

10 Port Gigabit Managed Network Switch (8 Port GbE, 2 SFP)

RG-NBS31-8G2S



The RG-NBS31-8G2S is a 10-port Layer 2 cloud-managed switch designed for reliable business and CCTV networks. It features eight Gigabit Ethernet ports and two Gigabit SFP uplinks, delivering a 20 Gbps switching capacity. Advanced VLAN, QoS, security and loop-prevention features help optimise and protect network traffic, while automatic IP camera recognition simplifies CCTV management. Lifetime-free Ruijie Cloud management enables convenient remote monitoring and maintenance from anywhere.

3-Year Manufacturer's Warranty

For full terms & conditions, please see – [Ruijie Warranty T&Cs](#).

Features and Benefits

- » Eight Gigabit Ethernet ports provide fast, reliable wired connections for computers, cameras and other network devices.
- » Two Gigabit SFP uplinks support flexible fibre connections across longer distances and between network switches.
- » 20 Gbps switching capacity and a 14.88 Mpps forwarding rate deliver smooth, efficient network performance.
- » Advanced Layer 2 features, including VLAN, QoS, STP/RSTP/MSTP and LACP, improve traffic management and network reliability.
- » Automatic IP camera recognition, loop alarms and CCTV network monitoring simplify security system installation and troubleshooting.
- » 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	8
Total number of optical ports	2
Number of 1GE combo ports	No
Number of 1GE SFP ports	2
Number of 10GE SFP+ ports	No
Number of 10/100BASE-T ports	No
Number of 10/100/1000BASE-T ports	8
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	DC adapter: • 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 • Rated input current: 1.0 A Output: • Rated output voltage: 12 V DC • Maximum output current: 1.0 A
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Power Supply and Consumption (continued)

Maximum power consumption	8 W
Power output	No
Power supply	DC power adapter

System Specifications

RAM	256 MB
Flash memory	16 MB
Forwarding rate	14.88 Mpps
Switching capacity	20 Gbps(bit/s)

Dimensions and Weight

Casing	Metal
Product dimensions (W x D x H)	260 mm x 120 mm x 43.6 mm (10.24 in. x 4.72 in. x 1.72 in.)
Weight	1.2 kg (2.65 lbs) (without packaging materials)
Shipping weight	1.6 kg (3.53 lbs)

Environment and Reliability

Hot swapping of fan modules	No
Fan	Fanless design
Cooling	Natural cooling
Acoustic noise	No
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: ± 4 kV for common mode and ± 2 kV for differential mode
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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	8000
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 (global configuration mode)
EEE	Yes
Cable test	Yes

IP Routing

IPv4 static route	No
IPv6 static route	No
OSPFv2	No
OSPFv3	No

IP Service

IP Service (continued)

Maximum number of ARP entries	1000
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	No
DHCP server	No
DHCP client	Yes

Multicast

IGMPv1 snooping	Yes
IGMPv2 snooping	Yes
Basic IGMPv3 snooping	Yes
Full IGMPv3 snooping	No
IGMP filtering	Yes
IGMPv1, v2, and v3	No

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	No
eWeb management	Yes
Ruijie Cloud management	Yes

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Network Management and Monitoring (continued)

Ruijie Reyee App management	Yes
SNMPv1, v2c, and v3	Yes

Reliability

System dual backup	No
Enabling dual backup for the partition Uboot (based on a single flash memory)	No
Load balancing	No
ERPS	Yes

Security

Maximum number of ACEs	Number of ACEs in the inbound direction of an interface: 1200 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: 80 400 W H265: 40
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