12 Port Multi-Gigabit Layer 3 Business-Class Managed Non-PoE Network Switch (12x 10GE SFP+)

RG-NBS5500-12XS

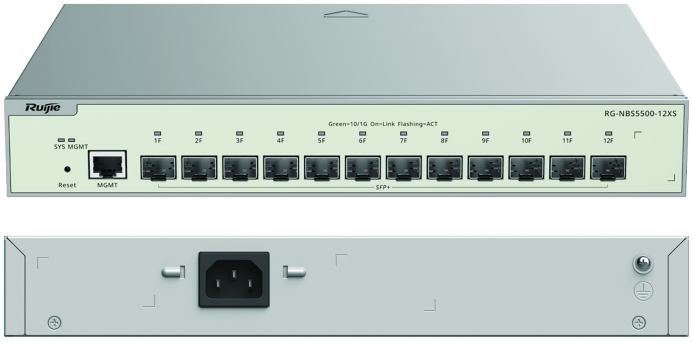
The RG-NBS5500-12XS is a 12-port full 10 Gigabit SFP+ Layer 3 managed switch designed for high-performance enterprise networks and Wi-Fi 7 infrastructure. Its 240 Gbps switching capacity provides fast, reliable aggregation for bandwidth-intensive devices and services. Advanced Layer 3 features include static routing, OSPF, DHCP server and relay, multicast management and VCS. Comprehensive security and redundancy functions help protect critical networks, while the dedicated management port and lifetime-free Ruijie Cloud management simplify configuration, monitoring and maintenance.

5-Year Manufacturer's Warranty

For full terms & conditions, please see – Ruijie Warranty T&Cs.

Features and Benefits

- Twelve 10 Gigabit SFP+ ports deliver high-speed fibre connectivity for network aggregation, servers, switches and Wi-Fi 7 infrastructure.
- 240 Gbps switching capacity and 178.56 Mpps forwarding provide reliable performance for demanding, high-traffic enterprise networks.
- Advanced Layer 3 features, including static routing and OSPF, enable efficient communication across complex network environments.
- Built-in DHCP server and relay simplify IP address distribution and management across multiple network segments.
- VCS, ERPS and system redundancy features improve network resilience and help maintain service continuity.
- Lifetime-free Ruijie Cloud management and comprehensive security policies enable convenient remote administration and stronger network protection.



Specifications

Hardware Specifications

Port Specifications

Total number of RJ45 ports	1
Total number of optical ports	12
Number of 1GE combo ports	No
Number of 1GE SFP ports	No
Number of 10GE SFP+ ports	12
Number of 10/100BASE-T ports	No
Number of 10/100/1000BASE-T ports	No
Number of 10/100/1000/ 2500BASE-T ports	No
Number of 100/1000/2.5G/5G/ 10GBASE-T ports	No
Module slots	No
Reset button	1
DIP switch	No

Power Supply and Consumption

Power input	220 V AC power supply: • Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz • Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz • Maximum input current: 2 A

Power Supply and Consumption (continued)

Maximum power consumption	44 W
Power output	No
Power supply	Fixed power supply

System Specifications

RAM	1 GB
Flash memory	256 MB
Forwarding rate	178.56 Mpps
Switching capacity	240 Gbps(bit/s)

Dimensions and Weight

Casing	Metal
Product dimensions (W x D x H)	300 mm x 232 mm x 44 mm (11.81 in. x 9.13 in. x 1.73 in.)
Weight	2.26 kg (4.98 lbs) (without packaging materials)
Shipping weight	3.04 kg (6.7 lbs)

Environment and Reliability

Hot swapping of fan modules	No
Fan	2 x fixed fans
Cooling	Air cooling, left-to-right airflow
Acoustic noise	25°C (77°F): 40 dB
Mounting options	Rack
Hot swapping of cables	Service ports support hot swapping of cables.
MTBF	400,000 hours
Operating temperature	0°C to +50°C (32°F to 122°F)
Storage temperature	−40°C to +70°C (−40°F to +158°F)
Operating humidity	10% RH to 90% RH (non-condensing)
Storage humidity	5% RH to 95% RH (non-condensing)
Altitude	Operating altitude: −500 m to +5,000 m (−1,640.42 ft. to +16,404.20 ft.) Storage altitude: −500 m to +5,000 m (−1,640.42 ft. to +16,404.20 ft.)
Corrosion class	No
ESD protection	Contact discharge: 6 kV Air discharge: 8 kV

Environment and Reliability (continued)

Surge protection	Service port: ±6 kV for common mode Power connector: ±6 kV for both common mode and differential mode

Certification and Regulatory Compliance

EMC	EN 55032 EN 61000-3-2 EN 61000-3-3 EN 55035 EN 300 386
Safety compliance	IEC 62368-1
Certification	CE, FCC, IC, cTUVus

Software Specifications

Authentication

RADIUS	Yes
802.1X authentication	Yes
Port-based 802.1X authentication	Yes
MAC address-based 802.1X authentication	Yes
Guest VLAN	Yes

Basic Configurations

PoE watchdog	No
Online upgrade	Yes

Ethernet Switching

Maximum number of VLANs	4094
Maximum number of MAC address entries	32000
Interface flow control	Yes
MAC address-based VLAN	No
IP subnet – based VLAN assignment	No
IEEE 802.1Q VLAN	Yes
Basic QinQ	No

Ethernet Switching (continued)

VLAN configuration supported on LAN ports	Yes
Voice VLAN	Yes
STP (IEEE 802.1d)	Yes
RSTP (IEEE 802.1w)	Yes
MSTP (IEEE 802.1s)	Yes
LLDP	Yes
LLDP-MED	Yes
Static MAC address	Yes
MAC address filtering	Yes
Static aggregation	Yes
LACP	Yes
Inbound or outbound rate limiting based on interface traffic	Yes

Gateway Features

802.1p priority-based traffic classification	Yes
DSCP priority-based traffic classification	Yes
Egress queues based on 802.1p and DSCP priorities	Yes
SP	Yes
WRR	Yes
SP+WRR	Yes
Global QoS	Yes

Interface

Jumbo frame length (MTU)	9216 bytes (interface configuration mode)
Cable test	Yes

IP Routing

Maximum number of IPv4 static routes	500
IPv6 routing table size (network route)	500
Maximum number of IPv6 static routes	500
IPv4 static route	Yes
IPv6 static route	Yes

IP Routing (continued)

OSPFv2	Yes
OSPFv3	Yes

IP Service

Maximum number of ARP entries	2000
IPv4 routing table size (host route)	12000
ARP	Yes
IPv4 ping	Yes
IPv4 traceroute	Yes
IPv6	Yes
ICMPv6	Yes
IPv6 ping	Yes
IPv6 traceroute	Yes
DNS client	Yes
DNSv6 client	Yes
DHCP relay	Yes
DHCP server	Yes
DHCP client	Yes

Multicast

IGMPv1 snooping	Yes
IGMPv2 snooping	Yes
Basic IGMPv3 snooping	Yes
Full IGMPv3 snooping	Yes
IGMP filtering	Yes
IGMPv1, v2, and v3	Yes

Network Management and Monitoring

Fan speed adjustment	Automatic speed adjustment
Port mirroring	Yes
Mirroring	Yes
HTTP login	Yes
HTTPS login	Yes
RLOG	Yes
SON	Yes
Syslog	Yes
Client auto-discovery	Yes
PoE service failure	No
PoE power overload	No
SSH	No
Camera detection	Yes

Network Management and Monitoring (continued)

Loop alarm	Yes
MAC address entries	Yes
IP address pool conflicts	Yes
Full ARP table	Yes
eWeb management	Yes
Ruijie Cloud management	Yes
Ruijie Reyee App management	Yes
SNMPv1, v2c, and v3	Yes

Reliability

Number of VCS members	2
System dual backup	Yes (Only supported on devices with a factory-installed software version of ReyeeOS 2.320 or later)
Enabling dual backup for the partition Uboot (based on a single flash memory)	Yes
Load balancing	No
ERPS	Yes:Stand-alone No:Hot standby

Security

Maximum number of ACEs	Number of ACEs in the inbound direction of an interface: 1900 Number of ACEs in the outbound direction of an interface: 0
Port isolation	Yes
Broadcast storm control	Yes
Multicast storm control	Yes
Unknown unicast storm control	Yes
DHCP snooping	Yes
Standard ACL	Yes
Extended MAC ACL	Yes
Extended IP ACL	Yes
IPv6 ACL	Yes
IP-MAC-port binding	Yes
ARP anti-spoofing	Yes

Security (continued)

IP source guard	Yes
CPU Protection Policy	Yes

System Performance Capacity

Recommended camera limit	200 W H265: 400 400 W H265: 200

Package Contents

Device

Device	1

Accessories

Rubber pad	4
Power cord retention clip	1
Screw	8 M3 x 6 mm cross recessed countersunk head screws
Grounding cable	1 x 1 m (3.28 ft.)
Power cord	1 x 1.5 m (4.92 ft.)
Rack-mount bracket	2

Manual

User Manual	1
Warranty Card	1