

RG-NIS3100 Series True Industrial-Grade Specilized for Harsh Environments

DATASHEET

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Highlights

- Three Different Models Meet Various Business Scenario Needs
- Unique Industrial Design Ensures Stable Operation in -40°C to 80°C
- 8 kV Protection: The Shield Against Voltage Spike
- IP40 Against 1mm Intruders in Dusty Conditions
- ERPS Plug-and-Play, without Complicated Configuration
- Local Network SON, Easy Configuration even without Cloud
- Ruijie Cloud : Easy Management even in Harsh Environments

Highlight Features

RG-NIS3100 Series Industrial Switch

True Industrial-Grade Specilized for Harsh Environments



Three Different Models Meet Various Business Scenario Needs



12-56V DC
Power Supply



STP/ RSTP/
SNMP/ ERPS¹



8kV ESD
Protection



-40°C to +80°C
Operating Temperature²



¹ Release in November 2023
² Installed in a fume hood with a blower, velocity no less than 400 LFM

RG-NIS3100-4GT2SFP-HP

4 PoE+ 2SFP

RG-NIS3100-8GT2SFP-HP

8 PoE+ 2SFP

RG-NIS3100-8GT4SFP-HP

8 PoE+ 4SFP

Highlight Features

A Must-Have for Coastal Areas

Conquer salt spray corrosion



Stay Cool, Stay Connected

Unique industrial design ensures stable operation in -40°C to 80°C



8 kV Protection

The shield against voltage spike



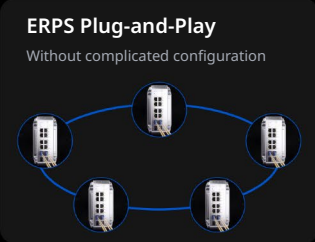
Stand Strong in Dusty Environment

IP40 Protection: Against 1mm intruders in dusty conditions



ERPS Plug-and-Play

Without complicated configuration



Local Network SON

Easy configuration even without cloud



Tough Environments, Easy Management

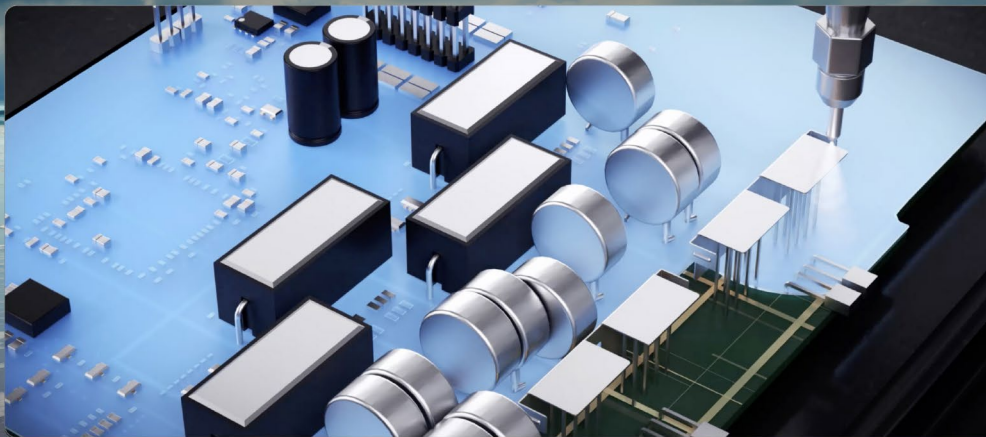
Ruijie Cloud: Easy management anytime anywhere



A Must-Have for Coastal Areas Conquer Salt Spray Corrosion

50-um Conformal Coating on PCB Boards

A precisely applied 50-um coating effectively isolates against salt spray, maintaining equipment thermal performance and conductivity.



Highlight Features



Enhanced Gold Plating Ports

Gold plating thickness on ports from 3 -um to 15 -um against salt spray corrosion.



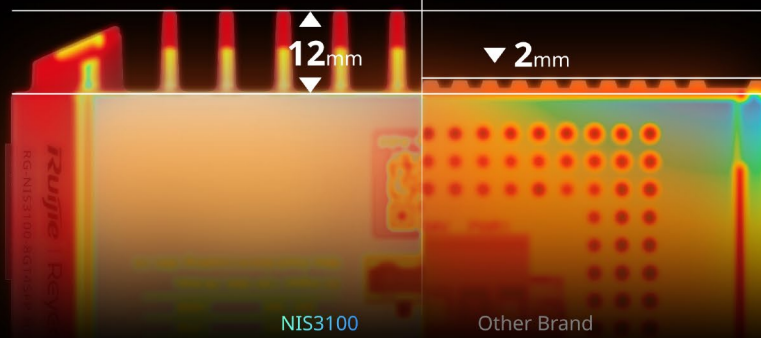
Specialized Outdoor Powder Coating

Preventing equipment surface damage from salt spray erosion.

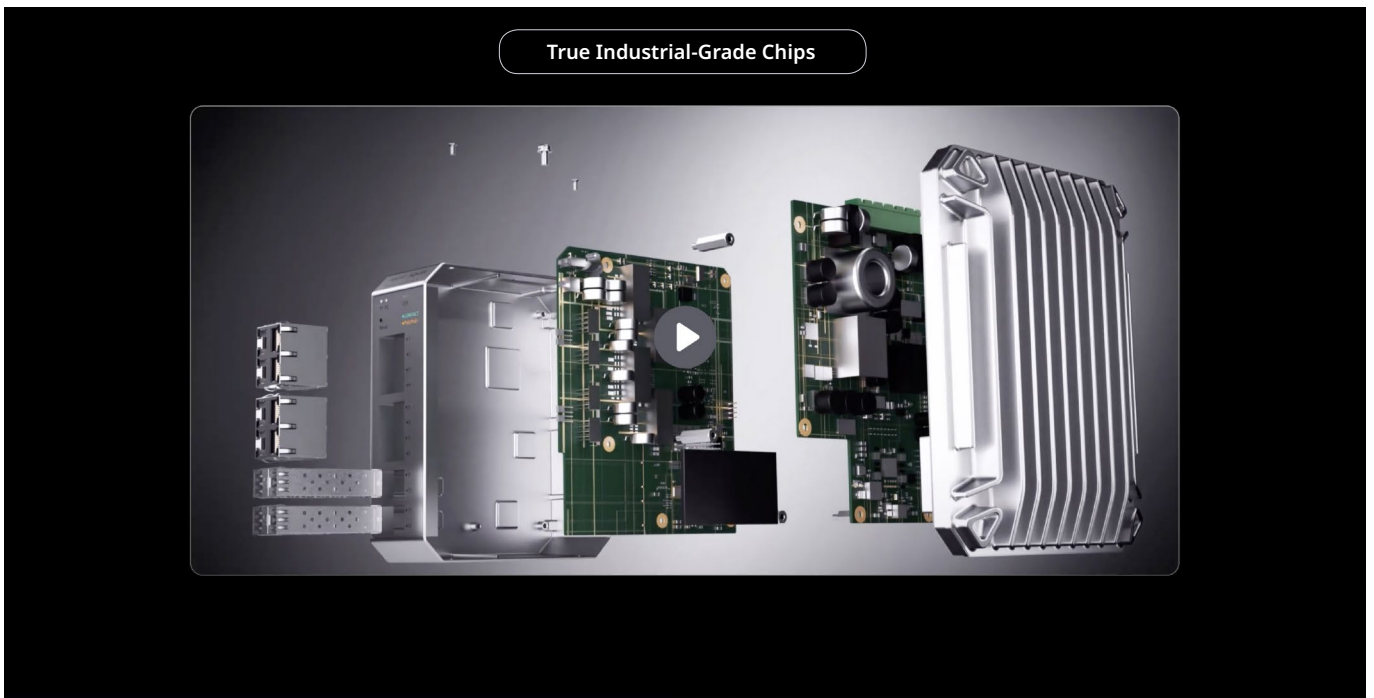
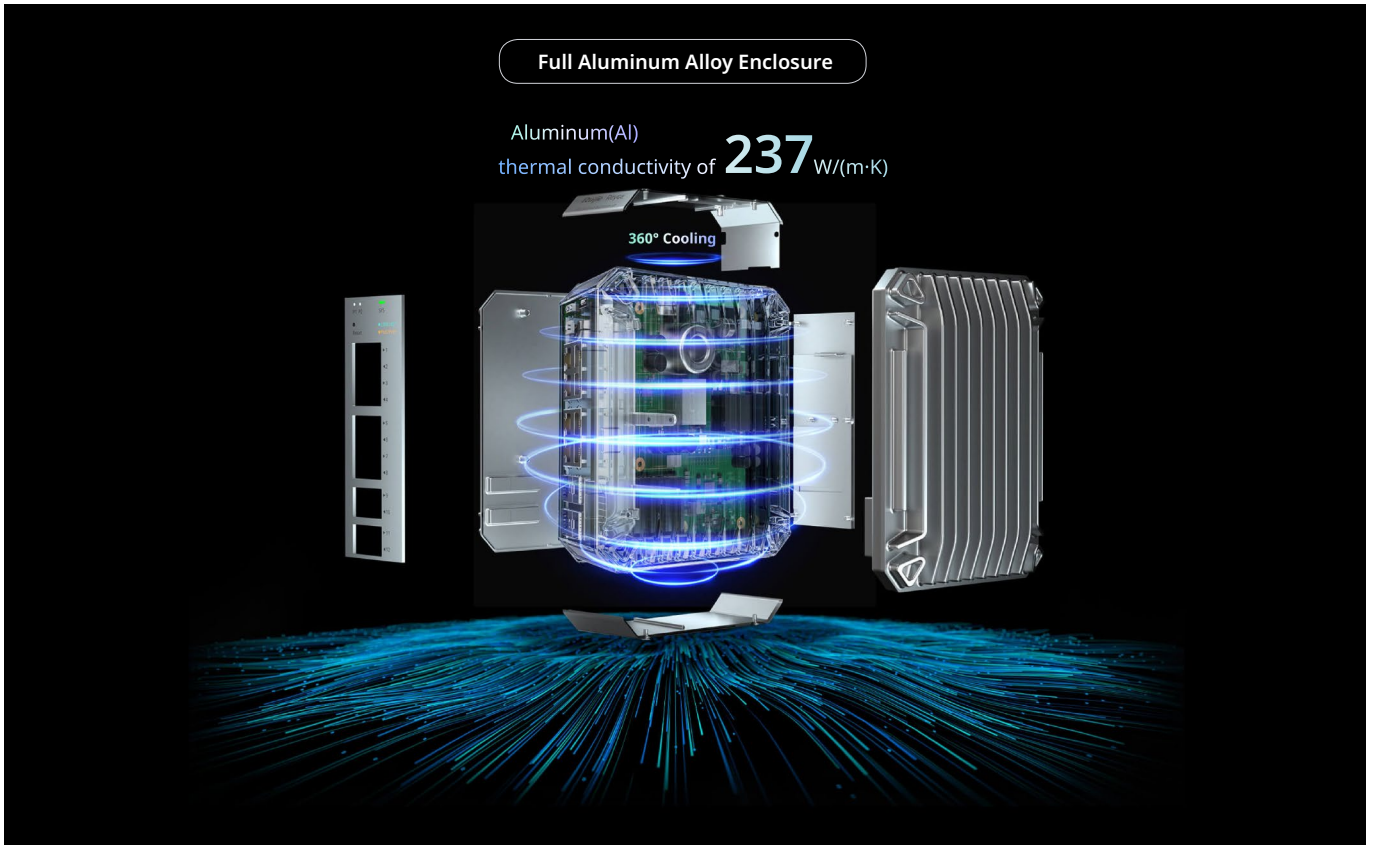
Unique Industrial Design Ensures Stable Operation in -40°C to 80°C

Double Heat Dissipation Surface

126.85%
larger surface area



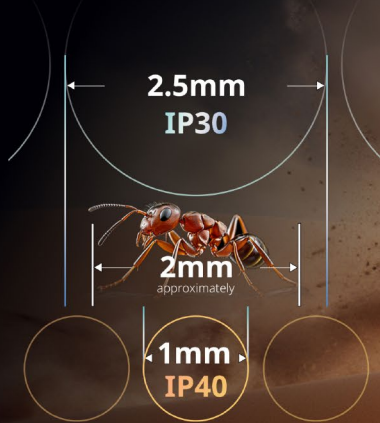
Highlight Features



Highlight Features

Stand Strong in Dusty Environment

IP40 Protection:
Against 1mm intruders in sandstorm conditions



High kV Protection: The Shield Against Voltage Spike

6kV Surge Protection



8kV ESD Protection³



ERPS Plug-and-Play

Without complicated configuration



Highlight Features

LAN Self-Organizing Network

Skip individual configurations, simplify setup



Ruijie Cloud: Distance No Barrier

Easily manage devices remotely anytime, anywhere



Specifications

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
Hardware Specifications				
Product Information	Warranty	5 years	5 years	5 years
	Product category	Layer 2	Layer 2	Layer 2
Port Specifications	Total number of RJ45 ports	8	8	4
	Total number of optical ports	4	2	2
	Number of 1GE SFP ports	4	2	2
	Number of 10/100/1000BASE-T ports	8	8	4
Interface Specifications	Reset button	1	1	1
Certification and Regulatory Compliance	EMC	EN 55032	EN 55032	EN 55032
		EN 61000-3-2	EN 61000-3-2	EN 61000-3-2
		EN 61000-3-3	EN 61000-3-3	EN 61000-3-3
		EN 55035	EN 55035	EN 55035
		EN 300 386	EN 300 386	EN 300 386
	Safety compliance	IEC 62368-1	IEC 62368-1	IEC 62368-1
Certification	CE;FCC	CE, FCC	CE, FCC	
Power Supply and Consumption	PoE Out standard	PoE/PoE+ (IEEE 802.3af/at)	PoE/PoE+ (IEEE 802.3af/at)	PoE/PoE+ (IEEE 802.3af/at)
	Number of PoE Out ports	8	8	4
	Number of PoE/PoE+ Out ports	8	8	4
	PoE budget	240 W	240 W	120 W
	PoE power pins	1-2 (+), 3-6 (-)	1-2 (+), 3-6 (-)	1-2 (+), 3-6 (-)

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
Power input	DC power input:	DC power input:	DC power input:	DC power input:
	Rated input voltage: 12 V DC to 56 V DC	Rated input voltage: 12 V DC to 56 V DC	Rated input voltage: 12 V DC to 56 V DC	Rated input voltage: 12 V DC to 56 V DC
	Maximum input current: 7 A	Maximum input current: 7 A	Maximum input current: 7 A	Maximum input current: 7 A
	RG-NS-PA240-48 (AC input):	RG-NS-PA240-48 (AC input):	RG-NIS-PA120-48 (AC input):	RG-NIS-PA120-48 (AC input):
	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	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 voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz	Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz	Maximum input voltage: 85 V AC to 264 V AC, 47 Hz to 63 Hz
	Rated input current: 3.5 A	Rated input current: 3.5 A	Rated input current: 3.5 A	Rated input current: 1.5 A
	RG-NIS-PA120-48 (AC input):	RG-NIS-PA120-48 (AC input):	RG-NIS-PA240-54 (AC input):	RG-NIS-PA240-54 (AC input):
	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz
	Maximum input voltage: 85 V AC to 264 V AC, 47 Hz to 63 Hz	Maximum input voltage: 85 V AC to 264 V AC, 47 Hz to 63 Hz	Maximum input voltage: 85 V AC to 264 V AC, 47 Hz to 63 Hz	Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Rated input current: 1.5 A	Rated input current: 1.5 A	Rated input current: 1.5 A	Rated input current: 3.5 A	
RG-NIS-PA240-54 (AC input):	RG-NIS-PA240-54 (AC input):	RG-NIS-PA120-54 (AC input):	RG-NIS-PA120-54 (AC input):	
Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz	

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
		<p>Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz</p> <p>Rated input current: 3.5 A</p>	<p>Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz</p> <p>Rated input current: 3.5 A</p>	<p>Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz</p> <p>Rated input current: 4 A"</p>
		<p>RG-NIS-PA120-54 (AC input):</p> <p>Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz</p> <p>Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz</p> <p>Rated input current: 4 A"</p>	<p>RG-NIS-PA120-54 (AC input):</p> <p>Rated input voltage: 100 V AC to 240 V AC, 50/60 Hz</p> <p>Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz</p> <p>Rated input current: 4 A"</p>	
	Maximum power consumption	<p>20 W (with no PoE load)</p> <p>80 W (full-load power when the input power is 12 V to 20 V)</p> <p>140 W (full-load power when the input power is 21 V to 45 V)</p> <p>260 W (full-load power when the input power is 46 V to 56 V)</p>	<p>20 W (with no PoE load)</p> <p>80 W (full-load power when the input power is 12 V to 20 V)</p> <p>140 W (full-load power when the input power is 21 V to 45 V)</p> <p>260 W (full-load power when the input power is 46 V to 56 V)</p>	<p>12 W (with no PoE load)</p> <p>72 W (full-load power when the input power is 12 V to 20 V)</p> <p>132 W (full-load power when the input power is 21 V to 56 V)</p>
Power output	<p>RG-NS-PA240-48</p> <p>90 V AC to 264 V AC: 54 V DC (output voltage), 4.4 A (rated output current)</p> <p>RG-NIS-PA120-48</p>	<p>RG-NS-PA240-48</p> <p>90 V AC to 264 V AC: 54V DC (output voltage), 4.4 A (rated output current)</p> <p>RG-NIS-PA120-48</p>	<p>RG-NIS-PA120-48:</p> <p>85 V AC to 264 V AC: 48 V DC (output voltage), 2.5 A (rated output current)</p> <p>RG-NIS-PA240-54</p>	

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
		85 V AC to 264 V AC: 48 V DC (output voltage), 2.5 A (rated output current) RG-NIS-PA240-54	85 V AC to 264 V AC: 48 V DC (output voltage), 2.5 A (rated output current) RG-NIS-PA240-54	90 V AC to 264 V AC: 54 V DC (output voltage), 4.4 A (rated output current) RG-NIS-PA120-54
		90 V AC to 264 V AC: 54 V DC (output voltage), 4.4 A (rated output current)	90 V AC to 264 V AC: 54 V DC (output voltage), 4.4 A (rated output current)	90 V AC to 264 V AC: 54 V DC (output voltage), 2.2 A (rated output current)
		RG-NIS-PA120-54 90 V AC to 264 V AC: 54 V DC (output voltage), 2.2 A (rated output current)	RG-NIS-PA120-54 90 V AC to 264 V AC: 54 V DC (output voltage), 2.2 A (rated output current)	
	Power supply	DC power input Power module	DC power input Power module	DC power input Power module
Dimensions and Weight	Casing	Metal	Metal	Metal
	Product dimensions (W x D x H)	85 mm x 132 mm x 165 mm (3.35 in. x 5.2 in. x 6.5 in.)	85 mm x 132 mm x 165 mm (3.35 in. x 5.2 in. x 6.5 in.)	85 mm x 132 mm x 165 mm (3.35 in. x 5.2 in. x 6.5 in.)
	Weight	1.47 kg (3.24 lbs) (without packaging materials)	1.42 kg (3.13 lbs) (without packaging materials)	1.39 kg (3.06 lbs) (without packaging materials)
	Shipping weight	1.93 kg (4.25 lbs)	1.91 kg (4.21 lbs)	1.86 kg (4.1 lbs)
System Specifications	CPU	MAC chip, single-core processor, 500 MHz clock frequency	MAC chip, single-core processor, 500 MHz clock frequency	MAC chip, single-core processor, 500 MHz clock frequency
	RAM	256 MB	256 MB	256 MB
	Flash memory	16 MB	16 MB	16 MB
	Forwarding rate	17.857 Mpps	14.88 Mpps	8.928 Mpps

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
	Switching capacity	24 Gbps(bit/s)	20 Gbps(bit/s)	12 Gbps(bit/s)
Environment and Reliability	Fan	Fanless design	Fanless design	Fanless design
	Cooling	Natural cooling	Natural cooling	Natural cooling
	Acoustic noise	25°C (77°F): 30 dB	25°C (77°F): 30 dB	25°C (77°F): 30 dB
	Mounting options	DIN rail/Wall	DIN rail/Wall	DIN rail/Wall
	Hot swapping of cables	Service ports support 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	400,000 hours
	Operating temperature	-40°C to +65°C (-40°F to 149°F) (installed in a sealed cabinet)	-40°C to +65°C (-40°F to 149°F) (installed in a sealed cabinet)	-40°C to +65°C (-40°F to 149°F) (installed in a sealed cabinet)
		-40°C to +70°C (-40°F to 158°F) (installed in a fume hood with a ventilation speed of at least 80LFM (Line Feet Minute))	-40°C to +70°C (-40°F to 158°F) (installed in a fume hood with a ventilation speed of at least 80LFM (Line Feet Minute))	-40°C to +70°C (-40°F to 158°F) (installed in a fume hood with a ventilation speed of at least 80LFM (Line Feet Minute))
-40°C to +75°C (-40°F to 167°F) (installed in a fume hood with a ventilation speed of at least 200LFM (Line Feet Minute))		-40°C to +75°C (-40°F to 167°F) (installed in a fume hood with a ventilation speed of at least 200LFM (Line Feet Minute))	-40°C to +75°C (-40°F to 167°F) (installed in a fume hood with a ventilation speed of at least 200LFM (Line Feet Minute))	
-40°C to +80°C (-40°F to 176°F) (installed in a fume hood with a ventilation speed of at least 400LFM (Line Feet Minute))		-40°C to +80°C (-40°F to 176°F) (installed in a fume hood with a ventilation speed of at least 400LFM (Line Feet Minute))	-40°C to +80°C (-40°F to 176°F) (installed in a fume hood with a ventilation speed of at least 400LFM (Line Feet Minute))	
Storage temperature	-40°C to +75°C (-40°F to +167°F)	-40°C to +75°C (-40°F to +167°F)	-40°C to +75°C (-40°F to +167°F)	

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
	Operating humidity	5% RH to 95% RH (non-condensing)	5% RH to 95% RH (non-condensing)	5% RH to 95% RH (non-condensing)
	Storage humidity	55% RH to 95% RH (non-condensing)	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.)	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.)	Storage altitude: –500 m to +5,000 m (– 1,640.42 ft. to +16,404.20 ft.)
	Corrosion class	Salt tolerance	Salt tolerance	Salt tolerance
	ESD protection	Contact discharge: 6 kV Air discharge: 8 kV	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: ±4 kV for common mode and ±2 kV for differential mode	Service port: ±6 kV for common mode Power connector: ±4 kV for common mode and ±2 kV for differential mode	Service port: ±6 kV for common mode Power connector: ±4 kV for common mode and ±2 kV for differential mode	
Software Specifications				
Basic Configurations	PoE watchdog	Yes	Yes	Yes
	Online upgrade	Yes	Yes	Yes
System Performance Capacity	Recommended camera limit	200 W H265: 80 400 W H265: 40	200 W H265: 80 400 W H265: 40	200 W H265: 80 400 W H265: 40
Interface	Jumbo frame length (MTU)	9216 bytes (global configuration mode)	9216 bytes (global configuration mode)	9216 bytes (global configuration mode)

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
	EEE	Yes	Yes	Yes
	Cable test	Yes	Yes	Yes
Reliability	ERPS	Yes	Yes	Yes
Authentic ation	RADIUS	Yes	Yes	Yes
	802.1X authentication	Yes	Yes	Yes
	Port-based 802.1X authentication	Yes	Yes	Yes
	MAC address-based 802.1X authentication	Yes	Yes	Yes
	Guest VLAN	Yes	Yes	Yes
Multicast	IGMPv1 snooping	Yes	Yes	Yes
	IGMPv2 snooping	Yes	Yes	Yes
	Basic IGMPv3 snooping	Yes	Yes	Yes
	IGMP filtering	Yes	Yes	Yes
Gateway Features	802.1p priority-based traffic classification	Yes	Yes	Yes
	DSCP priority-based traffic classification	Yes	Yes	Yes
	Egress queues based on 802.1p and DSCP priorities	Yes	Yes	Yes
	SP	Yes	Yes	Yes
	WRR	Yes	Yes	Yes
	SP+WRR	Yes	Yes	Yes

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
	Global QoS	Yes	Yes	Yes
IP Service	Maximum number of ARP entries	1000	1000	1000
	ARP	Yes	Yes	Yes
	IPv4 ping	Yes	Yes	Yes
	IPv4 traceroute	Yes	Yes	Yes
	ICMPv6	Yes	Yes	Yes
	IPv6 ping	Yes	Yes	Yes
	IPv6 traceroute	Yes	Yes	Yes
	DNS client	Yes	Yes	Yes
	DNSv6 client	Yes	Yes	Yes
	DHCP client	Yes	Yes	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	Number of ACEs in the inbound direction of an interface: 1200 Number of ACEs in the outbound direction of an interface: 0	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	Yes	Yes
	Broadcast storm control	Yes	Yes	Yes
	Multicast storm control	Yes	Yes	Yes
	Unknown unicast storm control	Yes	Yes	Yes
	DHCP snooping	Yes	Yes	Yes
	Standard ACL	Yes	Yes	Yes
	Extended MAC ACL	Yes	Yes	Yes
	Extended IP ACL	Yes	Yes	Yes

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
	IPv6 ACL	Yes	Yes	Yes
	IP-MAC-port binding	Yes	Yes	Yes
	ARP anti-spoofing	Yes	Yes	Yes
	IP source guard	Yes	Yes	Yes
	CPU Protection Policy	Yes	Yes	Yes
Ethernet Switching	Maximum number of VLANs	4094	4094	4094
	Maximum number of MAC address entries	8000	8000	8000
	Interface flow control	Yes	Yes	Yes
	IEEE 802.1Q VLAN	Yes	Yes	Yes
	VLAN configuration supported on LAN ports	Yes	Yes	Yes
	Voice VLAN	Yes	Yes	Yes
	STP (IEEE 802.1d)	Yes	Yes	Yes
	RSTP (IEEE 802.1w)	Yes	Yes	Yes
	MSTP (IEEE 802.1s)	Yes	Yes	Yes
	LLDP	Yes	Yes	Yes
	LLDP-MED	Yes	Yes	Yes
	Static MAC address	Yes	Yes	Yes
	MAC address filtering	Yes	Yes	Yes
	Static aggregation	Yes	Yes	Yes
	LACP	Yes	Yes	Yes
	Inbound or outbound rate	Yes	Yes	Yes

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
	limiting based on interface traffic			
Network Management and Monitoring	Port mirroring	Yes	Yes	Yes
	Mirroring	Yes	Yes	Yes
	HTTP login	Yes	Yes	Yes
	HTTPS login	Yes	Yes	Yes
	RLOG	Yes	Yes	Yes
	SON	Yes	Yes	Yes
	Syslog	Yes	Yes	Yes
	Client auto-discovery	Yes	Yes	Yes
	PoE service failure	Yes	Yes	Yes
	PoE power overload	Yes	Yes	Yes
	Camera detection	Yes	Yes	Yes
	Loop alarm	Yes	Yes	Yes
	MAC address entries	Yes	Yes	Yes
	IP address pool conflicts	Yes	Yes	Yes
	eWeb management	Yes	Yes	Yes
	Ruijie Cloud management	Yes	Yes	Yes
Ruijie Reyee App management	Yes	Yes	Yes	
SNMPv1, v2c, and v3	Yes	Yes	Yes	
Package Contents				
Device	Device	1	1	1
Manual	User Manual	1	1	1

Specifications		RG-NIS3100-8GT4SFP-HP	RG-NIS3100-8GT2SFP-HP	RG-NIS3100-4GT2SFP-HP
	Warranty Card	1	1	1
Accessories	Rack-mount bracket	2	2	2
	Screw	4 M3 x 6 mm cross recessed countersunk head screws	4 M3 x 6 mm cross recessed countersunk head screws	4 M3 x 6 mm cross recessed countersunk head screws

Ruijie | RYCE

 **Redefine your easy network**

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