, FAN-ECS5550
350 W AC PSU FRU	P/N: F0TE16800001A, G1251-0350WNA
350 W DC PSU FRU	P/N: F0TE16800002A, G1268-0350WNA