

DS-3E3950-H(B) Campus Core Aggregation Switch



This series of Layer 3 10-Gigabit Ethernet switch products features an ultra-large switching capacity and provides 100G uplink capabilities. Designed for network environments requiring high port density and easy installation, these intelligent managed switches are built on an industry-leading hardware architecture. They support pluggable dual power supplies and pluggable dual fan modules, ensuring high reliability at the hardware level. Additionally, with innovative energy-saving and architectural designs, they achieve the lowest power consumption among 10-Gigabit access switches, delivering a new generation of green, eco-friendly, and energy-efficient Ethernet switch products to users.

- Supports a hardware-based IPv4/IPv6 dual-stack platform with robust IPv4 and IPv6 Layer 3 routing protocols, multicast technologies, and policy routing mechanisms, delivering a comprehensive IPv4/IPv6 solution for users.
- Supports centralized MAC address authentication, 802.1x authentication, and PORTAL authentication. Enables dynamic or static binding of user identification elements such as user account, IP, MAC, VLAN, and port. Implements dynamic delivery of user policies (VLAN, QoS, ACL).
- Supports enhanced ACL control logic with large-capacity ingress and egress port ACLs, as well as VLAN-based ACL deployment, simplifying user configuration while preventing ACL resource waste.
- Supports multiple reliability protections at both the device and link levels.
- Supports pluggable AC power modules and a pluggable dual-fan reliability design, allowing flexible configuration of AC power modules based on actual environmental requirements. The device also supports power supply and fan fault detection and alarm functions, with automatic fan speed adjustment according to temperature changes. These designs significantly enhance the reliability of the equipment.
- Supports L2 (Layer 2) to L4 (Layer 4) packet filtering, providing flow classification based on source MAC address, destination MAC address, source IP address, destination IP address, TCP/UDP port numbers, protocol type, and VLAN. It offers flexible queue scheduling algorithms configurable per port and per queue, supporting three modes: SP (Strict Priority), WRR (Weighted Round Robin), and SP+WRR.
- Supports 48 × 10 Gigabit SFP+ ports and 2 × 40/100 Gigabit QSFP28 ports.

▪ Specification

Hardware Specifications	
Port	48 × 10 Gigabit SFP+ port, 2 × 40/100 Gigabit QSFP28 port
Switching Capacity	2160 Gbps
Packet Forwarding Rate	1607 Mpps
Power Supply Unit (PSU) Slots	2
Fan Slots	2
Power Supply	1+1 redundancy backup, 2 PSU included as standard
Fan	2 modular fan(s) included as standard
MAC Address Capacity	256 K
Cache	96 Mbits
Dimensions (W × H × D)	440.0 mm × 43.6 mm × 360.0 mm (17.32" × 1.72" × 14.17")
Net Weight	7.6 kg (16.8 lb)
Gross Weight	7.85 kg (17.31 lb)
Operating Temperature	-5°C to 45°C (23°F to 113°F)
Operating Humidity	5% to 95% (no condensation)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Storage Humidity	5% to 95% (no condensation)
Installation Mode	1U Rack Mounting (19" width)
Power Supply Method	AC: 100-240 V, 50/60 Hz, 4 A
Console Port	1 × Console Port
USB Port	1 × USB 2.0 Port, 1 × Micro-USB Port
MGMT Port	Supported
Power Consumption (Idle)	Single AC: 44 W, Dual AC: 49 W
Power Consumption (Max. Load)	Single AC: 249 W, Dual AC: 251 W
Surge Protection	2 kV
Packing List	Switch × 1 AC Power Cord × 1 L-Shaped Bracket Kit × 1 Console Cable × 1 Grounding Cable × 1 Cable Retention Clip × 1 Rubber Foot × 4 Quick Start Guide × 1 Regulatory Compliance and Safety Information × 1
Service Features	
Link Aggregation	Supports static aggregation. Supports dynamic aggregation via LACP. Supports cross-device aggregation (MLAG).
VLAN	Supports 4K VLANs. Supports QinQ. Supports Voice VLAN. Supports protocol-based VLAN. Supports MAC-based VLAN.

Multicast	Supports IGMP v1/v2/v3 Snooping Supports MLD Snooping Supports Multicast VLAN Supports PIM-SM Supports PIM-DM Supports MSDP Supports Bidirectional PIM
STP	Supports STP(IEEE 802.1d). Supports RSTP(IEEE 802.1w). Supports MSTP(IEEE 802.1s).
ERPS	Supported
RRPP	Supported
Private Loop Detection	Supported
Storm Control	Supported
Traffic Suppression	Supported
Mirroring	Supports local port mirroring. Supports remote port mirroring. Supports N:1 port mirroring. Supports flow mirroring.
IPv4 Service	Supports Ping. Supports Telnet. Supports FTP. Supports TFTP. Supports Traceroute. Supports DNS. Supports ARP. Supports ARP Proxy.
IPv4 Routing	Supports static routing. Supports OSPFv2. Supports RIPv1/v2. Supports BGP. Supports IS-IS. Supports equal-cost multi-path (ECMP) routing. Supports policy-based routing (PBR). Supports VRRP. Supports BFD.

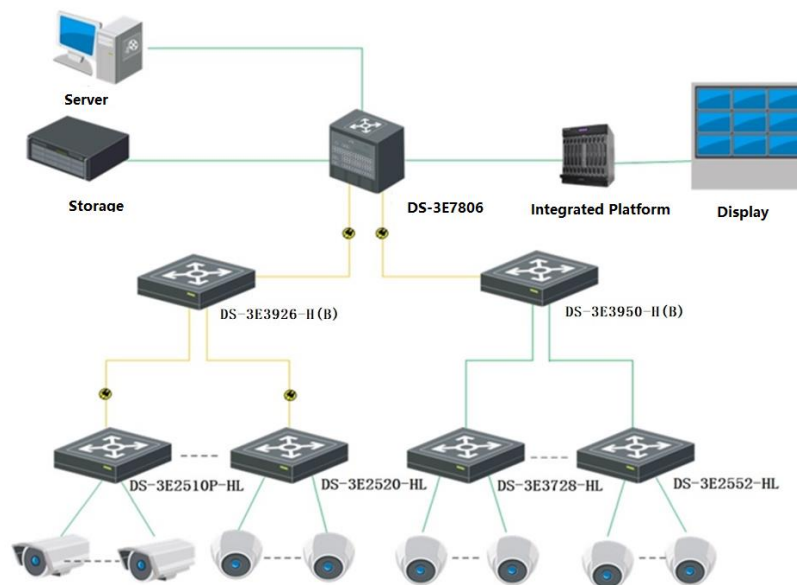
IPv6 Service	- Supports IPv4/IPv6 dual stack. - Supports Ping6. - Supports Telnet6. - Supports FTP6. - Supports TFTP6. - Supports Traceroute6. - Supports Neighbor Discovery (ND). - Supports Path MTU (PMTU) Discovery. - Supports IPv6 tunneling. - Supports GRE, 6to4, and 4to6 tunneling. - Supports IPv6 Router Advertisement. - Supports DNSv6. - Supports ICMPv6.
IPv6 Routing	- Supports IPv6 static routing. - Supports OSPFv3. - Supports BGP4+. - Supports IS-IS for IPv6. - Supports RIPng. - Supports policy-based routing (PBR). - Supports VRRP for IPv6. - Supports BFD for IPv6.
DHCP	- Supports DHCP Client. - Supports DHCP Snooping. - Supports DHCP Option 82. - Supports DHCP Relay. - Supports DHCP Server.
Cable Detection	Supports device link detection protocol (DLDP).
Virtualization	Supports stacking, maximum stacking quantity: 9 units
MPLS	- Supports MPLS L2VPN. - Supports MPLS L3VPN. - Supports MPLS MCE.
VXLAN	- Supports VXLAN Layer 2 switching. - Supports VXLAN Layer 3 routing. - Supports centralized VXLAN gateway and distributed Anycast gateway. - Supports BGP EVPN. - Supports OpenFlow+NETCONF centralized control plane with automated deployment.
802.1X Authentication	Supported
MAC Authentication	Supported
Portal Authentication	Supported
RADIUS	Supports RADIUS authentication.
TACACS+	Supports TACACS+ authentication.

ACL	Supports L2 to L4 packet filtering. Supports ACL definitions based on source/destination MAC address, source/destination IP address (IPv4/IPv6), IP protocol type, TCP/UDP port number or port range, VLAN ID, etc. Supports Time Range-based ACLs. Supports ACL application globally, on ports, or to VLANs. Supports Basic ACL, Advanced ACL, and MAC ACL configurations. Supports inbound, outbound, and VLAN-based ACLs.
QoS	Supports 802.1p/DSCP priority mapping. Supports queue scheduling mechanisms including SP, WRR, WFQ, SP+WRR, and SP+WFQ. Supports traffic shaping. Supports priority marking and remarking. Supports flow-based packet filtering. Supports flow-based traffic statistics. Supports flow-based redirection. Supports flow-based rate limiting. Supports 8 queues per port.
Security	Supports DoS attack protection. Supports CPU protection. Supports IP Source Guard (IPv4/IPv6). Supports port isolation. Supports HTTPS. Supports ARP detection. Supports ARP source suppression. Supports ARP attack protection. Supports ND snooping. Supports IP-MAC binding. Supports port security.
LLDP	Supports LLDP.
Operation Management	
Status Alarm	Supported
SSH	Supported
Telnet	Supported
SNMP	Supports SNMPv1. Supports SNMPv2c. Supports SNMPv3.
Clock Management	Supports NTP.
RMON	Supported
sFlow	Supported
FTP	Supported
TFTP	Supported
SFTP	Supported
DDM	Supported
Log	Supports system logs.

Approval

EMC	CE-EMC (EN 55032: 2015+A11: 2020, EN IEC 61000-3-2: 2019, EN 61000-3-3: 2013+A1: 2019, EN 50130-4: 2011+A1: 2014, EN 55035: 2017+A11: 2020)
Safety	CB (IEC 62368-1: 2023, CE-LVD (EN 62368-1: 2024+A11: 2024)
Chemistry	Reach (Regulation (EC) No.1907/2006), WEEE (2012/19/EU), CE-RoHS (2011/65/EU)

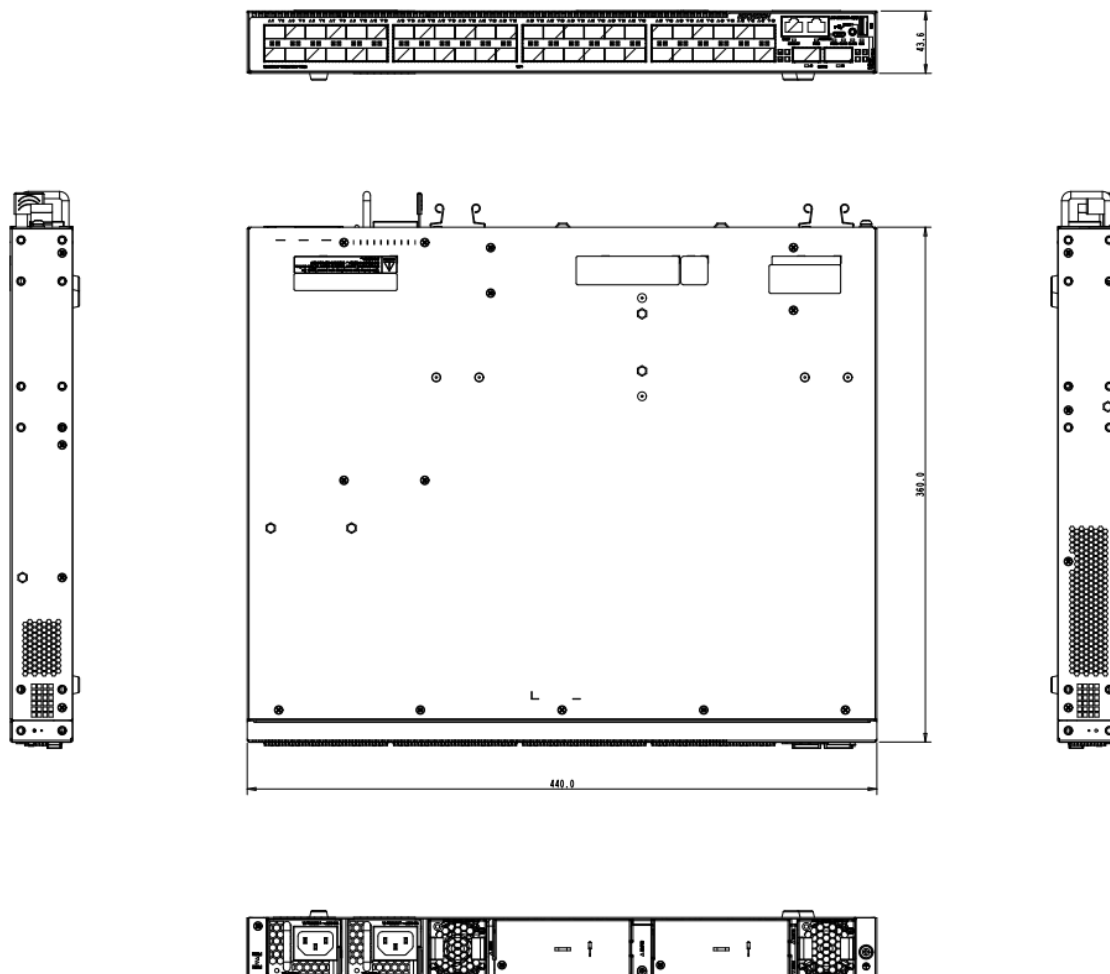
Typical Application



Available Product

Product Model	Product Description	Compatible Chassis	Installable Slot
DS-3E3900-PWR250A-H	DS-3E3900 AC power supply module, 250W, used in power module slots	DS-3E3900	PWR 1 to 2
DS-3E3900-FAN-H	DS-3E3900 FAN module, < 40W, used in FAN module slots	DS-3E3900	FAN 1 to 2

Dimension



▪ **Accessory**

▪ **Included**

DS-3E3900-FAN- H	DS-3E3900-PWR2 50A-H
	

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