ISCOM2600G Series 1000 Mbit/s Access Ethernet Switches

Overview

The ISCOM2600G series switches are the new-generation, environmental-friendly, and energy-saving Ethernet switches independently developed by Raisecom, which can provide 1000 Mbit/s access and 10 Gbit/s uplink interfaces. Based on the high-performance hardware platform and Raisecom new-generation switching software platform, the ISCOM2600G series switches provide multiple features, such as flexible networking, various security control, and easy management and meanwhile support mature IPv6 and intelligent PoE management. The ISCOM2600G series switches support Intelligent Stacking Framework (ISF), which means that multiple switches can be virtualized as one device logically to form a highly reliable, scalable, manageable, and intelligent network. This series can be widely applied to multiple scenarios, such as enterprise park access and GE to desktop.
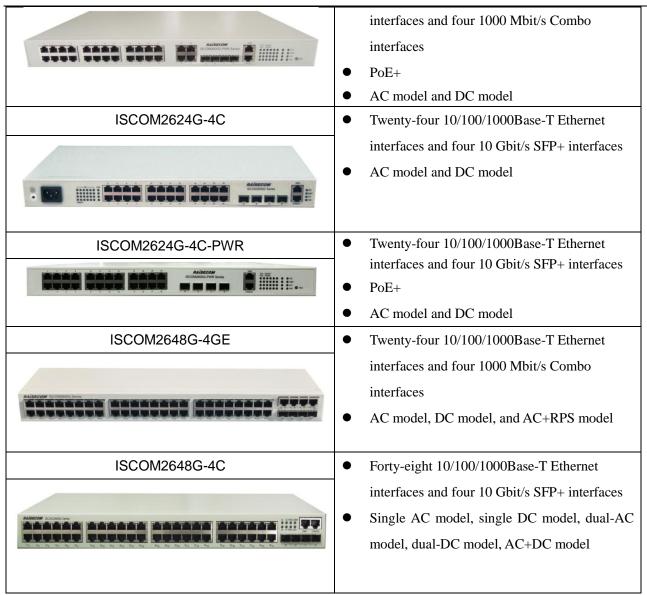
Product model and appearance

ISCOM2608G-2GE	
	• Eight 10/100/1000Base-T Ethernet interfaces and two 1000 Mbit/s Combo interfaces • AC model and DC model
ISCOM2608G-2GE-PWR	
	• Eight 10/100/1000Base-T Ethernet interfaces and two 1000 Mbit/s Combo interfaces • PoE+ • AC model and DC model
ISCOM2624G-4GE	
	• Twenty-four 10/100/1000Base-T Ethernet interfaces and four 1000 Mbit/s Combo interfaces • AC model, DC model, and AC+RPS model
ISCOM2624G-4GE-PWR	• Twenty-four 10/100/1000Base-T Ethernet

	interfaces and four 1000 Mbit/s Combo interfaces • PoE+ • AC model and DC model
ISCOM2624G-4C	• Twenty-four 10/100/1000Base-T Ethernet interfaces and four 10 Gbit/s SFP+ interfaces • AC model and DC model
ISCOM2624G-4C-PWR	• Twenty-four 10/100/1000Base-T Ethernet interfaces and four 10 Gbit/s SFP+ interfaces • PoE+ • AC model and DC model
ISCOM2648G-4GE	• Twenty-four 10/100/1000Base-T Ethernet interfaces and four 1000 Mbit/s Combo interfaces • AC model, DC model, and AC+RPS model
ISCOM2648G-4C	• Forty-eight 10/100/1000Base-T Ethernet interfaces and four 10 Gbit/s SFP+ interfaces • Single AC model, single DC model, dual-AC model, dual-DC model, AC+DC model

Features

Flexible Ethernet networking

In addition to traditional STP/RSTP/MSTP spanning tree protocol, the ISCOM2600G series switches also support the latest Ethernet Ring Protection Switching (ERPS) standard defined in ITU-T G.8032, which applies to various ring network topologies, such as single ring, tangent ring, and intersecting ring, and can provide sub-50ms

protection switching to achieve carrier-grade reliability.

The ISCOM2600G series switches support interface backup dual-homed protection, manual and static LACP to implement uplink backup, greatly improving the reliability of access-side devices, and also support G.8031 to implement end-to-end linear protection.

The ISCOM2600G series switches support loop detection, automatic loop detection and loop elimination, to ensure the stable operation of the network.

The ISCOM2600G series switches support complete Ethernet OAM (IEEE 802.3ah/802.1ag) to fast detect link faults.

Various security control

The ISCOM2600G series switches support multiple access control technologies and user authentication security technologies, such as ACL, Dot1X, RADIUS, and TACACS+ to flexibly adapt to multiple authentication requirements of the network environment.

ARP attacks and ARP virus are the number one threat to LAN security. The ISCOM2600G series switches support rich ARP defense functions, such as dynamic ARP detection which can check user validity and ARP packet validity, and ARP rate limiting which prevents the CPU from being impacted by a large number of ARP packets, and so on.

The ISCOM2600G series switches discard invalid packets that do not match the binding entry by establishing and maintaining the DHCP snooping binding table. By using the DHCP Snooping trusted interface, the ISCOM2600G series switches can also guarantee the legality of the DHCP server.

Easy maintenance and management

The ISCOM2600G series switches support various management modes, such as SNMPv1/v2c/v3, Raisecom NMS, CLI, Web network management, Telnet, in-band management, and out-of-band management, which facilitate maintenance; support multiple encryption methods, such as SSH2.0, which make management more secure; and support RMON and interface traffic statistics which facilitate network optimization and reconstruction.

The ISCOM2600G series switches support automatic configuration downloading and software upgrade from the DHCP server, and batch remote upgrade through Raisecom NMS to reduce the operation and maintenance costs.

The ISCOM2600G series switches support MAC-based VLAN partitions, which is a good solution to the smart and flexible management of mobile office.

The power interface on some models of the ISCOM2600G series switches is on the front panel, which simplifies the operation and maintenance (single-sided) of the entire equipment, and provides more flexible cabinet placement. You can place the cabinet against the wall or against the cabinet, saving the space.

With complete IPv6 management and certification functions, the ISCOM2600G series switches are suitable for the management in IPv6 network management environment.

Powerful and flexible PoE (for PoE models only)

The ISCOM2600G series switches comply with IEEE 802.3af and IEEE 802.3at standards. The interface can supply up to 30 W power.

The ISCOM2600G series switches are well compatible to PDs and provide forcible power supply mode for non-standard PDs.

The ISCOM2600G series switches support intelligent PoE management, including enabling/disabling power supply to interfaces, configuring output power of interfaces, configuring priority of power supply, power overloading protection, overtemperature protection.

The ISCOM2600G series switches support intelligent PoE power supply, including timed power supply, periodically restarting PDs, monitoring connection status of PDs, and restarting PDs upon disconnection.

Raisecom ISF

The ISCOM2600G series switches support ISF, which means that up to 9 switches can be logically virtualized into one switch to simplify configurations and management. Device reliability can be improved through redundancy backup among member devices. Link reliability can be improved through link aggregation across devices. Interfaces and bandwidths can be easily expanded by adding member devices. The GE interfaces or 10GE interfaces can be stacked, which is of low cost and simple structure. The ISCOM2600G series switches also support long-distance stacking.

Technical specifications

Model	ISCOM2608G-2GE ISCOM2608G-2GE-PWR	ISCOM2624G-4GE ISCOM2624G-4GE-PWR	ISCOM2624G-4C ISCOM2624G-4C-PWR	ISCOM2648G-4GE	ISCOM2648G-4C
Interface	Eight 10/100/1000Base-TX 1000 Mbit/s electrical interfaces and two 1000 Mbit/s Combo interfaces	Twenty-four 10/100/1000Base-TX 1000 Mbit/s electrical interfaces and four 1000 Mbit/s Combo interfaces	Twenty-four 10/100/1000Base-TX 1000 Mbit/s electrical interfaces and 4 10G SFP+/1G SFP optical interfaces	Forty-eight 10/100/1000Base-TX 1000 Mbit/s electrical interfaces and four 1000 Mbit/s Combo interfaces	Forty-eight 10/100/1000Base-TX 1000 Mbit/s electrical interfaces and 4 10G SFP+/1G SFP optical interfaces
Switching capacity	256 Gbit/s	256 Gbit/s	256 Gbit/s	256 Gbit/s	256 Gbit/s

Packet forwarding rate	15 Mpps	42 Mpps	96 Mpps	78 Mpps	131 Mpps
Dimensions (mm) (Width × Depth × Height)	• ISCOM2608G-2GE: 260 × 130 × 43.6 • ISCOM2608G-2GE-PWR: 300 × 220 × 43.6 • ISCOM2624G-4GE, ISCOM2624G-4C: 440 × 220 × 43.6 • ISCOM2624G-4GE-PWR, ISCOM2624G-4GE-PWR, ISCOM2648G-4GE, ISCOM2648G-4C: 440 × 300 × 43.6				
Management interface	• 1 RJ45 Console interface • 1 SNMP out-of-band management interface				
MAC address table	• 16K MAC addresses • Automatic learning and aging of MAC addresses and static MAC address • Static, dynamic, and blackhole MAC address entries • MAC address limit based on interface or VLAN • Managing MAC address flapping				
VLAN	• 4K VLANs • MAC/protocol/IP subnet/interface-based VLAN • Basic QinQ and selective QinQ • VLAN mapping • Private VLAN • Voice VLAN • GVRP				
Jumbo frame	Supported				
Ring network protection	• ERPS (G8032) • STP/RSTP/MSTP/MRSTP • BPDU protection and root protection • Loop detection				
Reliability	• Manual aggregation, static LACP, and MC-LAG • Interface backup • ELPS (G8031) • Ethernet OAM 802.3ah and 802.1ag				
IP routing	IPv4 and IPv6 static routes, RIP, OSPFv2, and RIPng*				

IPv6	• IPv6 Ping, IPv6 Tracert, IPv6 Telnet, and IPv6 FTP/TFTP/SFTP • IPv6 SNMP and Raisecom NView NNM IPv6 network management • IPv6 RADIUS, IPv6 TACACS+, IPv6 NTP and SNTP • IPv6 ACL • ND • Manual Tunnel configuration • IPv6 over IPv4 Tunnel • IPv6 IP Source Guard • DHCPv6 Relay, DHCPv6 Snooping, and DHCPv6 Client
Multicast	• IGMPv1/v2/v3 Snooping and immediate leave • Interface/user-based immediate leave • Static multicast group • IGMP MVR • MLDv1/v2 Snooping • IGMP filter • IGMP Proxy
DHCP	• DHCP Client • DHCP Snooping • DHCP Relay • DHCP Server and Option43 • DHCP Snooping Option 61/82 and DHCP Relay Option 82
Mirroring	• Traffic mirroring • Local and remote port mirroring
QoS/ACL	• Rate limiting in the ingress direction and egress direction of the interface • 8 queues for each interface • SP, WRR, DRR, SP+WRR, and SP+DRR • Packet redirection • 802.1p and DSCP priority remarking for packets • Interface-based traffic monitoring and dual-rate three-color CAR • L2–L4 packet filtering based on source MAC address and destination MAC address • Packet filtering based on source IP address, destination IP address, TCP/UDP source/destination interface ID, protocol, and VLAN • Hierarchy-CAR

Security	• Hierarchical user management and password protection • 802.1x authentication based on interface and MAC address • CPU protection and anti-ARP attack • Group binding of IP address, MAC address, interface, and VLAN • Blackhole MAC address • MAC address limit • AAA, RADIUS, and TACACS+ • Interface isolation • Port security MAC • SSHv2.0 • SFTP • HTTPS • DHCP Snooping and DHCP server which prevents against spoofing • Dynamic ARP inspection, preventing MITM and ARP DoS • BPDU guard and root guard
Management and maintenance	• ISF • Management through the Console interface and out-of-band interface • SNMPv1/v2c/v3 and various management modes, such as CLI, Web, Telnet, and SSHv2.0 • Raisecom NView NNM system • RMON • LLDP/LLDP-MED • Syslog and hierarchical alarm reporting • Ping and Tracert • Dying Gasp alarm • NTP and SNTP • Virtual cable test • Interface loopback • Auto-provisioning, which means that configurations can be automatically downloaded and software upgraded from the DHCP server • Interface loop detection • Optical module DDM • Link-state tracking • DLDP unidirectional link detection • Dual systems

PoE (for PoE models only)	- IEEE 802.3af and IEEE 802.3at-compliant, up to 30 W power for the interface - Forcible power supply mode for non-standard PDs - PoE power management, such as enabling/disabling power supply to interfaces, interface output power configuration, priority of power supply configuration, power overloading protection, and overtemperature protection - PoE timed power supply, periodical restart of PDs, PD connection monitoring, and restarting PDs upon disconnection.
Lightning protection	Interface lightning protection: 6 KV
Input voltage	- AC power: 220 VAC, 100–240 VAC, 50–60 Hz - DC power: -48 VDC, -36 to -72 VDC
Maximum power consumption	- ISCOM2608G-2GE: 15 W - ISCOM2608G-2GE-PWR: 150 W (PoE: 124 W) - ISCOM2624G-4GE, ISCOM2624G-4C: 25 W - ISCOM2624G-4GE-PWR, ISCOM2624G-4C-PWR: 440 W (PoE: 370 W) - ISCOM2648G-4GE: 38 W - ISCOM2648G-4C: 45 W
Energy saving and environmental protection	- Support IEEE802.3az energy conservation. - The PWR models and ISCOM2648G-4C support smart adjustment of fan speed according to the temperature. Other models adopt a fanless and silent design. - The ISCOM2608G-2GE-PWR (A) support smart adjustment of fan speed according to the temperature while the ISCOM2608G-2GE-PWR (R) adopts a fanless and silent design.
Environment requirements	- Operating temperature: 0–50 ℃ - Relative humidity: 5%–90% (non-condensing)

The feature marked with * is not released now but planned.

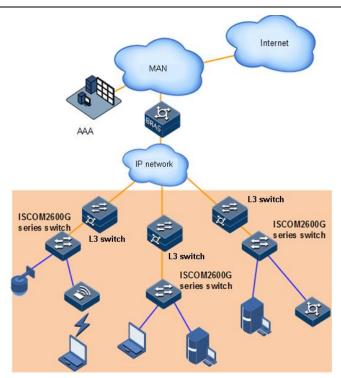# Networking application

Enterprise park network access

In enterprise park access scenario, the ISCOM2600G series switches serve as the access devices and are connected downstream to the data devices in the enterprise/campus/residency and upstream to the L3 aggregation devices, accessing and transmitting the bandwidth, voice, Wi-Fi, and video services, thus meeting the users' requirements for high bandwidth and multi-service access.

RAISECOM

Raisecom Technology Co., Ltd.

Ordering information

Product model	Description
ISCOM2624G-4GE-AC/DC	• Telecom MAN access Ethernet switch • Twenty-four 10/100/1000 Mbit/s Ethernet electrical interfaces • 4 Combo interfaces (four 1000 Mbit/s optical interfaces which support 100/1000 Mbit/s SFP optical modules and four 10/100/1000 Mbit/s electrical interfaces) • Single AC/DC power supply
ISCOM2624G-4GE-RPS-AC	• Telecom MAN access Ethernet switch • Twenty-four 10/100/1000 Mbit/s Ethernet electrical interfaces • 4 Combo interfaces (four 1000 Mbit/s optical interfaces which support 100/1000 Mbit/s SFP optical modules and four 10/100/1000 Mbit/s electrical interfaces) • 220 VAC power supply, one 12 V input RPS interface which can be connected to an additionally purchased RPS for power backup
ISCOM2624G-4C-AC/DC	• Telecom MAN access Ethernet switch • Twenty-four 10/100/1000 Mbit/s Ethernet electrical interfaces • 4 SFP+ 10GE optical interfaces (support 1000 Mbit/s SFP/10 Gbit/s SFP+

	• optical modules)
	• Single AC/DC power supply
ISCOM2648G-4C-AC/DC/S	• Telecom MAN access Ethernet switch
	• Forty-eight 10/100/1000 Mbit/s Ethernet electrical interfaces
	• 4 SFP+ 10GE optical interfaces (support 1000 Mbit/s SFP/10 Gbit/s SFP+ optical modules)
	• Single AC/DC power supply
ISCOM2648G-4C-AC/DC/D	• Telecom MAN access Ethernet switch
	• Forty-eight 10/100/1000 Mbit/s Ethernet electrical interfaces
	• 4 SFP+ 10GE optical interfaces (support 1000 Mbit/s SFP/10 Gbit/s SFP+ optical modules)
	• Dual AC/DC power supplies
ISCOM2648G-4C-AC_DC	• Telecom MAN access Ethernet switch
	• Forty-eight 10/100/1000 Mbit/s Ethernet electrical interfaces
	• 4 SFP+ 10GE optical interfaces (support 1000 Mbit/s SFP/10 Gbit/s SFP+ optical modules)
	• Dual power supplies, one AC + one DC
ISCOM2648G-4GE-AC/DC	• Telecom MAN access Ethernet switch
	• Forty-eight 10/100/1000 Mbit/s Ethernet electrical interfaces
	• 4 Combo interfaces (4 optical interfaces which support 100/1000 Mbit/s SFP optical modules and four 10/100/1000 Mbit/s electrical interfaces)
	• Single AC/DC power supply
ISCOM2648G-4GE-RPS-AC	• Telecom MAN access Ethernet switch
	• Forty-eight 10/100/1000 Mbit/s Ethernet electrical interfaces
	• 4 Combo interfaces (4 optical interfaces which support 100/1000 Mbit/s SFP optical modules and four 10/100/1000 Mbit/s electrical interfaces)
	• Single 220 VAC power supply, one 12 V input RPS interface which can be connected to an additionally purchased RPS for power backup
ISCOM2608G-2GE-AC/DC	• Telecom MAN access Ethernet switch
	• Eight 10/100/1000M Ethernet electrical interfaces
	• 2 Combo interfaces (2 optical interfaces which support 100/1000 Mbit/s SFP optical modules and two 10/100/1000 Mbit/s electrical interfaces)
	• 1 SNMP interface
	• Single AC/DC power supply
ISCOM2608G-2GE-PWR-AC/DC	• Layer 2 Ethernet switch
	• Eight 10/100/1000 Mbit/s electrical interfaces (IEEE 802.3af/802.3at-compliant)
	• 2 Combo interfaces (2 optical interfaces which support 100/1000 Mbit/s SFP optical modules and two 10/100/1000 Mbit/s electrical interfaces)
	• Version A: single AC/DC power supply

	• Version R: single AC power supply
ISCOM2624G-4GE-PWR-AC/DC	• Layer 2 Ethernet switch • Twenty-four 10/100/1000M electrical interfaces (IEEE 802.3af/802.3at-compliant) • 4 Combo interfaces (4 optical interfaces which support 100/1000 Mbit/s SFP optical modules and four 10/100/1000 Mbit/s electrical interfaces) • Single AC/DC power supply
ISCOM2624G-4C-PWR-AC/DC	• Layer 2 Ethernet switch • Twenty-four 10/100/1000 Mbit/s electrical interfaces (IEEE 802.3af/802.3at-compliant) • 4 SFP+ 10GE optical interfaces (support 1000 Mbit/s SFP or 10 Gbit/s SFP+ optical modules) • Single AC/DC power supply