Product Specification

S1000-32C

32-Port 100GbE QSFP28 Layer 3 Managed Data Center Ethernet Switch



Features

- 32 x 100GbE QSFP28 ports in a compact 1U form factor
- Up to 6.4Tbps switching capacity
- Up to 3571.2Mpps packet forwarding performance
- Low forwarding latency of approximately 700ns
- Flexible 10G / 25G / 40G / 100G Ethernet connectivity
- Supports QSFP28 breakout to 4 x 10GbE or 4 x 25GbE on designated ports
- Layer 2 and Layer 3 wire-speed switching and routing
- IPv4 and IPv6 dual-stack networking
- Supports BGP, OSPF, IS-IS, ECMP, BFD and VRRP
- Supports MLAG for active-active network redundancy
- EVPN-VXLAN support for scalable data center fabrics
- PFC, ECN and DCBX for lossless Ethernet and RoCEv2 networks
- 36MB packet buffer for burst traffic handling
- Jumbo frame support up to 9.6KB
- Advanced QoS, ACL and traffic management
- SNMP, CLI, Web, SSH and out-of-band management
- Redundant hot-swappable power supplies
- Redundant hot-swappable intelligent cooling fans

Compliance

- Ethernet and Networking Standards
- IEEE 802.3ba – 40GbE / 100GbE
- IEEE 802.3by – 25GbE
- IEEE 802.3ae – 10GbE
- IEEE 802.1Q – VLAN
- IEEE 802.1AX – Link Aggregation
- IEEE 802.1D – Spanning Tree Protocol
- IEEE 802.1w – Rapid Spanning Tree Protocol
- IEEE 802.1s – Multiple Spanning Tree Protocol
- IEEE 802.1AB – Link Layer Discovery Protocol
- IEEE 802.1X – Port-Based Network Access Control
- IEEE 802.1Qbb – Priority-Based Flow Control

Applications

- Data center leaf and spine networks
- High-density 100GbE aggregation and core networks
- RoCEv2 and lossless Ethernet fabrics
- Private cloud, virtualization and hyper-converged infrastructure
- High-performance compute and storage networks

Description

The S1000-32C is a high-density 100GbE Layer 3 managed Ethernet switch designed for modern data center networks. It provides 32 QSFP28 interfaces in a compact 1U chassis and delivers up to 6.4Tbps switching capacity for high-bandwidth server, storage and fabric connectivity.

The QSFP28 interfaces support 100GbE and 40GbE operation, with designated ports supporting breakout connectivity for 10GbE and 25GbE networks. This flexible port architecture allows the switch to be deployed in both high-density aggregation and leaf-spine network architectures.

The S1000-32C provides comprehensive Layer 2 and Layer 3 functionality including VLAN, LACP, MLAG, IPv4/IPv6, BGP, OSPF, IS-IS, ECMP, BFD, VRRP and EVPN-VXLAN. Data center bridging capabilities including PFC, ECN and DCBX enable lossless Ethernet transport for RoCEv2, high-performance computing and storage applications.

Redundant hot-swappable power supplies and fan modules improve system availability, while dedicated console, out-of-band management and USB interfaces simplify deployment, monitoring and maintenance.

Product Performance Specifications

1、Hardware Specifications

Parameter	Specification
Ports	32 x 100GbE QSFP28
Supported Speeds	10GbE / 25GbE / 40GbE / 100GbE
Switching Capacity	6.4Tbps
Forwarding Rate	Up to 3571.2Mpps
Packet Buffer	36MB
Forwarding Latency	Approx. 700ns
Jumbo Frame	Up to 9600 Bytes
Management Interfaces	1 x RJ45 Console, 1 x RJ45 Management, 1 x USB
Power Supplies	2 x Hot-Swappable Redundant Power Supplies
Fan Modules	4 x Hot-Swappable Fan Modules
Airflow	Front-to-Rear
Form Factor	1U Rackmount
Dimensions (H x W x D)	Approx. 44 x 440 x 480mm
Typical Power Consumption	Approx. 172W
Maximum Power Consumption	224W

Operating Temperature	0° C to 45° C

2、Software Features

Parameter	Specification
VXLAN	Support VXLAN tunnel configuration Support VXLAN Layer 2 and Layer 3 gateway Support VXLAN distributed gateway Support VXLAN dual-active access Support VXLAN across data center networks Support VXLAN traffic forwarding Support BGP EVPN control plane
MLAG	Support MLAG basic functions Support active-active Layer 2 connectivity Support MLAG peer-link and keepalive mechanisms Support link aggregation across MLAG peer switches
MAC Address	Support static MAC address configuration and dynamic MAC address learning Support MAC address table viewing and clearing Support configurable MAC address aging time Support MAC address learning limits Support MAC address filtering Support black-hole MAC entries
VLAN	Support up to 4K VLANs Support IEEE 802.1Q VLAN Support Access and Trunk modes Support VLAN Mapping Support QinQ and flexible QinQ Support Private VLAN
STP	Support IEEE 802.1D STP Support IEEE 802.1w RSTP Support IEEE 802.1s MSTP Support BPDU Guard Support Root Guard Support Loop Guard
Link Aggregation	Support static link aggregation Support IEEE 802.1AX / LACP dynamic link aggregation Support load balancing across aggregated links
Multicast	Support IGMPv1 / v2 / v3 Support IGMP Snooping Support IGMP Fast Leave Support multicast group policies and multicast group limits Support PIM-SM / PIM-SSM / PIM-DM Support MLDv1 / v2 and MLD Snooping

IPv4	Support IPv4 static routing Support RIPv1 / RIPv2 Support OSPFv2 Support BGP4 Support IS-IS Support policy-based routing Support ECMP load balancing Support BFD for dynamic routing protocols
IPv6	Support IPv4 / IPv6 dual stack Support ICMPv6 Support DHCPv6 Support IPv6 Neighbor Discovery Support IPv6 Path MTU Discovery Support IPv6 static routing Support RIPng Support OSPFv3 Support BGP4+ Support MLDv1 / v2 and MLD Snooping
EVPN	Support BGP EVPN Support EVPN-VXLAN network virtualization Support Layer 2 and Layer 3 EVPN services Support distributed VXLAN gateway
QoS	Support traffic classification based on Layer 2 / Layer 3 / Layer 4 header fields Support 802.1p and DSCP priority remarking Support traffic policing and traffic shaping Support SP / WRR / WDRR queue scheduling Support WRED congestion avoidance Support ingress and egress ACL-based traffic policies
Data Center Bridging	Support IEEE 802.1Qbb Priority Flow Control (PFC) Support Explicit Congestion Notification (ECN) Support Data Center Bridging Exchange (DCBX) Support lossless Ethernet networking for RoCEv2 applications
Security	Support Layer 2 / Layer 3 / Layer 4 ACL Support IPv4 / IPv6 / MAC ACL Support port isolation Support port security Support IP / MAC / port binding Support DHCP Snooping Support DHCP Option 82 Support Dynamic ARP Inspection Support IP Source Guard Support IEEE 802.1X authentication Support RADIUS and TACACS+ Support uRPF

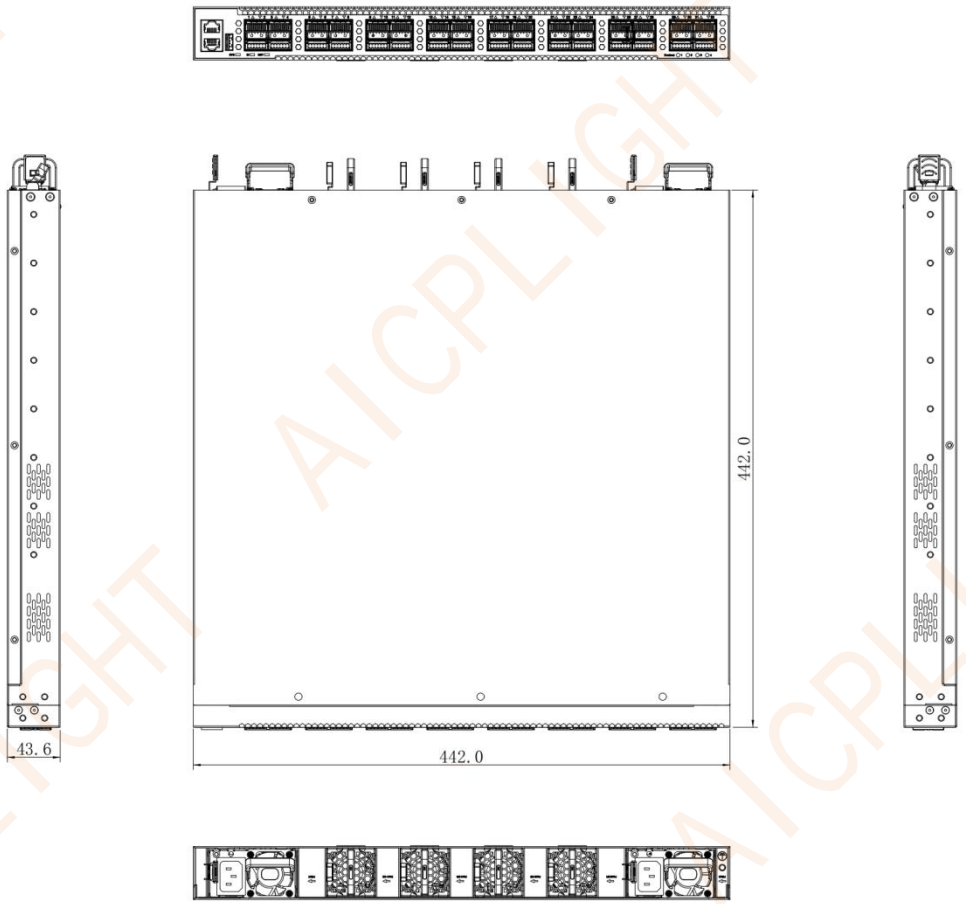
	Support control-plane protection
Reliability	Support 1+1 redundant power supplies Support hot-swappable power supplies and fan modules Support static and LACP link aggregation Support MLAG active-active redundancy Support ERPS Ethernet ring protection Support VRRP gateway redundancy Support BFD fast failure detection
Management and Maintenance	Support Console and out-of-band Ethernet management Support CLI management Support SSH 2.0 Support Web-based management Support SNMPv1 / v2c / v3 Support Syslog Support RMON Support sFlow traffic monitoring Support NTP Support TFTP / FTP configuration and file management Support ZTP zero-touch provisioning Support device temperature, fan and power supply monitoring

Recommended Module Types

Type	Description	Typical Use Case
Recommended Modules		
QSFP-100G-SR4	100GBASE-SR4 QSFP28 850nm 100m DOM MTP/MPO-12 UPC MMF Optical Transceiver Module	Data center server, storage and switch interconnection over MMF up to 100m at 100Gbps.
QSFP-100G-CWDM4	100GBASE-CWDM4 QSFP28 1310nm 2km DOM Duplex LC/UPC SMF Optical Transceiver Module	Data center aggregation and campus interconnection over SMF up to 2km at 100Gbps.
QSFP-100G-LR4	100GBASE-LR4 QSFP28 1310nm 10km DOM Duplex LC/UPC SMF Optical Transceiver Module	Data center interconnection and long-distance network links over SMF up to 10km at 100Gbps.
QSFP-40G-SR4	40GBASE-SR4 QSFP+ 850nm 150m DOM MTP/MPO-12 UPC MMF Optical Transceiver Module	40GbE server, storage and switch interconnection over MMF up to 150m.
QSFP-40G-LR4	40GBASE-LR4 QSFP+ 1310nm 10km DOM Duplex LC/UPC SMF Optical Transceiver Module	40GbE aggregation and long-distance switch interconnection over SMF up to 10km.
Recommended Active Optical Cables (AOCs)		
Q100-Q100-A	100G QSFP28 to 100G QSFP28 Active Optical Cable	Short- to medium-range 100GbE switch, server and storage interconnection within data centers.
Q100-4S25-A	100G QSFP28 to 4x25G SFP28 Active Optical Breakout Cable	100GbE switch port breakout to four 25GbE server, NIC or downstream switch ports.

Q40-Q40-A	40G QSFP+ to 40G QSFP+ Active Optical Cable	Short- to medium-range 40GbE switch, server and storage interconnection.
Recommended Direct-Attach Cables (DACs)		
Q100-Q100-C	100G QSFP28 to 100G QSFP28 Passive Direct Attach Copper Twinax Cable	Short-range 100GbE switch-to-switch, switch-to-server and switch-to-storage links within the rack or adjacent racks.
Q100-4S25-C	100G QSFP28 to 4x25G SFP28 Passive Direct Attach Copper Breakout Cable	Short-range 100GbE switch port breakout to four 25GbE server, NIC or downstream switch ports.
Q40-Q40-C	40G QSFP+ to 40G QSFP+ Passive Direct Attach Copper Twinax Cable	Short-range 40GbE switch, server and storage interconnection within or between adjacent racks.

Technical Drawing



Handling and Safety Precautions：

- Take appropriate ESD precautions when installing, removing, or handling the switch and pluggable modules.
- Ensure that the input voltage and power source comply with the rated input specifications of the switch.
- Properly ground the switch before powering on the equipment.
- Keep the switch powered off during installation, cabling, or hardware replacement unless hot-swappable operation is specifically

supported.

- Ensure adequate airflow around the switch and do not block the air intake or exhaust vents.
- Install the switch securely in a compatible 19-inch rack and ensure that the rack is properly grounded and mechanically stable.
- Do not open, modify, or disassemble the switch chassis or power supply modules.
- Disconnect the power supply before cleaning the equipment. Use a clean, dry, lint-free cloth only. Do not use liquid or aerosol cleaners.
- Keep the equipment away from water, excessive humidity, heat sources, open flames, and conductive contaminants.
- Do not place excessive strain on power cords, network cables, or optical cables, and maintain the recommended cable bend radius.
- Use only compatible optical modules, cables, power supplies, and accessories specified for the switch.
- Keep the switch and its cabling away from high-voltage power lines and strong electromagnetic interference sources.
- Do not look directly into optical transceiver ports or fiber connectors when optical modules are installed and operating.
- Before replacing a hot-swappable power supply or fan module, follow the specified removal and installation procedures to prevent equipment damage or personal injury.

Ordering Information

PN	Description
S1000-32C	32-Port 100GbE QSFP28 Layer 3 Managed Data Center Ethernet Switch, High-Density 1U Rackmount Design
S1000-48B8C	48-Port 25GbE SFP28 Layer 3 Managed Data Center Leaf Switch, 8 × 100GbE QSFP28 Uplink Ports, 1U Rackmount
S1000-48T6S	48-Port Gigabit Ethernet Layer 3 Managed Access Switch, 48 × 10/100/1000BASE-T RJ45 Ports, 6 × Dedicated 10GbE SFP+ Uplink Ports, for Enterprise and Campus Networks
S1000-48X6S	48-Port 1GbE SFP Layer 3 Managed Fiber Aggregation Switch, 6 × Dedicated 10GbE SFP+ Uplink Ports, for Enterprise and Campus Networks
S1000-48TP4S	48-Port Gigabit Ethernet PoE+ Layer 2 Managed Access Switch, 48 × 10/100/1000BASE-T RJ45 PoE+ Ports, Up to 30W per Port, 4 × 1GbE SFP Uplink Ports, for IP Surveillance and Enterprise Networks
S1000-5T	5-Port Gigabit Unmanaged Mini Ethernet Switch, 5 × 10/100/1000BASE-T RJ45 Ports, Fanless Metal Housing, Desktop/Wall-Mount Design
S1000-8T	8-Port Gigabit Unmanaged Mini Ethernet Switch, 8 × 10/100/1000BASE-T RJ45 Ports, Fanless Metal Housing, Desktop/Wall-Mount Design