28 Port Gigabit Layer 3 Business-Class Cloud-Managed Non-PoE Network Switch (24x RJ45 GbE, 4x SFP)

RG-NBS51-24G4S

The RG-NBS51-24G4S is a 28-port Layer 3 cloud-managed switch designed for high-performance commercial and enterprise networks. It features 24 Gigabit Ethernet ports, four Gigabit SFP uplinks and a 56 Gbps switching capacity. Advanced IPv4/IPv6 routing, VLAN, QoS and security features provide efficient, protected network management. With 6kV surge protection and lifetime-free Ruijie Cloud management, it delivers reliable performance and convenient remote administration.

5-Year Manufacturer's Warranty

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

Features and Benefits

- 24 Gigabit Ethernet ports provide fast, reliable connectivity for computers, servers, cameras and other network devices.
- Four Gigabit SFP uplinks enable flexible fibre connections between switches, buildings and network infrastructure.
- 56 Gbps switching capacity and a 41.66 Mpps forwarding rate deliver smooth performance across high-traffic networks.
- Advanced Layer 3 features, including IPv4/IPv6 static routing, OSPF and DHCP services, simplify larger network deployments.
- VLAN, QoS, ACL, port isolation and 6kV surge protection help improve network performance, security and reliability.
- Lifetime-free Ruijie Cloud management enables convenient remote configuration, monitoring and maintenance through the Ruijie Reyee App.

Specifications

Hardware Specifications

Port Specifications

Total number of RJ45 ports	24
Total number of optical ports	4
Number of 1GE combo ports	No
Number of 1GE SFP ports	4
Number of 10GE SFP+ ports	No
Number of 10/100BASE-T ports	No
Number of 10/100/1000BASE-T ports	24
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: 1.5 A
Maximum power consumption	28.028 W
Power output	No
Power supply	Fixed power supply

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Matchmaster For the Best

System Specifications

RAM	512 MB
Flash memory	256 MB
Forwarding rate	41.66 Mpps
Switching capacity	56 Gbps(bit/s)

Dimensions and Weight

Casing	Metal
Product dimensions (W x D x H)	440 mm x 207.5 mm x 43.6 mm (17.32 in. x 8.17 in. x 1.72 in.)
Weight	2.9 kg (6.39 lbs) (without packaging materials)
Shipping weight	4.02 kg (8.86 lbs)

Environment and Reliability

Hot swapping of fan modules	No
Fan	1 x fixed fan
Cooling	Air cooling, left-to-rear airflow
Acoustic noise	25°C (77°F): 45 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
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

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	16000
Interface flow control	Yes
MAC address-based VLAN	No
IP subnet – based VLAN assignment	No
IEEE 802.1Q VLAN	Yes
Basic QinQ	No
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

Ethernet Switching (continued)

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)
EEE	Yes
Cable test	Yes

IP Routing

Maximum number of IPv4 static routes	500
IPv6 routing table size (network route)	128
Maximum number of IPv6 static routes	128
IPv4 static route	Yes
IPv6 static route	Yes
OSPFv2	Yes
OSPFv3	Yes

IP Service

Maximum number of ARP entries	2000
IPv4 routing table size (host route)	6000

IP Service (continued)

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

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
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

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Network Management and Monitoring (continued)

SNMPv1, v2c, and v3	Yes

Reliability

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

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
IP source guard	Yes
CPU Protection Policy	Yes

System Performance Capacity

Recommended camera limit	200 W H265: 350 400 W H265: 170

Package Contents

Device

Device	1

Accessories

Rubber pad	4
Power cord retention clip	1
Screw	8 M4 x 8 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