RG-NIS3100-8GT2SFP-HP

True Industrial-Grade Switch Specially Designed for Harsh Environments

Highlights

- Three Different Models Meet Various Business Scenario Needs

- Unique Industrial Design Ensures Stable Operation in -40℃ to 80℃

- 8 KV Protection: The Shield Against Voltage Spike

- IP40 Against 1mm Intruders in Dusty Conditions

- ERPS ensures network stability: service failover within 50ms

- Local Network SON, Easy Configuration even without Cloud

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/ ERPS[1]

8kV ESD
Protection

-40°C to +80°C
Operating Temperature[2]

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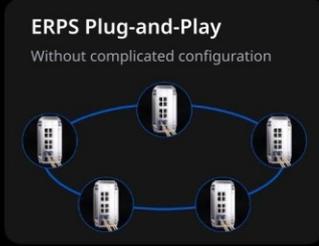Unique industrial design ensures stable operation in -40°C to 80°C

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.
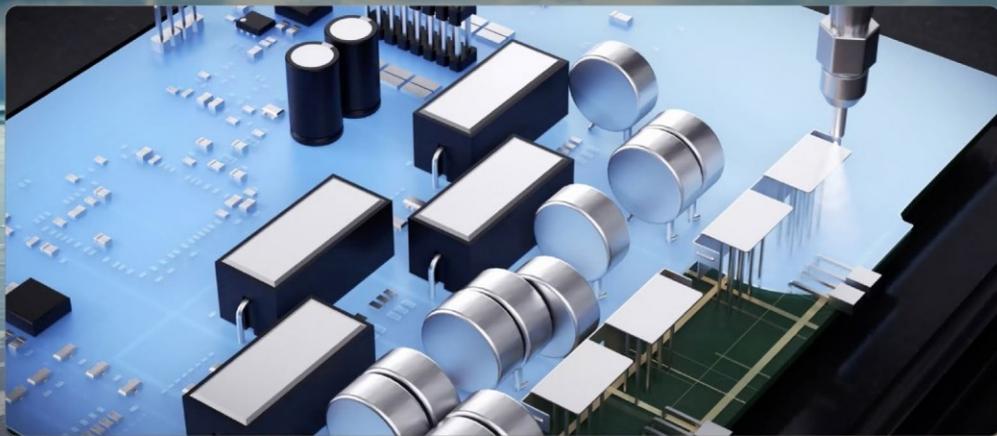
Highlight Features

Enhanced Gold Plating Ports

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

Specialized Outdoor Powder Coating
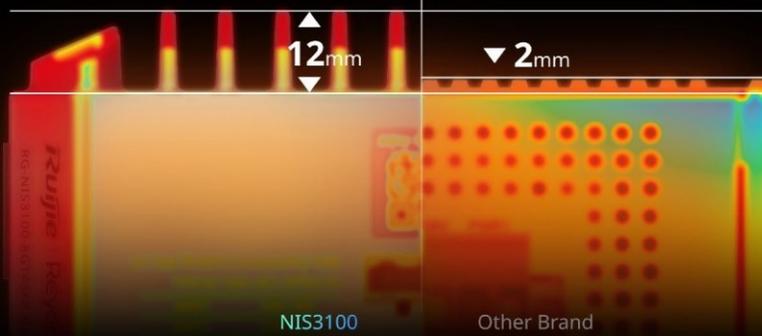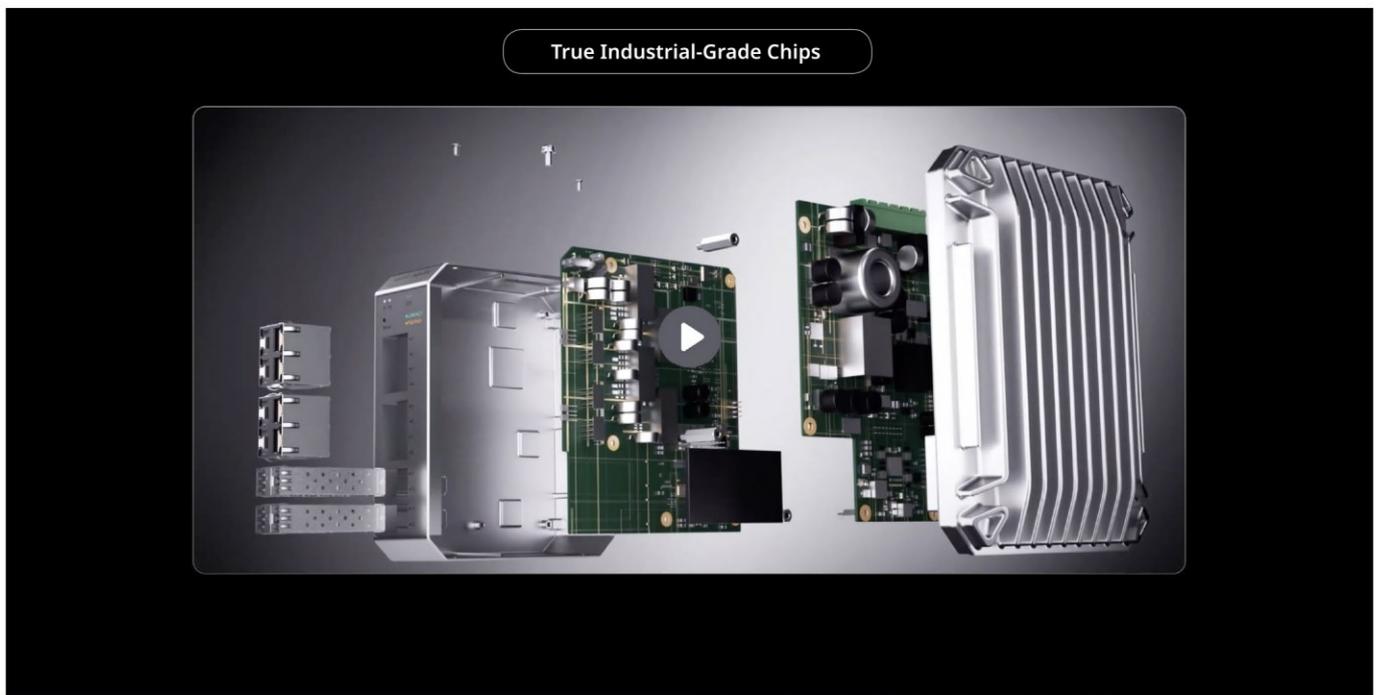
Preventing equipment surface damage from salt spray erosion.

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

Double Heat Dissipation Surface

126.85%

larger surface area

▲ 12mm ▼

▼ 2mm

NIS3100

Other Brand

Highlight Features

Full Aluminum Alloy Enclosure

Aluminum(Al)
thermal conductivity of **237** W/(m·K)

360° Cooling

True Industrial-Grade Chips

Stand Strong in Dusty Environment

IP40 Protection:
Against 1mm intruders in sandstorm conditions

2.5mm
IP30

2mm
approximately

1mm
IP40
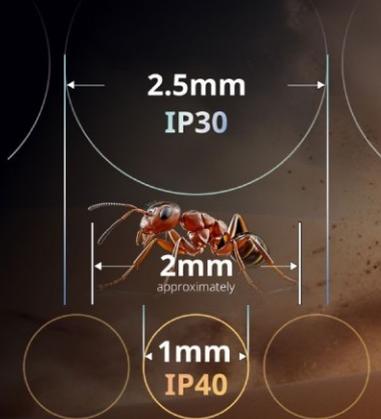
High kV Protection:
The Shield Against Voltage Spike

6kV Surge Protection

8kV ESD Protection[3]

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

/ Product Information

Model	RG-NIS3100-8GT2SFP-HP
Product Category	Layer 2

/ Hardware Specifications

Model	RG-NIS3100-8GT2SFP-HP
Product Information	
Warranty	5 years
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	
PoE Out standard	PoE/PoE+ (IEEE 802.3af/at)
Number of PoE Out ports	8
Number of PoE/PoE+ Out ports	8

Hardware Specifications

Model	RG-NIS3100-8GT2SFP-HP
Number of PoE/PoE+/PoE++ Out ports	No
PoE budget	240 W
PoE power pins	1–2 (+), 3–6 (-)
Power input	DC power input： ● Rated input voltage: 12 V DC to 56 V DC ● Maximum input current: 7 A RG-NIS-PA240-48 (AC input): ● 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: 3.5 A RG-NIS-PA120-48 (AC input): ● 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 ● Rated input current: 1.5 A
Maximum power consumption	20 W (with no PoE load) 80 W (full-load power when the input power is 12 V to 20 V) 140 W (full-load power when the input power is 21 V to 45 V) 260 W (full-load power when the input power is 46 V to 56 V)
Power output	● RG-NIS-PA240-48 90 V AC to 264 V AC: 54V DC (output voltage), 4.4 A (rated output current) ● RG-NIS-PA120-48 85 V AC to 264 V AC: 48 V DC (output voltage), 2.5 A (rated output current)
Power supply	● DC power input ● Power module
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

/ Hardware Specifications

Model	RG-NIS3100-8GT2SFP-HP
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.)
Weight	1.42 kg (3.13 lbs) (without packaging materials)
Shipping weight	1.91 kg (4.21 lbs)
Environment and Reliability	
Hot swapping of fan modules	No
Fan	Fanless design
Cooling	Natural cooling
Acoustic noise	25°C (77°F): 30 dB
Mounting options	DIN rail/Wall
Hot swapping of cables	Service ports support hot swapping of cables.
MTBF	400,000 hours
Operating temperature	-40ºC to +65ºC (-40°F to 149°F) (installed in a sealed cabinet) -40ºC to +70ºC (-40°F to 158°F) (installed in a fume hood with a ventilation speed of at least 80LFM (Line Feet Minute)) -40ºC to +75ºC (-40°F to 167°F) (installed in a fume hood with a ventilation speed of at least 200LFM (Line Feet Minute)) -40ºC to +80ºC (-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)
Operating humidity	5% RH to 95% 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	Salt tolerance
ESD protection	Contact discharge: 6 kV Air discharge: 8 kV

/ Hardware Specifications

Model	RG-NIS3100-8GT2SFP-HP
Surge protection	Service port: ±6 kV for common mode Power connector: ±4 kV for common mode and ±2 kV for 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

Model	RG-NIS3100-8GT2SFP-HP
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	Yes
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
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

Software Specifications

Model	RG-NIS3100-8GT2SFP-HP
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

Software Specifications

Model	RG-NIS3100-8GT2SFP-HP
IP Service	
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

Software Specifications

Model	RG-NIS3100-8GT2SFP-HP
HTTP login	Yes
HTTPS login	Yes
RLOG	Yes
SON	Yes
Syslog	Yes
Client auto-discovery	Yes
PoE service failure	Yes
PoE power overload	Yes
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
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

Software Specifications

Model	RG-NIS3100-8GT2SFP-HP
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

/ Package Contents

Model	RG-NIS3100-8GT2SFP-HP
Device	
Device	1
Accessories	
Rubber pad	No
Power cord retention clip	No
Screw	4 M3 x 6 mm cross recessed countersunk head screws
Grounding cable	No
Power cord	No
Rack-mount bracket	4
Manual	
User Manual	1
Warranty Card	1

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