

High-performance, High-density Switch

ISCOM S7600-32D



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Product Overview

The ISCOM S7600-32D is Raisecom's new high-performance, high-density switch for data center networks. Featuring pluggable modules and an advanced architecture, it delivers powerful hardware forwarding and rich data center features. Paired with the ISCOM S7610, it enables a flexible, high-quality 400GE/200GE/100GE data center network for the cloud era. As a SPINE or LEAF node, the S7600-32D helps enterprises and operators build a cloud-ready data center network platform.

ISCOM S7600-32D Data Center Switch >>

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- 32 x 400GE/200GE/100GE optical interfaces.
- 1 x USB port, 1 x Console port, 1 x management Ethernet port.
- 6 fan module slots, each fan module contains 1 fan unit.
- 2 power module slots, supporting AC/DC power modules and HVDC power modules.

Highlights

➤ High-Capacity, High-Density Port Access

- Provides 32 high-performance 400GE QSFP112 interfaces. The 400GE QSFP112 interfaces are backward compatible with 200GE/100GE and support 1-to-4 split (4x100G) and 1-to-2 split (2x200G).

➤ Cross-Device Link Aggregation

- Supports M-LAG (Multi-Chassis Link Aggregation), enabling link aggregation across multiple devices. This improves link reliability from the board level to the device level, allowing dual-active uplinks and multiplying effective network connection bandwidth.
- Each node device in an M-LAG can be upgraded independently; other nodes handle service forwarding during the upgrade, achieving zero service interruption.
- Applicable to both Overlay and traditional Underlay scenarios, offering flexible networking.

➤ **Rich Data Center Features**

- Fully supports RoCE features including PFC, ECN, and AI ECN, building a zero-loss, low-latency, high-throughput intelligent computing network.
- Supports VXLAN technology to meet the requirements for building flexible, efficient, highly reliable, and scalable next-generation data centers.
- Supports BGP-EVPN as the control plane for VXLAN, simplifying VXLAN deployment and improving the efficiency of constructing large Layer 2 networks.

➤ **Carrier-Grade Reliability Design**

- Products feature high reliability with redundant designs for key components like power supplies and fans. All modules support hot-swapping, maximizing the reliability and availability of the entire system.
- Supports hardware health status visualization, enabling real-time monitoring of key components, system temperature, power modules, and fan modules.
- Supports hardware BFD for fast fault detection with protocols such as VRRP/OSPF/BGP4/ISIS/ISISv6/static routes, achieving ms-level fault detection time.

➤ **Comprehensive Security Protection Mechanisms**

- Supports binding of multiple elements such as user accounts, IP addresses, MAC addresses, VLANs, and ports, meeting the need in campus networks to enhance access control and restrict communication by unauthorized users.
- Ensures device management security with user identity authentication based on 802.1x, AAA/RADIUS, and hierarchical user privilege management.
- Supports CPU hardware protection queues, enabling separate processing of data and control traffic to prevent security threats such as DoS attacks, illegal access, and control plane overload.

➤ **Comprehensive IPv6 Solution**

- Supports wire-speed forwarding for IPv4/IPv6 dual stack, IPv6 static routing, RIPng, OSPFv3, BGP+, and IS-ISv6.
- Supports rich IPv4-to-IPv6 transition technologies, including various tunneling technologies (manually configured tunnels, automatic tunnels, and ISATAP tunnels), ensuring a smooth migration and meeting the requirements for IPv6-only or IPv4/IPv6 hybrid networking.

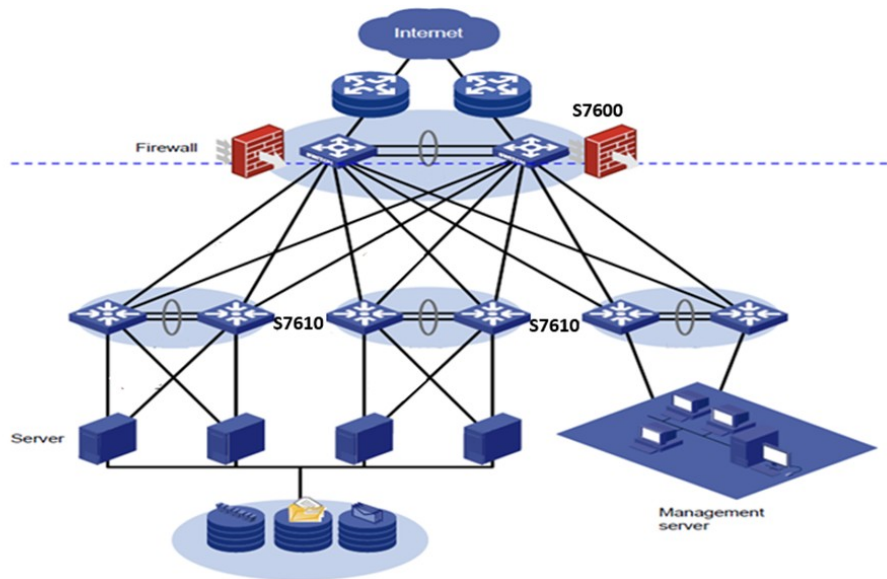
➤ **Simple Operation & Maintenance Management**

- Supports diverse management and maintenance methods like CLI and Telnet for easier device management.
- Supports features such as SNMP, RMON, and Syslog for routine network diagnostics and maintenance.
- Supports Telemetry technology for real-time device data collection, accurately presenting real-time network status for timely and effective fault location and cause analysis.

➤ **Green Energy-Saving Design**

- Adopts a strict front-to-back airflow path with completely isolated hot and cold aisles, improving heat dissipation efficiency and meeting data center design requirements.
- Supports intelligent fan speed adjustment, effectively reducing device power consumption and noise.
- Supports real-time power consumption monitoring, reducing operational and maintenance costs for customers and contributing to a green data center.

Applications



Note: Data Center Solution

In a typical data center networking scenario, the ISCOM S7600 is deployed as the core switch (Spine node), and the ISCOM S7610 serves as the Top-of-Rack (ToR) switch (Leaf node). They are interconnected via 400GE/200GE/100GE ports, providing a high-density 400GE/200GE/100GE server access solution. Protocols such as VXLAN are used to build a non-blocking large Layer 2 network, ensuring wide-range virtual machine mobility and flexible deployment of user services.

Technical Specifications

Product Specifications >>	
Product	ISCOM S7600-32D
Dimensions (W x D x H) mm	442 x 600 x 44
Switching Capacity	25.6Tbps
Packet Forwarding Rate	13000Mpps
400GE QSFP112 Interfaces	32
Number of Fan Modules	6
Number of Power Modules	2
Typical Power Consumption	590W
Fan Redundancy	Fan modules support hot backup. If a single fan module fails, the system can operate normally for a short period, but it is recommended to replace the faulty module immediately
Rated Input Voltage	DC Input: -48V DC AC Input: 110V AC / 220V AC, 50/60Hz HVDC Input: 240V DC / 336V DC
Maximum Input Voltage	DC Input: -36V DC ~ -72V DC AC Input: 100V AC ~ 240V AC; 47Hz ~ 63Hz HVDC Input: 180V DC ~ 300V DC
Operating Environment Temperature	0°C to 40°C (Altitude: 0m to 1800m). From 1800m to 5000m, the maximum operating temperature decreases by 1°C for every 220m increase in altitude
Operating Environment Relative Humidity	Relative Humidity: 10% to 90% (non-condensing)
Cooling Method	Front-to-back airflow, intelligent speed adjustment

Product Features

Product Software Features >>	
Device Virtualization	Supports M-LAG for cross-device link aggregation
Network Virtualization	Supports VXLAN Layer 2 and Layer 3 gateway
	Supports BGP-EVPN.
	Supports IPv6 VXLAN over IPv4
Network Convergence	Supports PFC (Priority Flow Control)
	Supports ECN (Explicit Congestion Notification)
	Supports RoCE (RoCE v1 and RoCE v2)
	Supports RDMA
SDN	Supports RCView INC

MAC	Supports automatic MAC address learning and aging
	Supports Static, Dynamic, and Blackhole MAC addresses
	Supports source MAC address filtering
	Supports MAC address learning limitation based on port and VLAN
VLAN	Supports up to 4K VLANs
	Supports VLAN assignment based on MAC address, protocol, IP subnet, and port
	Supports Access, Trunk, and Hybrid modes
	Supports Basic QinQ and Flexible QinQ
	Supports VLAN Mapping (1:1/N:1)
Multicast	Supports IGMP v1/v2/v3, IGMP v1/v2/v3 Snooping, and MLD Snooping
	Supports PIM-DM, PIM-SM, and PIM-SSM
	Supports user fast-leave mechanism
	Supports multicast VLAN
QoS/ACL	Supports Ingress/Egress ACL
	Supports flow-based priority scheduling and mapping, with 8 queues per port; supports time-based ACL
	Supports combined traffic classification based on Layer 2 protocol header, Layer 3 protocol, Layer 4 protocol, 802.1p priority, etc
	Supports port-based bandwidth limiting; supports flow/VLAN-based bandwidth limiting (Single-Rate Two-Color); supports flow-based bandwidth limiting (Single-Rate Three-Color, Two-Rate Three-Color)
	Supports SP, WRR, DRR, SP+WRR, and SP+DRR queue scheduling modes
	Supports congestion control mechanisms like WRED and tail drop
Loop Protection	Supports STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)
	Supports BPDU protection, root protection, and loop protection
	Supports ERPS Ethernet Ring Protection Protocol (G.8032)
Reliability	Supports LACP for port aggregation
	Supports hardware-based BFD for fast fault detection with protocols such as VRRP/BGP/IS-IS/OSPF/static routes.
	Supports VRRP and BFD for VRRP
	Supports hot patching for online patch upgrades
IP Routing	Supports IPv4 dynamic routing protocols such as RIP, OSPF, ISIS, and BGP
	Supports IPv6 dynamic routing protocols such as RIPng, OSPFv3, ISISv6, and BGP4+

Security Features	Supports AAA/RADIUS
	Supports TACACS+ and local authentication
	Supports 802.1x authentication
	Supports SSHv2
	Supports plaintext and MD5 ciphertext authentication for OSPF, RIPv2, and BGPv4 packets
	Supports hierarchical protection for the command line, preventing unauthorized access and providing different configuration permissions for users at different levels
	Supports port-based storm suppression
	Supports whitelist, port security MAC, and MAC address learning limitation
	Supports IP Source Guard and protection against DoS attacks, ARP attacks, TCP SYN Flood attacks, UDP Flood attacks, broadcast storm attacks, and high-traffic attacks
	Supports CPU hardware queues for hierarchical scheduling and protection of control plane protocol packets
Management & Maintenance	Supports login via Console port
	Supports SNMPv1/v2c/v3
	Supports gRPC and Telemetry Stream for traffic visualization
	Supports unified user management with group/domain/time-based authorization
	Supports system logs and graded alarms
	Supports RMON
	Supports online device status monitoring mechanism, enabling detection of key components, system temperature, power modules, and fan modules

Ordering Information

Ordering Information >>

Chassis Unit		
ISCOM S7600-32D	A	ISCOM S7600-32D host, includes 6 fan modules. Power modules need to be ordered separately.
Fan Unit		
FANS156	A	Universal fan module for the S7600 series.
Power Unit		
RPA2164-220D1212	A	Universal AC power module for the S7600 series, 1600W.
RPD2164-48D1212	A	Universal DC power module for the S7600 series, 1600W.



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