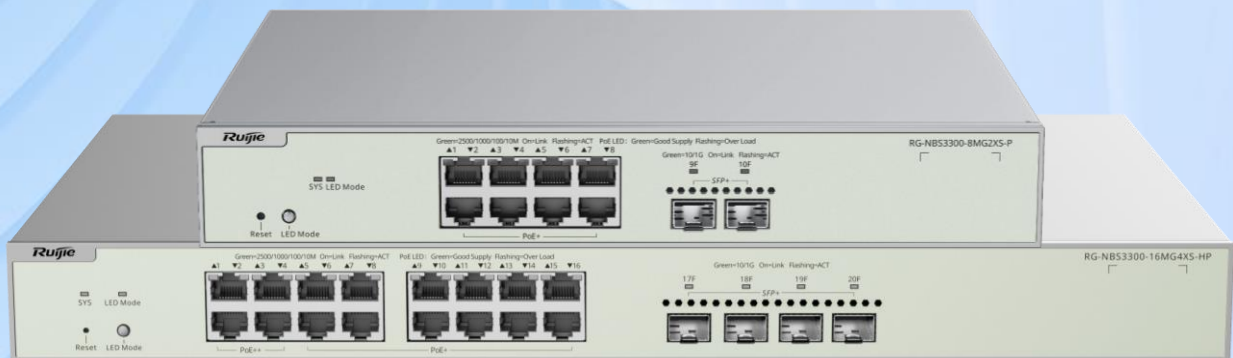


RG-NBS3300 Series

RG-NBS3300 Series Multi-Gigabit Layer 2+ Cloud Managed Switch



01 Product Overview

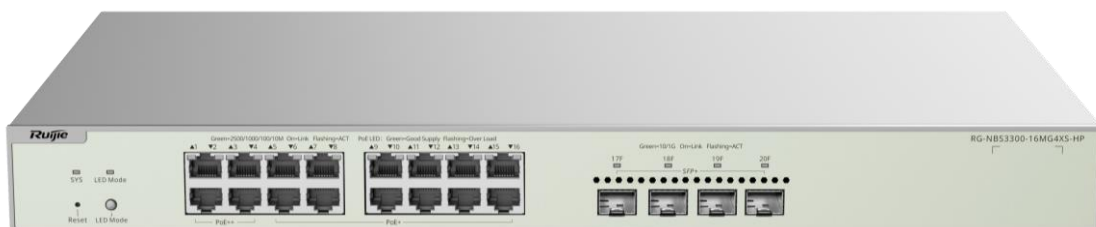
The RG-NBS3300 series switches launched by Ruijie Networks are next-generation multi-gigabit access switches that provide cost-effective, high-speed connectivity.

This series delivers both 1G and 2.5G access capabilities, along with 10G uplink ports to meet the demands of high-density environments.

The RG-NBS3300 series is designed for small and medium-sized enterprises, making it ideal for large-scale, high-density settings such as campuses, offices, and stadiums.

02 Product Appearance

RG-NBS3300-16MG4XS-HP



Front View of the RG-NBS3300-16MG4XS-HP

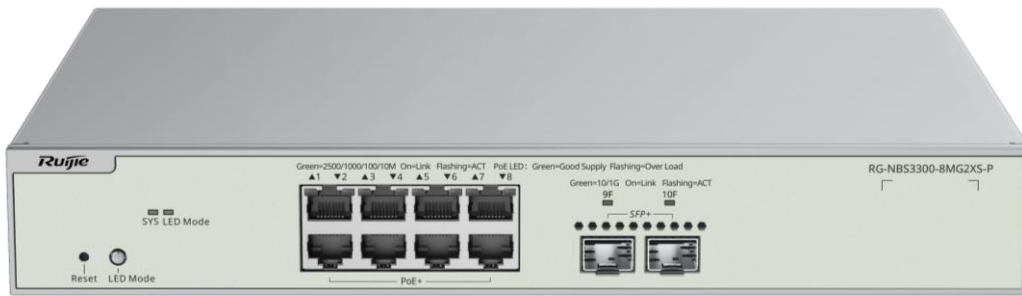


Left View of the RG-NBS3300-16MG4XS-HP

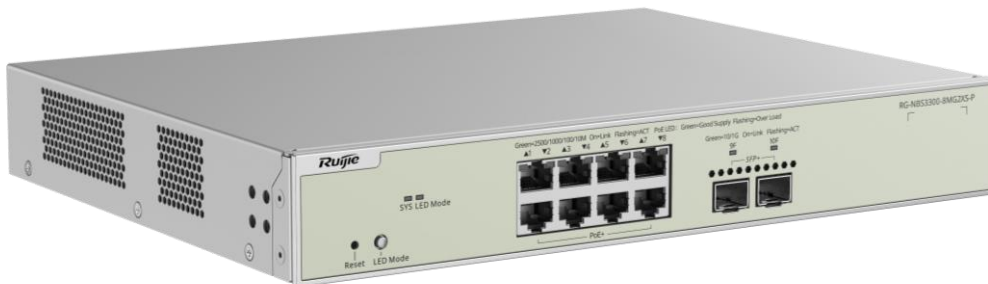


Right View of the RG-NBS3300-16MG4XS-HP

RG-NBS3300-8MG2XS-P



Front View of the RG-NBS3300-8MG2XS-P



Left View of the RG-NBS3300-8MG2XS-P



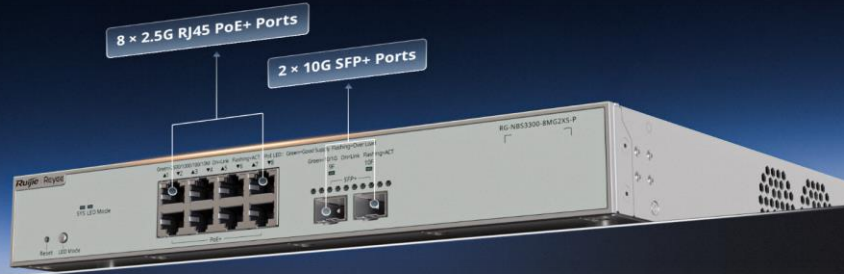
Right View of the RG-NBS3300-8MG2XS-P

03 Product Highlights

- 2.5G ports smash the gigabit barrier, unlocking the full potential of Wi-Fi 6 and 7 access points
- IEEE 802.3bt/at/af-compliant PoE ports provide a power budget of 370 W
- The CPU Protect Policy (CPP) safeguards the CPU against attacks, ensuring CPU performance and stability
- Enterprise-grade quality ensures high performance
- Multiple security policies protect your network
- Ruijie Cloud enables easy management anytime, anywhere

RG-NBS3300-8MG2XS-P

8-Port Multi-Gigabit Layer 2 Managed Switch, 2 x SFP+ Uplink Ports



2.5G Ports for
Wi-Fi 6/7 APs



PoE Budget
240 W



2 x 10G SFP+
Uplink Ports



Multiple Security
Policies

RG-NBS3300-16MG4XS-HP

16-Port Multi-Gigabit Layer 2 Managed Switch, 4 x SFP+ Uplink Ports



2.5G Ports for
Wi-Fi 6/7 APs



4 x PoE++
Ports



PoE Budget
370 W

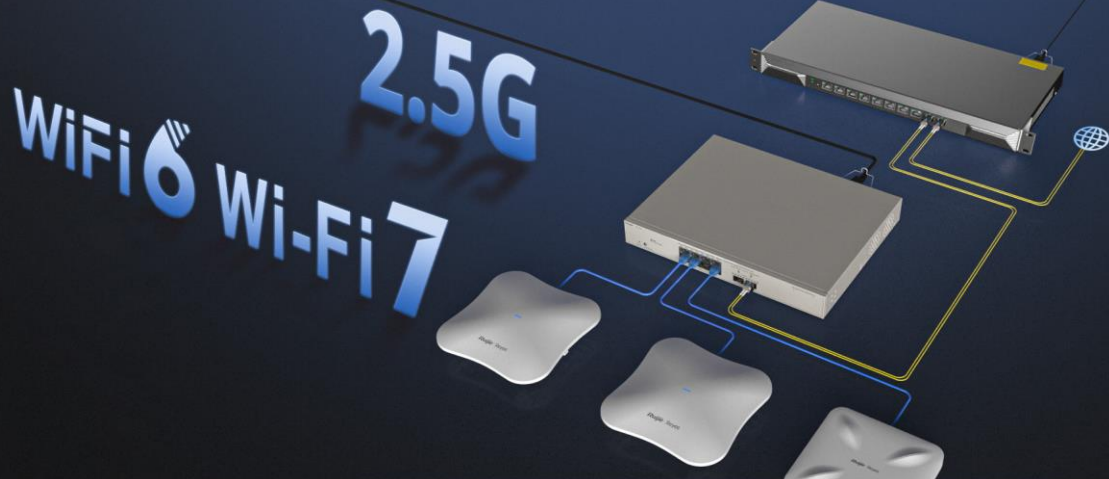


4 x 10G SFP+
Uplink Ports

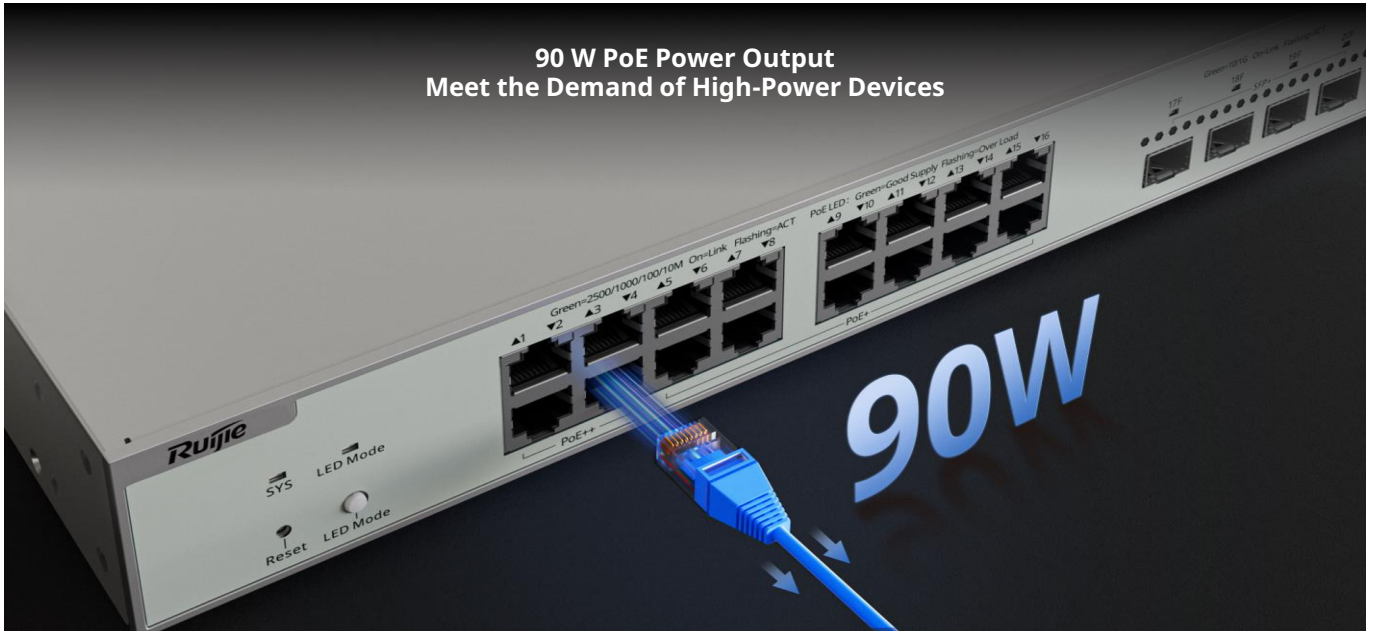


Multiple Security
Policies

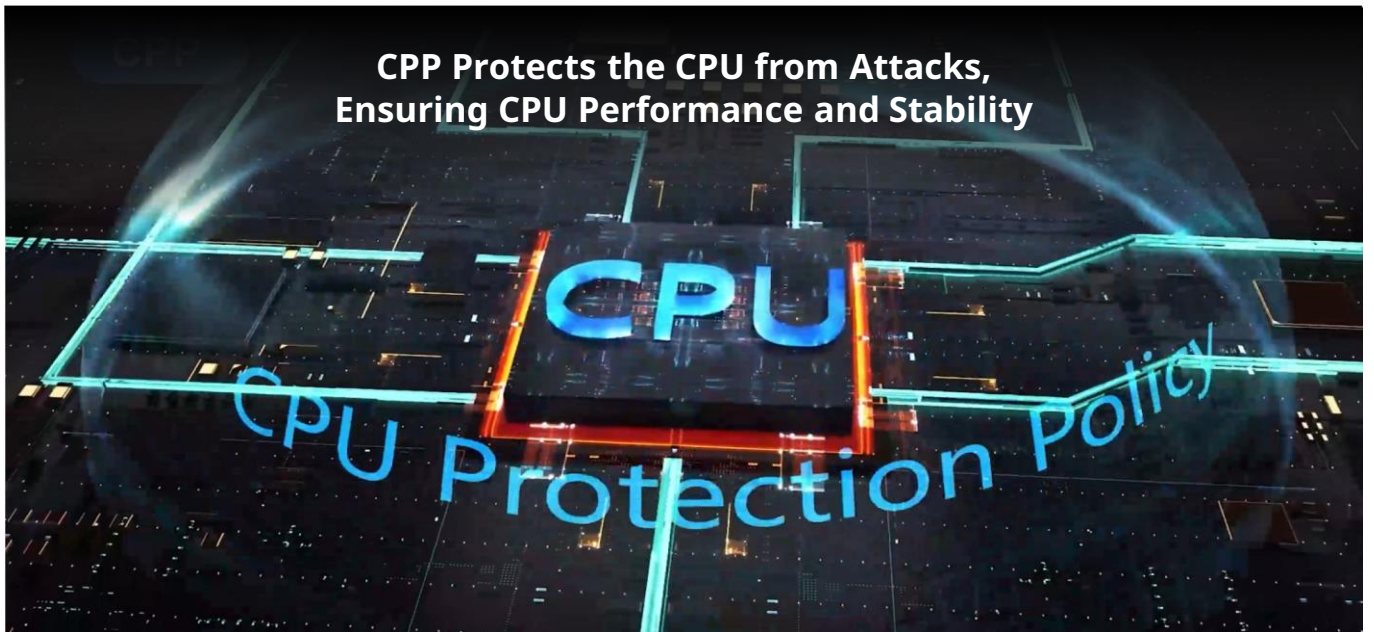
Integration with Wi-Fi 6/7 APs,
Boosting Network Performance and Efficiency



**90 W PoE Power Output
Meet the Demand of High-Power Devices**

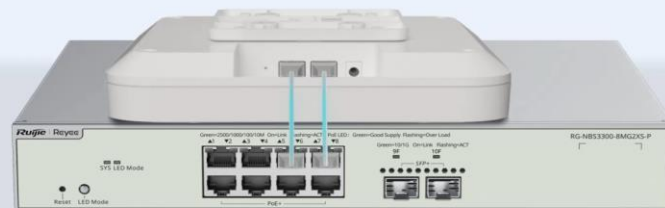


**CPP Protects the CPU from Attacks,
Ensuring CPU Performance and Stability**



Enterprise-grade Quality Ensures High Performance

[Link Aggregation](#) [IGMP Snooping](#) [VLAN](#)



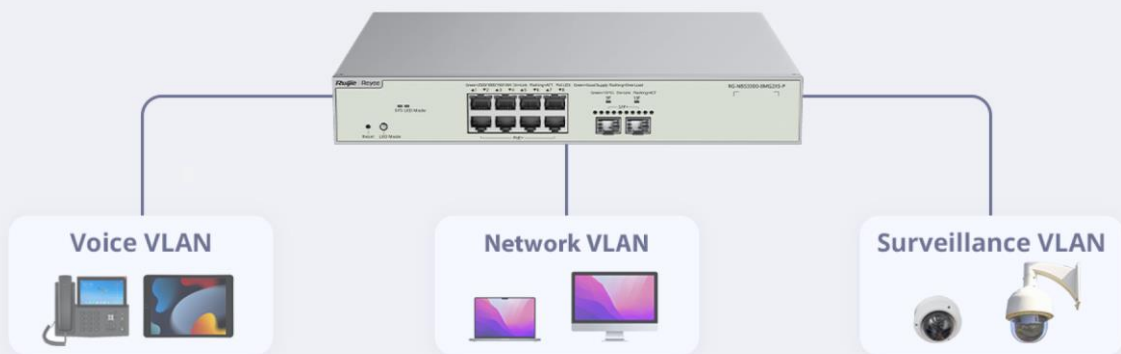
Enterprise-grade Quality Ensures High Performance

Link Aggregation **IGMP Snooping** VLAN



Enterprise-grade Quality Ensures High Performance

Link Aggregation IGMP Snooping **VLAN**



Cloud, Make Your Business Easy

- SON, Zero-Touch Provisioning on Ruijie Cloud
- Monitor Switch Statistics Anytime, Anywhere
- Configure VLANs Using Ruijie Reeye App
- Simplify Maintenance to Save Onsite Time and Costs



04 Product Features

High-Power PoE Power Supply

In previous scenarios involving PoE power supply, only the PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at) standards were available. When power requirements exceed 30 W, PoE is no longer a viable option, necessitating the deployment of power cables for mains electricity and possibly even extra high voltage power. This creates significant challenges related to deployment costs, timelines, maintenance, and security. In compliance with the IEEE 802.3bt standard, the RG-NBS3300-16MG4XS-HP utilizes high-power PoE technology, achieving a maximum PoE output of 90 W per port to significantly enhance user experience.

CPU Protection Policy (CPP)

In a network environment, many malicious attacks are often carried out by forging numerous management and protocol packets. When a switch becomes overwhelmed with attack packets, it is unable to process normal management and protocol packets. This can significantly impact the switch's security and the overall stability of the network.

The CPP function of Ruijie switches offers effective protection against malicious network attacks by identifying and filtering out attack packets, mitigating the impact of attack packets on the switch, and ensuring that packets in different priority queues are handled properly. Additionally, the CPP offers flexible packet policy configuration, allowing network administrators to optimize settings for specific network environments, thereby enhancing both switch security and network stability.

Enterprise-grade Quality Ensures High Performance

Spanning Tree Protocol (STP):

STP prevents broadcast storms caused by loops and provides link redundancy, aiming to eliminate loops on Ethernet networks. It establishes a loop-free logical topology by selecting a primary path while blocking redundant paths.

Rapid Spanning Tree Protocol (RSTP):

RSTP, as an enhanced version of STP, enables faster convergence to meet the demands of modern networks.

Rapid Link Detection Protocol (RLDP):

RLDP is designed to detect link failures and report Ethernet link issues. It automatically shuts down or notifies users to manually shut down relevant ports based on user-configured failure handling methods, preventing erroneous traffic forwarding and avoiding Ethernet Layer 2 loops.

Internet Group Management Protocol (IGMP):

IGMP manages the membership between hosts and multicast groups, allowing hosts to join or leave a multicast group.

IGMP snooping:

IGMP snooping is a feature of network switches that allows them to monitor IGMP traffic, optimizing the forwarding of multicast traffic.

Voice VLAN:

Voice VLAN is a dedicated virtual local area network (VLAN) designed for voice traffic. It separates voice data from regular data traffic, prioritizes voice transmission, and enhances the quality of voice calls.

Multiple Security Policies Protect Your Network

DHCP snooping:

DHCP snooping is a network security feature that protects against Dynamic Host Configuration Protocol (DHCP) attacks by ensuring that only trusted DHCP servers can assign IP addresses to devices on the network. In large enterprise environments, DHCP Snooping effectively prevents internal attacks and enhances network stability and security.

Access Control List (ACL):

An ACL controls data traffic passing through a switch. It filters data packets based on user configurations, thereby enhancing both network security and performance.

IEEE 802.1X:

IEEE 802.1X is a network access control standard used for identity authentication on both wired and wireless networks. It uses port-based access control to ensure that only authenticated devices can access the network.

IP-MAC binding:

IP-MAC binding is a security technology that associates a specified source IP address and source MAC address with a switch port to prevent IP address spoofing and MAC address forgery. Packets can pass through the port only when they match the bound source IP address and MAC address.

ARP anti-spoofing:

ARP anti-spoofing is used to prevent ARP spoofing attacks. ARP spoofing occurs when an attacker sends forged ARP messages to intercept, modify, or disrupt network traffic. ARP anti-spoofing methods include: (1) Static ARP entries: ARP entries are manually configured to prevent dynamic updates and ensure consistency; and (2) ARP monitoring tools: Tools are used to monitor ARP traffic in real time, enabling the detection of abnormal activities.

IP source guard:

IP source guard is a security feature that prevents IP address spoofing attacks. It checks the source IP address of a data packet against the bound source MAC address and port to ensure that only data packets with authorized IP addresses are allowed to pass through the switch. If the IP address does not match, the switch discards the data packet.

Easy Management

Self-Organizing Network (SON):

SON is an automated network management technology designed to simplify and optimize the deployment, configuration, management, and maintenance of wireless communication networks. SON allows networks to dynamically adapt to actual demands through automated configuration and self-optimization, enhancing both efficiency and user experience.

Management via web interface:

Network devices and services can be configured, monitored, and managed conveniently on a web user interface (UI). It allows network administrators to easily access and manage network resources, whether on a LAN or over the Internet.

Easy cloud management anytime, anywhere

Management via Ruijie Reyee App

SNMP:

Simple Network Management Protocol (SNMP) is a protocol used for managing network devices. It operates on a client/server model that allows for remote monitoring and control of these devices.

SNMP consists of a management station and agents. The management station communicates with the agents using the SNMP protocol to retrieve information such as device status, configuration, and performance data. It can also configure and manage the devices.

SNMP can be used to manage a variety of network devices, including routers, switches, servers, and firewalls. Users can manage user accounts through the SNMP configuration interface and monitor and control devices using third-party software.

Specifications

Specifications		RG-NBS3300-16MG4XS-HP	RG-NBS3300-8MG2XS-P
Hardware Specifications			
Product Information	Warranty	5 years	5 years
	Product category	Layer 2+	Layer 2+
Port Specifications	Total number of RJ45 ports	16	8
	Total number of optical ports	4	2
	Number of 10GE SFP+ ports	4	2
	Number of 10/100/1000/2500BASE-T ports	16	8
Interface Specifications	Reset button	1	1
Certification and Regulatory Compliance	EMC	EN 55032	EN 55032
		EN 61000-3-2	EN 61000-3-2
		EN 61000-3-3	EN 61000-3-3
EN 55035		EN 55035	
	EN 300 386	EN 300 386	
	Safety compliance	IEC 62368-1	IEC 62368-1
	Certification	CE, FCC	CE, FCC
Power Supply and Consumption	PoE Out standard	Ports 1–4: PoE/PoE+/PoE++ (IEEE 802.3af/at/bt) Ports 5–16: PoE/PoE+ (IEEE 802.3af/at)	PoE/PoE+ (IEEE 802.3af/at)
	Number of PoE Out ports	16	8
	Number of PoE/PoE+ Out ports	12	8
	Number of PoE/PoE+/PoE++ Out ports	4	No

Specifications		RG-NBS3300-16MG4XS-HP	RG-NBS3300-8MG2XS-P
	PoE budget	370 W	240 W
	PoE power pins	Ports 1–4: 1–2(-), 3– 6(+), 4– 5(+), 7–8(-); Ports 5–16: 1–2 (+), 3–6 (-)	1–2 (+), 3–6 (-)
	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: 6 A	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: 4.5 A
	Maximum power consumption	40 W (with no PoE load) 460 W (with full PoE load)	27 W (with no PoE load) 278 W (with full PoE load)
	Power supply	Fixed power supply	Fixed power supply
Dimensions and Weight	Casing	Metal	Metal
	Product dimensions (W x D x H)	440 mm x 267.5 mm x 43.6 mm (17.32 in. x 10.53 in. x 1.72 in.)	300 mm x 233 mm x 43.6 mm (11.81 in. x 9.17 in. x 1.72 in.)
	Weight	3.6 kg (7.94 lbs) (without packaging materials)	2.64 kg (5.82 lbs) (without packaging materials)
	Shipping weight	5.24 kg (11.55 lbs)	3.45 kg (7.61 lbs)
System Specifications	CPU	MAC chip, single-core processor, 800 MHz clock frequency	MAC chip, single-core processor, 800 MHz clock frequency
	RAM	512 MB	512 MB
	Flash memory	256 MB	256 MB
	Forwarding rate	119.04 Mpps	58.72 Mpps
	Switching capacity	160 Gbps(bit/s)	80 Gbps(bit/s)
Environment and Reliability	Fan	2 x fixed fans	2 x fixed fans
	Cooling	Air cooling, left-to-rear airflow	Air cooling, left-to-right airflow

Specifications		RG-NBS3300-16MG4XS-HP	RG-NBS3300-8MG2XS-P
	Acoustic noise	25°C (77°F): 40 dB	25°C (77°F): 40 dB
	Mounting options	Rack	Rack
	Hot swapping of cables	Service ports support hot swapping of cables.	Service ports support hot swapping of cables.
	MTBF	400,000 hours	400,000 hours
	Operating temperature	0°C to +50°C (32°F to 122°F)	0°C to +50°C (32°F to 122°F)
	Storage temperature	-40°C to +70°C (-40°F to +158°F)	-40°C to +70°C (-40°F to +158°F)
	Operating humidity	10% RH to 90% RH (non-condensing)	10% RH to 90% RH (non-condensing)
	Storage humidity	5% RH to 95% RH (non-condensing)	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.)	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.)	Storage altitude: -500 m to +5,000 m (-1,640.42 ft. to +16,404.20 ft.)
	ESD protection	Contact discharge: 6 kV Air discharge: 8 kV	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	Service port: ±6 kV for common mode Power connector: ±6 kV for both common mode and differential mode	
Software Specifications			
Basic Configurations	PoE watchdog	Yes	Yes
	Online upgrade	Yes	Yes

Specifications		RG-NBS3300-16MG4XS-HP	RG-NBS3300-8MG2XS-P
System Performance Capacity	Recommended camera limit	200 W H265: 300 400 W H265: 150	200 W H265: 300 400 W H265: 150
	Jumbo frame length (MTU)	9216 bytes (interface configuration mode)	9216 bytes (interface configuration mode)
Interface	EEE	Yes	Yes
	Cable test	Yes	Yes
Reliability	System dual backup	Yes (Only supported on devices with a factory-installed software version of ReyeeOS 2.320 or later)	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	Yes
	ERPS	Yes	Yes
Authentication	RADIUS	Yes	Yes
	802.1X authentication	Yes	Yes
	Port-based 802.1X authentication	Yes	Yes
	MAC address-based 802.1X authentication	Yes	Yes
	Guest VLAN	Yes	Yes
Multicast	IGMPv1 snooping	Yes	Yes
	IGMPv2 snooping	Yes	Yes
	Basic IGMPv3 snooping	Yes	Yes
	Full IGMPv3 snooping	Yes	Yes

Specifications		RG-NBS3300-16MG4XS-HP	RG-NBS3300-8MG2XS-P
	IGMP filtering	Yes	Yes
	MVR mode	Yes	Yes
Gateway Features	802.1p priority-based traffic classification	Yes	Yes
	DSCP priority-based traffic classification	Yes	Yes
	Egress queues based on 802.1p and DSCP priorities	Yes	Yes
	SP	Yes	Yes
	WRR	Yes	Yes
	SP+WRR	Yes	Yes
	Global QoS	Yes	Yes
IP Routing	Maximum number of IPv4 static routes	64	64
	IPv6 routing table size (network route)	128	128
	Maximum number of IPv6 static routes	64	64
	IPv4 static route	Yes	Yes
	IPv6 static route	Yes	Yes
IP Service	Maximum number of ARP entries	1000	1000
	IPv4 routing table size (host route)	6000	6000
	ARP	Yes	Yes
	IPv4 ping	Yes	Yes
	IPv4 traceroute	Yes	Yes
	ICMPv6	Yes	Yes
	IPv6 ping	Yes	Yes
IPv6 traceroute	Yes	Yes	

Specifications		RG-NBS3300-16MG4XS-HP	RG-NBS3300-8MG2XS-P
	DNS client	Yes	Yes
	DNSv6 client	Yes	Yes
	DHCP relay	Yes	Yes
	DHCP client	Yes	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	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	Yes
	Broadcast storm control	Yes	Yes
	Multicast storm control	Yes	Yes
	Unknown unicast storm control	Yes	Yes
	DHCP snooping	Yes	Yes
	Standard ACL	Yes	Yes
	Extended MAC ACL	Yes	Yes
	Extended IP ACL	Yes	Yes
	IPv6 ACL	Yes	Yes
	IP-MAC-port binding	Yes	Yes
	ARP anti-spoofing	Yes	Yes
	IP source guard	Yes	Yes
	CPU Protection Policy	Yes	Yes
	Ethernet Switching	Maximum number of VLANs	4094
Maximum number of MAC address entries		16000	16000
Interface flow control		Yes	Yes

Specifications		RG-NBS3300-16MG4XS-HP	RG-NBS3300-8MG2XS-P
	IEEE 802.1Q VLAN	Yes	Yes
	VLAN configuration supported on LAN ports	Yes	Yes
	Voice VLAN	Yes	Yes
	STP (IEEE 802.1d)	Yes	Yes
	RSTP (IEEE 802.1w)	Yes	Yes
	MSTP (IEEE 802.1s)	Yes	Yes
	LLDP	Yes	Yes
	LLDP-MED	Yes	Yes
	Static MAC address	Yes	Yes
	MAC address filtering	Yes	Yes
	Static aggregation	Yes	Yes
	LACP	Yes	Yes
	Inbound or outbound rate limiting based on interface traffic	Yes	Yes
Network Management and Monitoring	Fan speed adjustment	Automatic speed adjustment	Automatic speed adjustment
	Port mirroring	Yes	Yes
	Mirroring	Yes	Yes
	HTTP login	Yes	Yes
	HTTPS login	Yes	Yes
	RLOG	Yes	Yes
	SON	Yes	Yes
	Syslog	Yes	Yes
	Client auto-discovery	Yes	Yes
	PoE service failure	Yes	Yes
PoE power overload	Yes	Yes	

Specifications		RG-NBS3300-16MG4XS-HP	RG-NBS3300-8MG2XS-P
	Camera detection	Yes	Yes
	Loop alarm	Yes	Yes
	MAC address entries	Yes	Yes
	IP address pool conflicts	Yes	Yes
	Full ARP table	Yes	Yes
	eWeb management	Yes	Yes
	Ruijie Cloud management	Yes	Yes
	Ruijie Reeye App management	Yes	Yes
	SNMPv1, v2c, and v3	Yes	Yes
Package Contents			
Device	Device	1	1
Manual	User Manual	1	1
	Warranty Card	1	1
Accessories	Rack-mount bracket	2	2
	Rubber pad	4	4
	Power cord retention clip	1	1
	Screw	8 M4 x 8 mm cross recessed countersunk head screws	8 M4 x 8 mm cross recessed countersunk head screws
	Grounding cable	1 x 1 m (3.28 ft.)	1 x 1 m (3.28 ft.)
	Power cord	1 x 1.5 m (4.92 ft.)	1 x 1.5 m (4.92 ft.)

Ruijie



Ruijie Networks Co., Ltd.

For more information, visit www.ruijie.com or call 86-400-620-8818.