

RG-NBS7003

Layer 3 Chassis Cloud Managed Switch



Highlights

- Modular design provides scalability and flexibility
- High-Level redundancy, ensuring nonstop Service
- Whole network solution specially designed for SMB scenarios
- Lifetime management on Ruijie Cloud at anytime anywhere

Highlight Features

RG-NBS7003

Reyee First Chassis Switch Designed for SMB

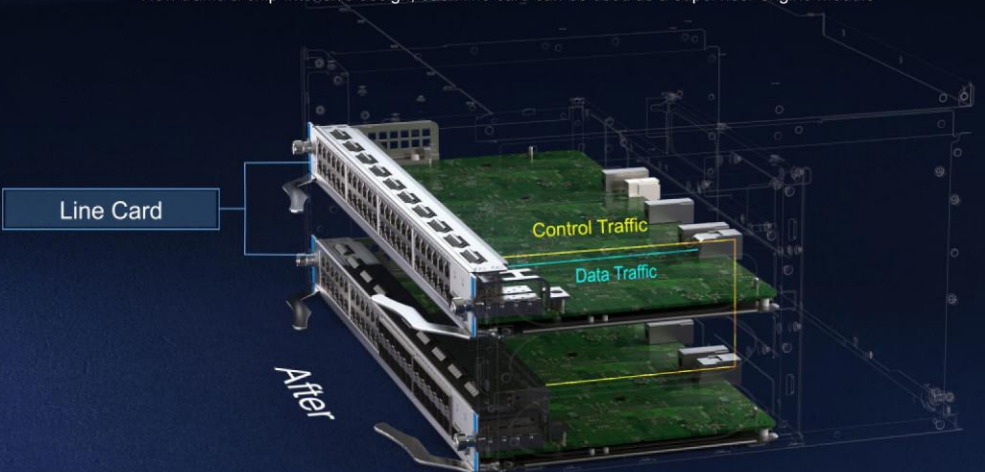


4 RU 3 Service Module
Chassis Core Switch

 7 Optional Line Cards	 32,000 MAC Address	 8,000 ARP Table	 960 Gbps(bit/s) Switching Capacity	 714.24 Mpps Packet Forwarding Rate
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Architecture Innovation: Higher Performance, Lower Cost

New traffic & chip-intensive design, each line card can be used as a supervisor engine module



Line Card

Control Traffic

Data Traffic

After

Modular Design: Scalability, and Flexibility

Support 7 types of line cards, up to 48 ports full 10 Gigabit



- M7000-8XS-EA
- M7000-48SFP2XS-EA
- M7000-48GT2XS-EA
- M7000-24GT2XS-EA
- M7000-16XS-EA
- M7000-24GT24SFP2XS-EA
- M7000-24SFP2XS-EA

Highlight Features

High-Level Redundancy, Ensuring Nonstop Service

Redundant Modules

Virtual Cluster Switching (VCS)

2 power slots: ensuring service continuity

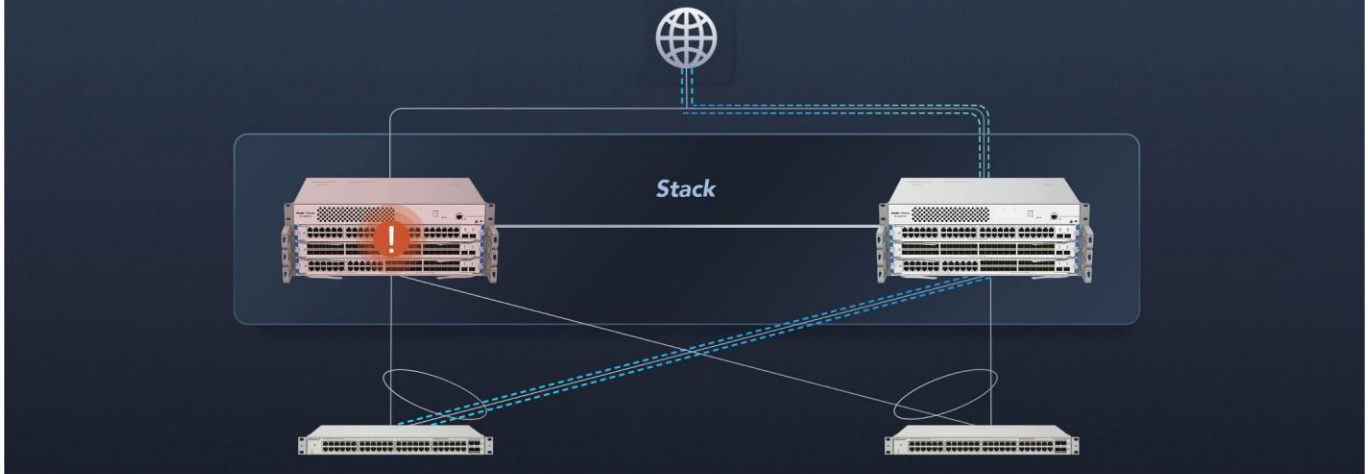


High-Level Redundancy, Ensuring Nonstop Service

Redundant Modules

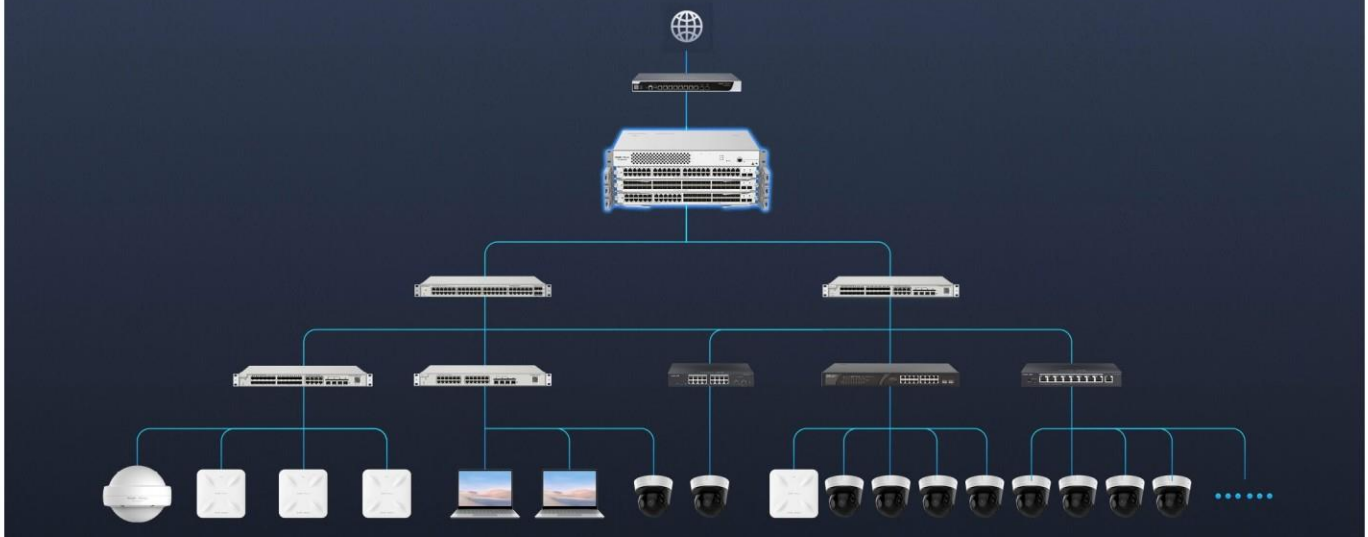
Virtual Cluster Switching (VCS)

Virtual Cluster Switching (VCS): service failover within seconds



Whole Network Solution Specially Designed for SMB Scenarios

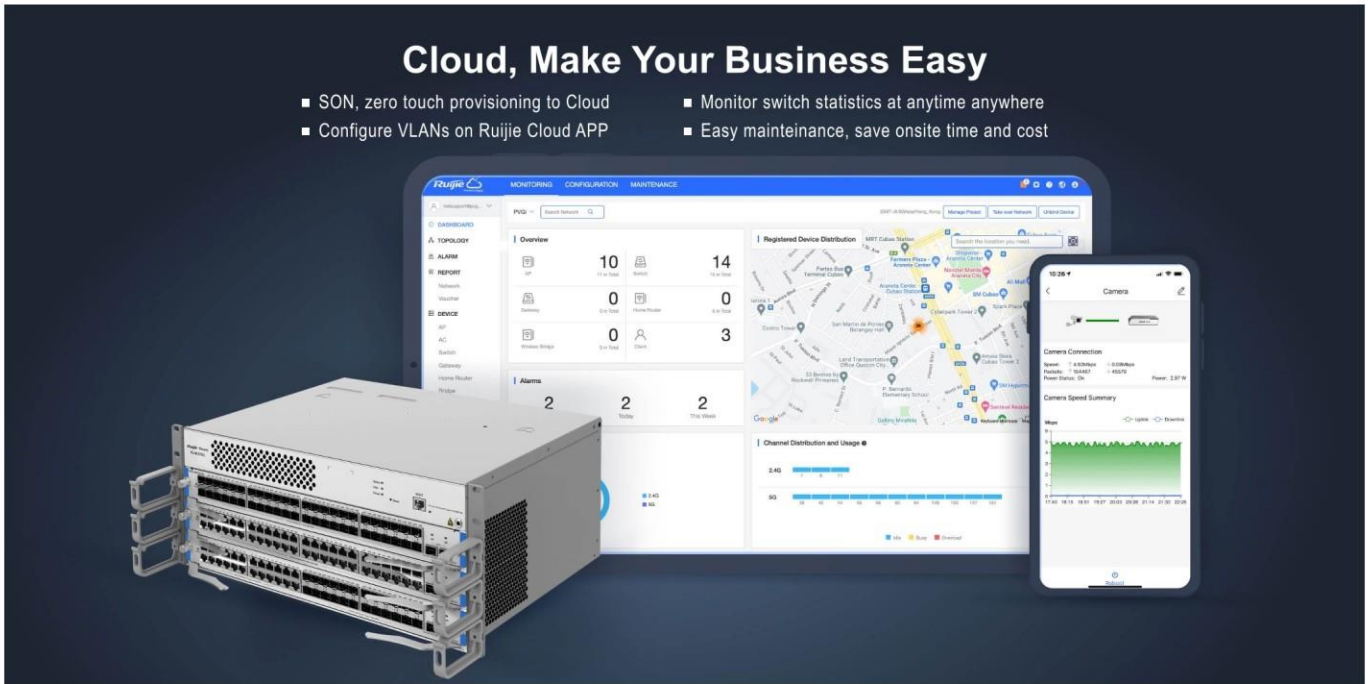
Up to 2000 terminal devices or 1000 CCTV (2mp H.265) can be accessed



Highlight Features

Cloud, Make Your Business Easy

- SON, zero touch provisioning to Cloud
- Monitor switch statistics at anytime anywhere
- Configure VLANs on Ruijie Cloud APP
- Easy maintenance, save onsite time and cost



Power Supply and Fan

RG-PA300I-FS	RG-NBS7003 Power Module (support redundancy,AC, 300W)
RG-PA460I-FS	RG-NBS7003 Power Module (support redundancy,AC, 460W)
M7003-FAN	NBS7003-FAN

Line Card & Service Module

M7000-24GT2XS-EA	24 Gigabit Ethernet copper port (RJ45) + 2 10-gigabit Ethernet fiber port (SFP+,LC)
M7000-48GT2XS-EA	48 Gigabit Ethernet copper port (RJ45) + 2-port 10-gigabit Ethernet fiber port (SFP+,LC)
M7000-24SFP2XS-EA	24 Gigabit fiber port (SFP,LC) + 2 10-Gigabit Ethernet fiber port (SFP+,LC)
M7000-48SFP2XS-EA	48 Gigabit fiber port (SFP,LC) + 2 10-Gigabit Ethernet fiber port (SFP+,LC)
M7000-24GT24SFP2XS-EA	24 Gigabit Ethernet copper port (RJ45)+ 24 Gigabit fiber port (SFP,LC)+ 2 10-gigabit Ethernet fiber port (SFP+,LC)
M7000-8XS-EA	8 10-Gigabit Ethernet fiber port (SFP+,LC)
M7000-16XS-EA	16 10-gigabit Ethernet fiber port (SFP+,LC)

Product Information

Model	RG-NBS7003
Product Category	Layer 3

Hardware Specifications

Model	RG-NBS7003
System Specifications	
RAM	Line card: 1 GB DDR3
Flash memory	Supervisor module/Line card: 256 MB
Forwarding rate	714.24 Mpps
Switching capacity	960 Gbps(bit/s)
Environment and Reliability	
Hot swapping of fan modules	Yes
Fan	1 x fan module (1 x fan module for factory delivery)
Cooling	Device: Air cooling, front-to-rear airflow + left-to-rear airflow + right-to-rear airflow Line card: Air cooling, right-to-rear airflow Power module: Air cooling, front-to-rear airflow
Acoustic noise	35°C (95°F): 50 dB 50°C (122°F): 60 dB
Mounting options	Rack
Hot swapping of cables	Power connectors and all interfaces of line cards 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.)

Hardware Specifications

Model	RG-NBS7003
	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
Port Specifications	
Total number of RJ45 ports	Determine the quantity based on the type and number of line cards.
Total number of optical ports	No
Number of 1GE combo ports	No
Number of 1GE SFP ports	No
Number of 10GE SFP+ ports	Determine the quantity based on the type and number of line cards.
Number of 10/100BASE-T ports	No
Number of 10/100/1000BASE-T ports	Determine the quantity based on the type and number of line cards.
Number of 10/100/1000/2500BASE-T ports	No
Number of 100/1000/2.5G/5G/10GBASE-T ports	No
Module slots	1 supervisor module slots 2 line card slots 2 system power module slots
Reset button	1

Hardware Specifications

Model	RG-NBS7003
DIP switch	No
Power Supply and Consumption	
Power input	<p>RG-PA300I-FS (AC input):</p> <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Maximum input current: 5 A <p>RG-PA460I-FS (AC input):</p> <ul style="list-style-type: none"> • Rated input voltage: 100 V AC to 240 V AC, 50 Hz to 60 Hz • Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz <ul style="list-style-type: none"> • Maximum input current: 6 A
Maximum power consumption	50 W
Power output	<ul style="list-style-type: none"> • RG-PA300I-F 90 V AC to 290 V AC: 12 V DC (output voltage), 25 A (maximum output current) • RG-PA460I-F 90 V AC to 290 V AC: 12 V DC (output voltage), 36 A (maximum output current)
Power supply	Power module
Dimensions and Weight	
Casing	Metal
Product dimensions (W x D x H)	<p>Chassis without cable management bracket: 442 mm x 313 mm x 175 mm (17.4 in. x 12.32 in. x 6.89 in.)</p> <p>EA card: 438.5 mm x 196 mm x 40.2 mm (17.26 in. x 7.72 in. x 1.58 in.)</p>
Weight	9.6 kg (21.16 lbs) (including the empty chassis and one fan module, without packaging materials)
Shipping weight	13 kg (28.66 lbs) (including packaging materials, empty chassis, and one fan module)
Product Information	
Warranty	5 years

Software Specifications

Model	RG-NBS7003
Reliability	
Number of VCS members	2
System dual backup	Yes
Enabling dual backup for the partition Uboot (based on a single flash memory)	Yes
Load balancing	No
ERPS	No
Multicast	
IGMPv1 snooping	Yes
IGMPv2 snooping	Yes
Basic IGMPv3 snooping	Yes
Full IGMPv3 snooping	Yes
IGMP filtering	Yes
IGMPv1, v2, and v3	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

Software Specifications

Model	RG-NBS7003
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
Static MAC address	Yes
MAC address filtering	Yes
Static aggregation	Yes
LACP	Yes
Inbound or outbound rate limiting based on interface traffic	Yes
Network Management and Monitoring	
Fan speed adjustment	Intelligent speed adjustment
Port mirroring	Yes
Mirroring	Yes
HTTP login	Yes
HTTPS login	Yes
RLOG	Yes
SON	Yes
Syslog	Yes
Client auto-discovery	Yes

Software Specifications

Model	RG-NBS7003
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 Reeye App management	Yes
SNMPv1, v2c, and v3	Yes
Authentication	
RADIUS	Yes
802.1X authentication	Yes
Port-based 802.1X authentication	Yes
MAC address-based 802.1X authentication	Yes
Guest VLAN	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

Software Specifications

Model	RG-NBS7003
WRR	Yes
SP+WRR	Yes
Global QoS	Yes
Interface	
Jumbo frame length (MTU)	9216 bytes (interface configuration mode)
EEE	Yes
Cable test	Yes
IP Service	
Maximum number of ARP entries	8000
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
IP Routing	
Maximum number of IPv4 static routes	2000

Software Specifications

Model	RG-NBS7003
IPv6 routing table size (network route)	2000
Maximum number of IPv6 static routes	500
IPv4 static route	Yes
IPv6 static route	Yes
OSPFv2	Yes
OSPFv3	Yes
System Performance Capacity	
Recommended camera limit	RG-NBS7003: Number of line cards x Recommended number of cameras per service interface board Recommended number of cameras connected to a line card: 200 W H265: 400 400 W H265: 200
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

Software Specifications

Model	RG-NBS7003
CPU Protection Policy	Yes

Package Contents

Model	RG-NBS7003
Manual	
User Manual	1
Warranty Card	1
Device	
Device	1
Accessories	
Rubber pad	No
Power cord retention clip	No
Screw	12 M6 x 16 mm cross recessed countersunk head screws 8 M3 x 10 mm cross recessed countersunk head screws 12 M6 cage nuts
Grounding cable	1 x 2 m (6.56 ft.)
Power cord	No
Rack-mount bracket	2

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Official Website: <https://Reyee.Ruijie.com>