

The ISCOM S7600 series data center switches are a new generation of high-performance, high-density switches launched by Raisecom specifically for data center networks. They support pluggable power supplies and fan modules, adopt advanced hardware architecture design, and possess powerful hardware forwarding performance and a wealth of data center features. The ISCOM S7600 can be paired with the ISCOM S7610 to construct a resilient, high-quality 400GE/200GE/100GE data center network, meeting the network requirements of data centers in the cloud era. The S7600 series data center switches is positioned as a SPINE or LEAF in the data center, assisting enterprises and operators in building a data center network platform tailored for the cloud computing era.



ISCOM S7600

**ISCOM S7600 series data center switch >>**

## ISCOM S7600-32D



- 32 optical interfaces of 400GE/200GE/100GE
- 1 USB interface, 1 Console interface, and 1 management Ethernet interface
- 6 fan module slots. Each fan module contains 1 fans.
- 2 power supply slots, supporting AC/DC power supplies

## ISCOM S7600-24B8D



- 24 optical interfaces of 200GE/100GE, and 8 optical interfaces of 400GE
- 1 USB interface, 1 Console interface, and 1 management Ethernet interface
- 6 fan module slots. Each fan module contains 1 fans.
- 2 power supply slots, supporting AC/DC power supplies

## ISCOM S7600-32C



- 32 optical interfaces of 100GE/40GE
- 1 USB interface, 1 Console interface, and 1 management Ethernet interface
- 5 fan module slots. Each fan module contains 1 fans.
- 2 power supply slots, supporting AC/DC power supplies



|                                                                                  |                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>ISCOM S7600-24C8B</p>                                                         | <ul style="list-style-type: none"> <li>● 24 optical interfaces of 100GE/40GE, and 8 optical interfaces of 200GE/100GE</li> <li>● 1 USB interface, 1 Console interface, and 1 management Ethernet interface</li> </ul> |
|  | <ul style="list-style-type: none"> <li>● 5 fan module slots. Each fan module contains 1 fans.</li> <li>● 2 power supply slots, supporting AC/DC power supplies</li> </ul>                                             |

## Characteristics >>

### High-density interface for access

- Supports 400GE high-performance QSFP112 interface and 200GE high-performance QSFP56 interface and 200GE high-performance QSFP28 interface. The 400GE QSFP112 interface supports backward compatibility with 200GE/100GE, supports one-to-four splitting (4\*100G), and supports one-to-two splitting (2\*200G). The 200GE QSFP56 interface supports backward compatibility with 100GE, and supports one-to-two splitting (2\*100G). The 100GE QSFP28 interface supports backward compatibility with 40GE, and supports one-to-four splitting (4\*25G).

## Inter-device link aggregation

- Support inter-device link aggregation M-LAG, which can achieve link aggregation among multiple devices, thereby increasing link reliability from the card level to device level, achieving dual active link uplink, and doubling the effective network connection bandwidth.
- Each node device of the M-LAG can be independently upgraded. During the upgrade process, other nodes take over service forwarding, avoiding service interruption.
- Suitable for Overlay and traditional Underlay scenarios, with flexible networking.

### Rich data center characteristics

- Support the VxLAN technology to meet the needs of building new-generation data centers that are flexible, efficient, highly reliable, and scalable.
- Support BGP-EVPN as the control plane of the VxLAN, thus simplifying VxLAN deployment and improving the efficiency of constructing great Layer 2 networks.
- Support DCB and RoCE v2, meeting the high-performance needs of data centers for low latency and no packet loss of network devices.

## Reliable carrier-grade design

- Feature high reliability, and adopt redundancy design for key components, such as power supplies and fans. All modules support hot swapping, maximizing the reliability and availability of the entire device.
- Support hardware health status visualization, thus monitoring key components, system temperature, power modules, fan modules in real time.
- Support hardware BFD, support BFD for VRRP/OSPF/BGP4/ISIS/ISISv6/static routing, and achieve fast fault detection mechanisms for various protocols, and implement the millisecond-level fault detection time.

## Complete security protection

- Support hardware-level encryption technology of MACsec for all interfaces, providing secure data transmission for



hop-by-hop devices.

- Support Cloudsec encryption to ensure the security of service traffic based on VXLAN.
- Provide enhanced ACL, and support high-capacity ingress/egress ACLs.
- Support binding multiple elements, such as the user account, IP address, MAC address, VLAN, and interface, to meet the needs of the park network to strengthen control over visitors and restrict unauthorized user communication.
- Support user authentication based on 802.1x or AAA/RADIUS. Hierarchical user permission management ensures the security of device management.
- Support CPU hardware protection queues, enabling separation and processing of the data plane and control plane, preventing security threats, such as DOS attacks, illegal access, and control plane overload.

#### **Comprehensive IPv6 solutions**

- Support IPv4/IPv6 dual protocol stacks.
- Support IPv6 static routing, RIPng, OSPFv3, BGP+, IS-ISv6.
- Support rich IPv4 to IPv6 transition technologies, ensuring smooth transition from IPv4 to IPv6 and meeting the needs of IPv6 independent networking and IPv4/IPv6 mixed networking.

#### **Easy OAM**

- Support diverse management and maintenance methods, such as CLI, Web, and Telnet, making device management more convenient.
- Support SNMP, RMON, Syslog and other features for daily network diagnosis and maintenance.
- Support Telemetry, which collects device data in real time, accurately presents realtime network status, and timely and effectively locates faults and their causes.
- Support ZTP deployment, which can obtain office deployment files from USB flash disks or file servers and automatically load them, achieving on-site configuration and deployment of devices, reducing labor costs, and improving deployment efficiency.
- Feature complete interface status indication. The innovative 100GE interface split LED clearly shows the status of all sub-interfaces.
- Support remote positioning, which can light up the LED of the device that needs maintenance on the network management, thus accurately locate the device in complex computer room environments.

#### **Green and energy-saving design**

- Adopt strict front-to-rear straight air ducts, which completely isolate hot and cold air ducts, improve heat dissipation efficiency, and meet the design needs of data center equipment rooms.
- Support intelligently adjusting rates, effectively reducing device power consumption and noise.
- Support monitoring power consumption in real time and turning off the optical modules of idle ports, which reduces operation and maintenance costs for customers and establish green data centers.

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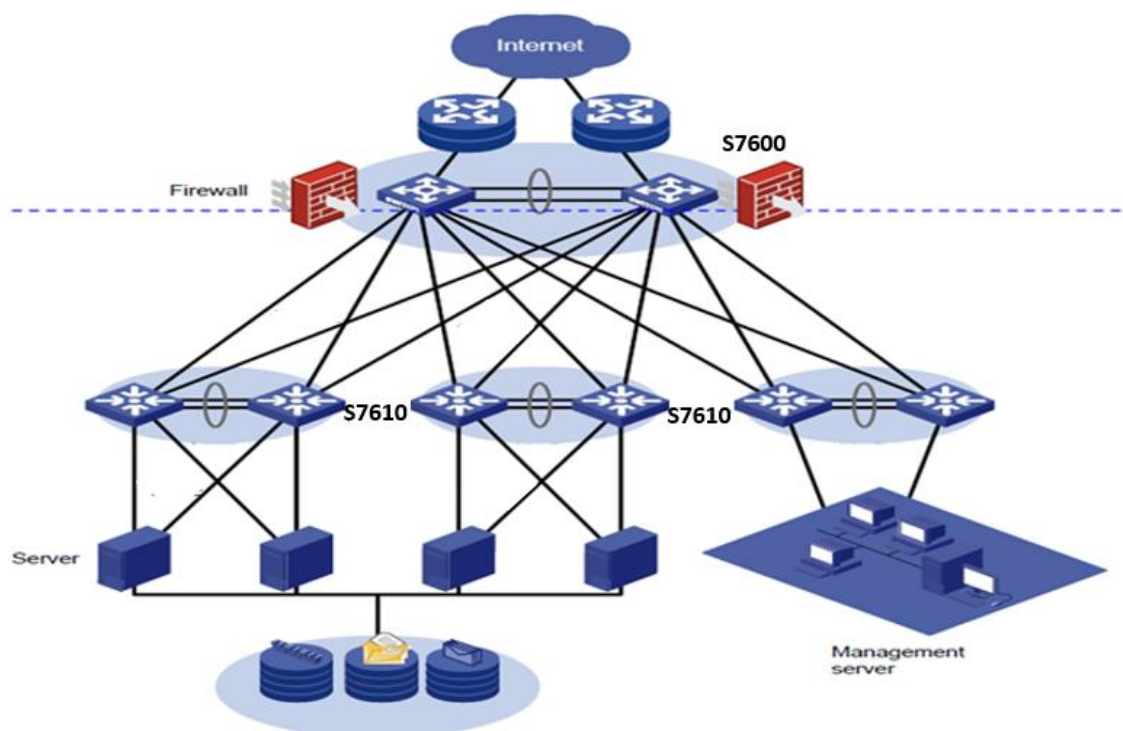
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## Typical applications >>

### Data center solution

In the typical networking of a data center, ISCOM S7600 is used as the core switch (Spine node) of the network, and ISCOM S7610 is used as the TOR switch (Leaf node). They are interconnected through 400GE/200GE/100GE ports to provide a high-density 400GE/200GE/100GE server access solution. Protocols such as VxLAN are used to establish a non-blocking layer 2 network, ensuring wide-range migration of virtual machines and flexible deployment of user services.



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| Hard specifications >>                   |                                                                                                                                                                                  |                   |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Item                                     | ISCOM S7600-32D                                                                                                                                                                  | ISCOM S7600-24B8D |
| Dimensions (mm) (Width × Depth × Height) | 442 x 600 x 44                                                                                                                                                                   | 442 x 600 x 44    |
| Switching capacity                       | 25.6Tbps                                                                                                                                                                         | 16Tbps            |
| Packet forwarding rate                   | 13000Mpps                                                                                                                                                                        | 11900Mpps         |
| 400GE QSFP112 interfaces                 | 32                                                                                                                                                                               | 8                 |
| 200GE QSFP56 interfaces                  | N/A                                                                                                                                                                              | 24                |
| Fan modules                              | 6                                                                                                                                                                                | 6                 |
| Power supplies                           | 2                                                                                                                                                                                | 2                 |
| Typical power consumption                | 590W                                                                                                                                                                             | 530W              |
| Fan redundancy                           | The fan modules support hot backup. When one fan module fails, the device can work properly for a short time; however, we recommend immediately replacing the faulty fan module. |                   |
| Rated input voltage                      | <ul style="list-style-type: none"> <li>● DC input: -48 VDC</li> <li>● AC input: 110/220 VAC, 50/60 Hz</li> </ul>                                                                 |                   |
| Maximum input voltage                    | <ul style="list-style-type: none"> <li>● DC input: -36 to -72 VDC</li> <li>● AC input: 90–264 VAC, 47–63 Hz</li> </ul>                                                           |                   |
| Operating temperature                    | 0–45°C (0–1800 m altitude). When the altitude increases by 220 m between 1800 m and 5000 m, the highest operating temperature decreases by 1°C.                                  |                   |
| Operating humidity (RH)                  | RH: 5%–95% (non-condensing)                                                                                                                                                      |                   |
| Heat dissipation mode                    | Front-to-rear straight air duct and intelligent speed adjustment                                                                                                                 |                   |

| Hard specifications >>                   |                 |                   |
|------------------------------------------|-----------------|-------------------|
| Item                                     | ISCOM S7600-32C | ISCOM S7600-24C8B |
| Dimensions (mm) (Width × Depth × Height) | 442 x 420 x 44  | 442 x 420 x 44    |
| Switching capacity                       | 6.4Tbps         | 8Tbps             |
| Packet forwarding rate                   | 1849Mpps        | 1849Mpps          |
| 200GE QSFP56 interfaces                  | N/A             | 8                 |
| 100GE QSFP28 interfaces                  | 32              | 24                |
| Fan modules                              | 5               | 5                 |



|                           |                                                                                                                                                                                  |      |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Power supplies            | 2                                                                                                                                                                                | 2    |
| Typical power consumption | 244W                                                                                                                                                                             | 275W |
| Fan redundancy            | The fan modules support hot backup. When one fan module fails, the device can work properly for a short time; however, we recommend immediately replacing the faulty fan module. |      |
| Rated input voltage       | <ul style="list-style-type: none"><li>● DC input: -48 VDC</li><li>● AC input: 110/220 VAC, 50/60 Hz</li></ul>                                                                    |      |
| Maximum input voltage     | <ul style="list-style-type: none"><li>● DC input: -36 to -72 VDC</li><li>● AC input: 90–264 VAC, 47–63 Hz</li></ul>                                                              |      |
| Operating temperature     | 0–45°C (0–1800 m altitude). When the altitude increases by 220 m between 1800 m and 5000 m, the highest operating temperature decreases by 1°C.                                  |      |
| Operating humidity (RH)   | RH: 5%–95% (non-condensing)                                                                                                                                                      |      |
| Heat dissipation mode     | Front-to-rear straight air duct and intelligent speed adjustment                                                                                                                 |      |

## Software features>>>

|                       |                                                         |
|-----------------------|---------------------------------------------------------|
| Device visualization  | Support ISF and local/remote stacking.                  |
|                       | Support inter-device link aggregation M-LAG.            |
| Network visualization | Support VxLAN Layer 2 and Layer 3 gateways.             |
|                       | Support BGP-EVPN.                                       |
|                       | Support QinQ in VxLAN.                                  |
| Network Convergence   | Support PFC                                             |
|                       | Support ECN                                             |
|                       | Support RoCE (RoCE v1 and RoCE v2)                      |
|                       | Support RDMA                                            |
| MAC                   | Support automatically learning and aging MAC addresses. |

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|                    |                                                                                                                                              |
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|                    | Support the static, dynamic, and blackhole MAC addresses.                                                                                    |
|                    | Support filtering the source MAC address.                                                                                                    |
|                    | Support MAC address limit based on interface or VLAN.                                                                                        |
| <b>VLAN</b>        | Support 4K VLANs.                                                                                                                            |
|                    | Support VLAN based on MAC/protocol/IP subnet/interface.                                                                                      |
|                    | Support the Access, Trunk, and Hybrid modes.                                                                                                 |
|                    | Support basic QinQ and selective QinQ.                                                                                                       |
|                    | Support VLAN mapping (1:1/N:1).                                                                                                              |
|                    | Support MVRP.                                                                                                                                |
| <b>Multicast</b>   | Support IGMP v1/v2/v3, IGMP v1/v2/v3 Snooping, and MLD Snooping.                                                                             |
|                    | Support PIM-DM, PIM-SM, and PIM-SSM.                                                                                                         |
|                    | Support immediate leave of users.                                                                                                            |
|                    | Support multicast policies and multicast QoS.                                                                                                |
|                    | Support multicast VLAN.                                                                                                                      |
| <b>QoS/ACL</b>     | Support Ingress/Egress ACL.                                                                                                                  |
|                    | Support priority mapping. Each interface supports 8 queues and priority mapping.                                                             |
|                    | Support combined traffic classification based on Layer 2 protocol header, Layer 3 protocol, Layer 4 protocol, and 802.1p priority.           |
|                    | Support the following actions: ACL, CAR, Remark, and Schedule.                                                                               |
|                    | Support SP, WRR, DRR, SP+WRR, and SP+DRR queue scheduling modes.                                                                             |
|                    | Support congestion control mechanisms, such as WRED and tail drop.                                                                           |
|                    | Support traffic shaping.                                                                                                                     |
| <b>MPLS</b>        | Support MPLS L3 VPN.                                                                                                                         |
|                    | Support VPLS/ VLL.                                                                                                                           |
|                    | Support MCE.                                                                                                                                 |
|                    | Support P/PE.                                                                                                                                |
| <b>Loop guard</b>  | Support STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s).                                                                       |
|                    | Support BPDU Guard, root Guard, and loop protection.                                                                                         |
|                    | Support ERPS (ITU-T G.8032).                                                                                                                 |
| <b>Reliability</b> | Support aggregating LACP interfaces.                                                                                                         |
|                    | Support hardware BFD, support BFD for VRRP/BGP/ISIS/OSPF/static routing, and achieve fast fault detection mechanisms for various protocols.* |
|                    | Support VRRP and BFD for VRRP.                                                                                                               |
|                    | Support Ethernet OAM (802.1ag and 802.3ah).                                                                                                  |
|                    | Support ISSU and all-service online upgrade.                                                                                                 |
|                    | Support hot patches for online upgrade.                                                                                                      |
| <b>IP routing</b>  | Support IPv4 dynamic routing protocols, such as RIP, OSPF, ISIS, and BGP.                                                                    |
|                    | Support IPv6 dynamic routing protocols, such as RIPng, OSPFv3, ISISv6, and BGP4+.                                                            |
| <b>Security</b>    | Support AAA/RADIUS.                                                                                                                          |
|                    | Support TACACS+ and local authentication.                                                                                                    |

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|                                   |                                                                                                                                                                                               |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | Support 802.1x.                                                                                                                                                                               |
|                                   | Support MAC address authentication.                                                                                                                                                           |
|                                   | Support SSHv2.0, SFTP, and HTTPS.                                                                                                                                                             |
|                                   | Support plaintext authentication and MD5 ciphertext authentication of OSPF, RIPv2, and BGPv4 packets.                                                                                         |
|                                   | Support hierarchical command protection, which avoid illegal access by unauthorized users and assigns different configuration rights for users at different levels.                           |
|                                   | Support encryption technologies, such as MACsec and Cloudsec.*                                                                                                                                |
|                                   | Support interface-based and VLAN-based storm control.                                                                                                                                         |
|                                   | Support the whitelist, port security MAC, and MAC address limit.                                                                                                                              |
|                                   | Support IP Source Guard, DoS attack prevention, ARP attack prevent, TCP SYN Flood attack prevent, UDP Flood attack prevent, broadcast storm attack prevent, and huge traffic attack prevent.  |
|                                   | Support hierarchical scheduling and protection of control plane packets in CPU hardware queues.                                                                                               |
| <b>Management and maintenance</b> | Support login through the Console interface.                                                                                                                                                  |
|                                   | Support SNMPv1/v2c/v3.                                                                                                                                                                        |
|                                   | Support the Raisecom RCView NMS.                                                                                                                                                              |
|                                   | Support gRPC and Telemetry Stream traffic visualization.*                                                                                                                                     |
|                                   | Support unified user management and group-based/domain-based/time-based authorization.                                                                                                        |
|                                   | Support system logs and hierarchical alarms.                                                                                                                                                  |
|                                   | Support RMON                                                                                                                                                                                  |
|                                   | Support ZTP deployment, which can obtain office deployment files from USB flash disks or file servers and automatically load them, achieving on-site configuration and deployment of devices. |
|                                   | Support hardware health status visualization, thus monitoring key components, system temperature, power modules, fan modules in real time.                                                    |

The features or products marked with \* are to be released.

## Ordering information >>

### Chassis

|                   |   |                                                                                                 |
|-------------------|---|-------------------------------------------------------------------------------------------------|
| ISCOM S7600-32D   | A | ISCOM S7600-32D, including 6 fan modules. The power supply needs to be configured separately.   |
| ISCOM S7600-24B8D | A | ISCOM S7600-24B8D, including 6 fan modules. The power supply needs to be configured separately. |
| ISCOM S7600-32C   | A | ISCOM S7600-32C, including 5 fan modules. The power supply needs to be configured separately.   |
| ISCOM S7600-24C8B | A | ISCOM S7600-24C8B, including 5 fan modules. The power supply needs to be configured separately. |

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| Power supply     |   |                                                          |
|------------------|---|----------------------------------------------------------|
| RPA2164-220D1212 | A | ISCOM S7600-32D/24B8D universal AC power supply, 1600 W. |
| RPD2164-48D1212  | A | ISCOM S7600-32D/24B8D universal DC power supply, 1600 W. |
| RPA550-220D12    | A | ISCOM S7600-32C/24C8B universal AC power supply, 550 W.  |
| RPD550-48D12     | A | ISCOM S7600-32C/24C8B universal DC power supply, 550 W.  |