



Overview

The RS-ES-400-28GSX is a 10G uplink managed Ethernet fiber switch independently developed by Rubisec.

It has 24*10/100/1000Base-T ports and 8*100/1000Base-X SFP ports and 4*1/10G SFP+ fiber slot ports. Each port can support wire-speed forwarding.

The RS-ES-400-28GSX has L3 full network management function, supports IPV4/IPV6 management, static and dynamic route full line rate forwarding, complete security protection mechanism, complete ACL/QoS policy and rich VLAN functions, and is easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS(<20ms) to improve link backup and network reliability.

When one-way network fails, communication can be quickly restored to ensure important Uninterrupted communication for applications. According to the actual application requirements, you can configure multiple application services such as port traffic control, VLAN division, and SNMP through the Web network management mode.

It satisfies high-density network application environment and is suitable for medium, large-scale scenes such as hotel, campus, park, shopping mall, scenic spot, hospital, bank to form an economical, efficient and reliable communication network.

Model	RS-ES-400-28GTSX
Interface Characteristics	
Fixed Port	1*Console RS232 port 24*10/100/1000Base-T ports 8*100/1000Base-X SFP ports 4*1/10G SFP+ fiber slot ports
Ethernet Port	10/100/1000Base-T(X) ports supports auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meters) 100BASE-TX: Cat5 or later UTP(≤100 meters) 1000BASE-T: Cat5e or later UTP(≤100 meters)
Optical Fiber Port	1/10G SFP+ optical fiber port, default no include optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Optical Fiber Port Expansion	Turbo overclocking 2.5G optical module expansion and ring network
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	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3ae 10GBase-SR/LR, IEEE802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	144Gbps (Non-blocking)
Forwarding Rate@64byte	107.14Mpps
CPU	500MHz
DRAM	2G
FLASH	128M
MAC	32K
Buffer Memory	32M

Jumbo Frame	9.6K
LED Indicators	Power: PWR (Yellow), System: SYS(Yellow), Network: Link (Yellow), Fiber port: L/A (Green)
Reset Switch	Yes, press and hold the switch for 10 seconds and release it to restore the factory settings

Power Supply

Total PWR / Input Voltage	60W (AC100-240V)
Power Consumption	Standby<20W, Full Load<45W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 1.0A

Physical Parameters

Operation TEMP / Humidity	-20°C~+55°C, 5%~90% RH Non condensing
Storage TEMP / Humidity	-40°C~+80°C, 5%~95% RH Non condensing
Ingress Protection	IP30
Lighting Protection	4KV 8/20us
Dimension (L*W*H)	440*290*44.5mm
Net / Gross Weight	<3.5kg / <4.3kg
Installation	Desktop, 19 inch 1U cabinet installation

Certification

CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS

Software Features	
Interface	<p>IEEE802.3X (Full-duplex) Port temperature protection setting No connection port automatic sleep Port green Ethernet Energy-saving setting Broadcast storm control based on port speed SFP+ optical port DDMI real-time digital diagnosis The speed limit of the message flow in the access port, minimum particle size is 64Kbps.</p>
Layer 3 Features	<p>IPv4 Equal Cost Routing NG protocol, maximum 1000 entries ARP protocol, maximum 1000 entries Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6 IPV4/IPV6 VRRP, the maximum group is 255 IPV4/IPV6 VLANIF interface supports up to 128 IPV4/IPV6 static route/default route supports up to 128 entries L3 network management function, IPV4/IPV6 dual-stack management IPV4 dynamic routing, RIPv1/v2, OSPFv2, BGP4+, 4000 routing entries IPV6 dynamic routing OSPFv3, BGP+, RIPng, IPV6 management, 1000 routing entries Layer 3 routing and forwarding, support communication between different network segments and different VLANs</p>
VLAN	<p>Voice VLAN, QinQ configuration, IEEE802.1q VLAN based on MAC, VLAN based on the protocol 4K VLAN based on port, Port configuration of Access, Trunk, Hybrid</p>
Port Aggregation	<p>802.3ad LACP dynamic aggregation, Static aggregation; Max. 18 aggregation groups and 8 ports per group.</p>
Spanning Tree	<p>STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)</p>
Industrial Ring Network Protocol	<p>Support ERPS ring network, ring network self-healing time is less than 20ms, ITU-T G.8032; Max. 250 Rings; Max. 250 devices per ring.</p>
Multicast	<p>MLD Snooping v1/v2, Multicast VLAN IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out</p>
Port Mirroring	<p>Bidirectional traffic mirroring for basic ports</p>
QoS	<p>Flow-based Rate Limiting Flow-based Packet Filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS, Priority Mark/Remark Queue Scheduling Algorithm (SP, WRR, SP+WRR)</p>
ACL	<p>Port-based Issuing ACL, ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.</p>

Security	<p>IP-MAC-VLAN-Port binding ARP inspection, Anti-DoS attack AAA & RADIUS, MAC learning limit Mac black holes, IP source protection IEEE802.1X & MAC address authentication Broadcast storm control, Backup for host datum SSH 2.0, SSL, Port isolation, ARP message speed limit User hierarchical management and password protection</p>
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP relay
Management	<p>CPU instant utilization status view Console/AUX Modem/Telnet/SSH2.0 CLI One-key recovery, Cable Diagnose, LLDP Web Management (HTTPS), NTP, System work log, Ping Test Rubisec NMS- Smart Network Management System Platform (LLDP+SNMP) Download & Management on FTP, TFTP, Xmodem, SFTP, SNMP V1/V2C/V3</p>
System	<p>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</p>

Packing List	Content	Qty	Unit
Packing List	36-port 10G uplink managed L3 Ethernet fiber switch	1	SET
	AC Power Cable	1	PC
	RJ45-DB9 Line	1	PC
	Mounting Kits (Hanging Ear)	1	SET
	User Guide	1	PC
	Warranty Card	1	PC

Ordering Information	
Model	Description
RS-ES-400-28GTSX	L3 managed Ethernet aggregation /core fiber switch with 24*10/100/1000Base-T ports and 8*100/1000Base-X SFP ports and 4*1/10G SFP+ fiber ports. Support 1U/19 inch rack installation.