



Overview

The RS-ES-500-28XQS high-performance 10G L3 managed aggregation switch launched by Rubisec, which is oriented to the next-generation metropolitan area networks, data centers, campus networks, and enterprise networks. It has 24*1/10G SFP+ ports and 4*40/100G (QSFP28) fiber ports. Use 1U/19-inch installation.

The RS-ES-500-28XQS is equipped with complete L3 management functions, with comprehensive protocols and applications. On the basis of providing high-performance L2/L3/L4 wire-speed switching service deployment and management, it further integrates IPv6, MPLS VPN, and network Multiple network services such as security, traffic analysis, virtualization, etc., combined with multiple data center high-reliability technologies such as uninterrupted upgrades, uninterrupted forwarding, graceful restart, redundancy protection, etc., to ensure the longest uninterrupted communication capability of the network.

The switch supports functions such as RIP, OSPF, BGP, and PIM-DM/SM, and is ideal for traditional or fully virtualized data centers. Network application managers can flexibly select appropriate optical fiber connections based on transmission distance or required transmission speed to effectively expand 1G/10G/40G/100G networks.

The RS-ES-500-28XQS has 1.28Tbps switching capacity, and key modules adopt 1:1 redundancy backup. It can handle very large amounts of data in a secure topology and is very suitable for network cores, data centers, and metropolitan area network cores in various industries and convergence, campus network core, and other places.

Model	RS-ES-500-28XQS
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Interface Characteristics

Fixed Port	1*Console RS232 port 1*USB 2.0 configuration port 24*1/10G SFP+ fiber ports 4*40G/100G QSFP28 fiber ports 1*10/100/1000M RJ45 management port
Optical Fiber Port	10G SFP+/ QSFP28 optical fiber ports, default no include optical modules (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable / Distance	Multi-mode: 850nm / 0~500M(1.25G), 0~300M(10G), Single-mode: 1310nm / 0~ 40KM, 1550nm / 0~120KM.

Chipset Parameters

Network Management Type	L3
Network Protocol	IEEE802.3u 100Base-TX , IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3ae 10G SFP+ , IEEE802.3ba 40G QSFP, IEEE802.32ba 100G QSFP28, IEEE802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	128Tbps (Non-blocking)
Forwarding Rate@64byte	952Mpps
MAC	32K
Buffer Memory	32M
Jumbo Frame	12K
LED Indicators	Power: PWRA, PWRB (Green), System: SYS (Green), Fiber port: CGO-4(Green)

Power Supply

Total PWR / Input Voltage	75W*2/ (AC100-240V)
Power Consumption	Standby<30W, Full Load<70W
Power Supply	Hot-Swap power supply AC100~240V 50~60Hz 1A*2

Physical Parameters	
Operation TEMP / Humidity	-20°C~+55°C, 5%~90% RH Non condensing
Storage TEMP / Humidity	-40°C~+75°C, 5%~95% RH Non condensing
Ingress Protection	IP30
Lighting Protection	6KV 8/20us
Dimension (L*W*H)	442.5*315*44mm
Net / Gross Weight	<6.0kg / <6.3kg
Installation	Desktop, 19 inch 1U cabinet installation

Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
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Software Features	
Virtualization and Stacking	Virtualization, Local stacking and remote stacking MAD stack split detection mechanism based on LACP, BFD, and ARP Distributed device management, distributed link aggregation, and distributed elastic routing
Ipv4	Policy routing, BFD for OSPF, BGP Equal-cost routing to achieve load balancing Static routing, RIP v1/v2, OSPF, BGP, IS-IS, BEIGRP
Ipv6	MLD v1/v2, MLD Snooping ICMPv6, DHCPv6, ACLv6, IPv6 Telnet Manual tunnel, ISATAP tunnel, 6to4 tunnel IPv6 static routing, RIPng, OSPFv3, BGP4+ IPv6 neighbor discovery, Path MTU discovery
MAC Exchange	View and clear the MAC address MAC address aging time is configurable IEEE 802.1AE MacSec Security Control Limit the number of MAC address learning Black hole MAC table entry, MAC address filtering function Static configuration and dynamic learning of MAC addresses
VLAN	1:1 and N:1 VLAN Mapping Basic QinQ and flexible QinQ functions 4K VLAN entries, GVRP, Private VLAN
Link Aggregation	10G port aggregation, Static aggregation, Dynamic aggregation
Flow Monitoring	sFLOW

DHCP	DHCP Snooping option82/ DHCP Relay option82 DHCP Client, DHCP Snooping, DHCP Relay, DHCP Server Zero configuration methods such as DHCP auto-config and CWMP-TR069
STP/ERPS	BPDU protection, root protection, loop protection ERPS Ethernet Protection Protocol (G.8032) 802.1D (STP), 802.1W (RSTP), 802.1S (MSTP)
Multicast	Enhanced L3 multicast protocol Multicast traffic replicated across VLAN MFF, MVRP, PIM snooping, PIM-SM, PIM-DM Multicast group policy and multicast group number limit IGMP v1/v2/v3, IGMP Snooping v2/v3, IGMP Fast Leave
ARP	Free ARP, Dynamic ARP Inspection ARP source suppression, ARP anti-attack Static entries, standard proxy ARP and local proxy ARP ARP Detection function (check based on DHCP Snooping security entries, 802.1x entries, or IP/MAC static binding entries)
Mirroring	Flow mirroring, N: 4 port mirroring, Local and remote port mirroring
MPLS VPN	MCE, LDP protocol, MPLS TE, MPLS OAM P/PE Functional Requirements of MPLS VPN
QoS / ACL	802.1P/DSCP priority remarking CAR traffic limit, Traffic policing and traffic shaping Queue scheduling methods such as SP, WRR, SP+WRR, etc. Congestion avoidance mechanisms such as Tail-Drop and WRED Traffic classification based on each field of the L2/L3/L4 protocol header Ingress and Egress ACL, match L2/L3/L4 and IP quintuple, copy, forward and discard Hash origin and same destination load balancing to ensure session integrity of traffic output
Security	Port security, IP+MAC+port binding DHCP Snooping, DHCP Option 82 Port isolation, command line hierarchical protection uRPF, IEEE 802.1x certified, Radius, BDTacacs+ certified Suppression of multicast, broadcast, and unknown unicast packets Prevent DDoS attacks, TCP SYN Flood attacks, UDP Flood attacks, etc. ACL flow identification and filtering security mechanism based on L2/L3/L4
Reliability	Optional power supply 1+1 backup HSRP, VRRP hot standby protocol ISSU (In-Service Software Upgrade) EAPS, ERPS ring network protection GR for OSPF, BGP, BFD for OSPF, BGP Static/ LACP link aggregation, cross-service card link aggregation
Management	ZTP(Zero Touch Provisioning) Management based on browser Web Traffic statistics analysis such as sFLOW Support USB for file upload and download NTP, Syslog, ISSU, 802.1AG and 802.3AH Power alarm function, Console, Telnet, SSH 2.0 Ping, Tracert, Track, Telnet remote maintenance SNMP (Simple Network Management Protocol) File upload and download management in TFTP mode Fan, temperature alarm, debugging information output Classified alarm, SNMP v1/v2/v3, RMON event history

Energy Saving	IEEE802.3az green energy Ethernet
System	Category 5 Ethernet network cable Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

Packing List	Content	Qty	Unit
Packing List	28-port 10G core routing switch	1	SET
	AC Power Cable	2	PC
	RJ45 to DB9 adapter cable	1	PC
	Mounting Kits (Hanging Ear)	1	SET
	Warranty Card	1	PC

Ordering Information	
Model	Description
RS-ES-500-28XQS	L3 managed 10G Ethernet core routing switch with 24*1/10G SFP+ fiber ports and 4*40/100G QSFP28 fiber ports. Redundant dual AC power supply and support 19-inch 1U cabinet mount.