

RG-NBF5300M-12MFS12MG4XS

e-Lighten Layer 3 Cloud Managed Core Switch

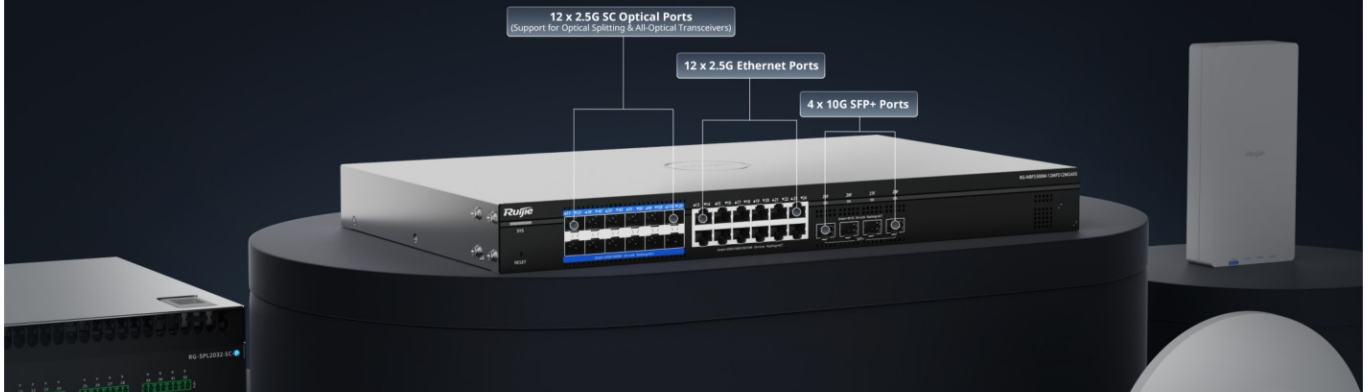


/ Highlights

- Passive/Active Optical Networking Support
- Core Switch + OLT 2-in-1 for Flexible Networking
- Support for Optical Network (P2MP) and Ethernet Network (P2P)
- 10G Uplink
- Full-Speed 2.5G downlink
- 6 kV Surge Protection, Reducing the Risk of Port Damage

RG-NBF5300M-12MFS12MG4XS

e-Lighten 2.0 OLT, 10G Layer 3 Core Switch



The All-Seeing Core Switch

See more. Do more. One device to rule your optical network

Core Switch + OLT Integration



Hybrid of P2P & P2MP Networks



10G Uplink



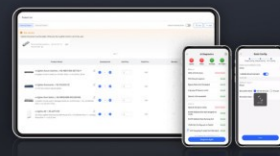
Full 2.5G Uplink & Downlink Optical Ports



5-Year Warranty



All-in-One Cloud



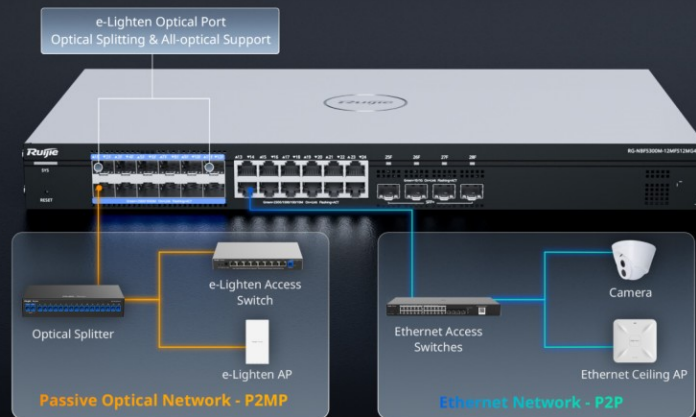
Core Switch + OLT Integration

Delivering Excellence, Minimizing Expense



Flexible Networking, Hybrid P2P & P2MP Networks

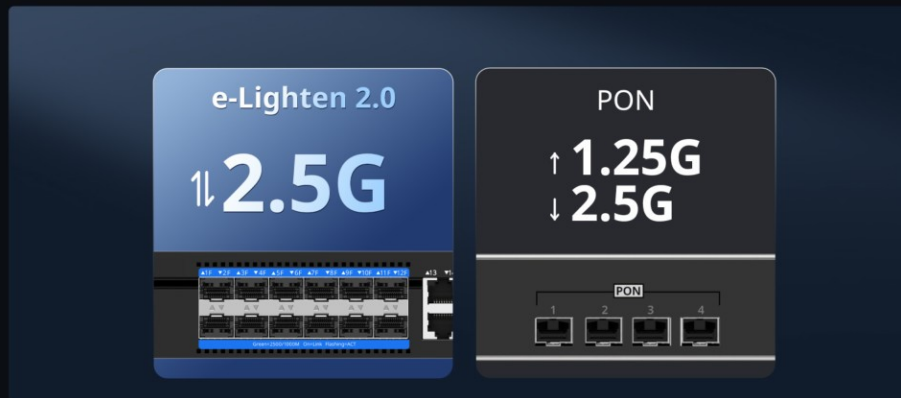
Customize the Network that Works Best for You



10G Uplink: Powering Next-Generation Connectivity



High Optical Splitting Performance with Full 2.5 Gbps Symmetric Uplink and Downlink



Cloud, Make Your Business Easy

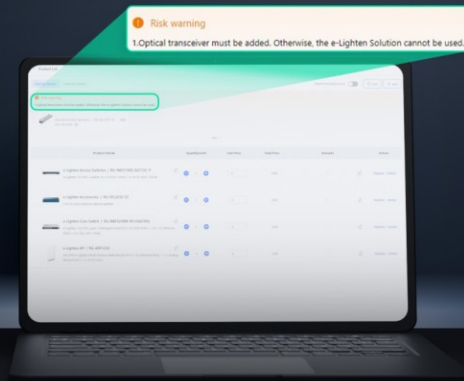
Pre-Sale

Deployment

Post-Sale

Easy BOM

Automated validation of the e-Lighten BOM for accuracy



Cloud, Make Your Business Easy

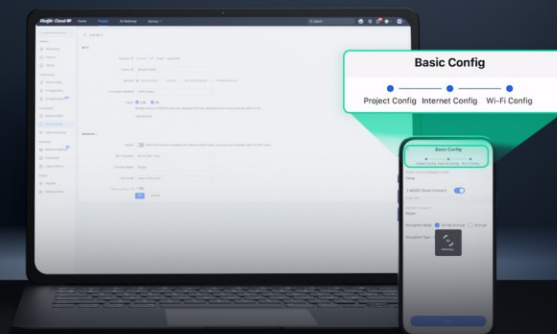
Pre-Sale

Deployment

Post-Sale

Easy Configuration

Unified configuration of optical networks, Ethernet networks, and telephony systems



Cloud, Make Your Business Easy

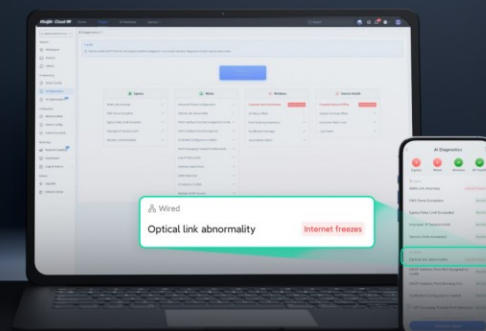
Pre-Sale

Deployment

Post-Sale

Easy Maintenance

One-click AI troubleshooting to remotely resolve 90% of faults



Product Information

Model	RG-NBF5300M-12MFS12MG4XS
Product Category	Layer 3

Hardware Specifications

Model	RG-NBF5300M-12MFS12MG4XS
Port Specifications	
Module slots	No
Number of 10/100BASE-T ports	No
Number of 10/100/1000BASE-T ports	No
Number of 10/100/1000/2500BASE-T ports	12
Number of 100/1000/2.5G/5G/10GBASE-T ports	No
Number of 100M SC ports	No
Number of 1GE SC ports	No
Number of 10GE SFP+ ports	4
Number of 1GE combo ports	No
Number of 2.5GE SFP ports	12
Number of 10GE combo ports	No
Number of 25GE SFP ports	No
Number of 40GE SFP ports	No
Number of 100GE SFP ports	No

Hardware Specifications

Model	RG-NBF5300M-12MFS12MG4XS
Total number of optical ports	16
Total number of RJ45 ports	12
MGMT port	No
Buttons	No
DIP switch	No
Maximum number of PON ports	12
Maximum number of PON ports per OLT	12
Reset button	1
LEDs	1 x system status LED 12 x SFP/PON port LEDs 12 x Ethernet port LEDs 4 x SFP+ port LEDs
Product Information	
Product category	Fixed device
Applicable products	No
System Specifications	
Switching capacity	240 Gbps (Gbit/s)
Forwarding rate	148.8 Mpps
Power Supply and Consumption	
Maximum power consumption	70 W
Power supply	Fixed power supply

Hardware Specifications

Model	RG-NBF5300M-12MFS12MG4XS
Environment and Reliability	
Surge protection	Service port: ± 6 kV for common mode Power connector: ± 6 kV for both common mode and differential mode
Temperature monitoring	No
Operating temperature	0°C to 50°C (32°F to 122°F)
Mounting options	Rack
Hot swapping of power modules	No
Altitude	-500 m to 5,000 m (-1,640.42 ft. to 16,404.2 ft.)
Power supply monitoring	Module monitoring: No Fault alarm: No Intelligent power-on: No
Cooling	Air cooling, front-to-rear airflow + right-to-rear airflow
Fan	2 x fixed fans
MTBF	400,000 hours
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)
IP rating	IP20
Certification and Regulatory Compliance	

Hardware Specifications

Model	RG-NBF5300M-12MFS12MG4XS
EMC	EN 55032 Class A EN 300386 Class A EN 55035 EN 300386 IEC 61000-4-2 IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-5 IEC 61000-4-6 IEC 61000-4-11 IEC 61000-3-2 IEC 61000-3-3
RoHS	Yes
Safety compliance	IEC 62368-1
Dimensions and Weight	
Product dimensions (W x D x H)	440 mm x 43.6 mm x 262.5 mm (17.32 in. x 1.72 in. x 10.33 in.)
Casing	Iron
Weight	3.58 kg (7.89 lbs) (without packaging materials)
Shipping weight	4.65 kg (10.25 lbs) (with packaging materials)

Software Specifications

Model	RG-NBF5300M-12MFS12MG4XS
Basic Configurations	
eWeb login with the username and password	Yes
Local upgrade	Yes
Online upgrade	Yes
Restoring factory defaults	Yes
IP Service	
DHCP server	Yes
DHCP client	Yes
DHCP relay	Yes
Option 138	Yes
Option 43	Yes
DNS client	Yes
Layer 2 multicast (IPv4)	Yes
Layer 3 multicast	Yes
Maximum number of ARP entries	2000
ARP binding	Yes
Secondary IP address	Yes
ND	Yes
ICMPv6	Yes
IPv6	Yes

Software Specifications

Model	RG-NBF5300M-12MFS12MG4XS
IPv4 ping	Yes
IPv6 ping	Yes
IPv4 traceroute	Yes
IPv6 traceroute	Yes
IP Routing	
RIPng	Yes
RIP	Yes
OSPFv2	Yes
OSPFv3	Yes
IPv4 static route	Yes
IPv6 static route	Yes
IP Routing	Yes
Interface	
Number of Layer 3 interfaces	32
Maximum number of SVIs	32
Maximum number of Layer 3 aggregate interfaces	15
Cable test	Yes
EEE	Yes
Gateway Features	
QoS	Yes

Software Specifications

Model	RG-NBF5300M-12MFS12MG4XS
Priority re-marking	Yes
Queue scheduling	Yes
Authentication	
802.1X authentication	Yes
RADIUS	Yes
Ethernet Switching	
VLAN	Yes
Maximum number of VLANs	4094
Link aggregation	Yes
Interface flow control	Yes
Number of static MAC addresses	256
Maximum number of MAC address entries	16000
Static MAC address	Yes
Number of filtered MAC addresses	256
VLAN configuration supported on LAN ports	Yes
Voice VLAN	Yes
Inbound or outbound rate limiting based on interface traffic	Yes
STP (IEEE 802.1d)	Yes

Software Specifications

Model	RG-NBF5300M-12MFS12MG4XS
RSTP (IEEE 802.1w)	Yes
LLDP	Yes
Multicast	
IGMP	Yes
IGMP snooping	Yes
IGMP filtering	Yes
IGMP fast leave	Yes
PIM-DM	No
PIM-SM	Yes
System Performance Capacity	
Recommended number of concurrent clients	1200
Recommended camera limit	200W H265: 400
	400W H265: 200
	800W H265: 100
Reliability	
Stacking	Yes (via VCS, without dedicated stacking port)
VCS	Yes
Ruijie Rapid Link Detection Protocol	Yes
Security	
Port isolation	Yes

Software Specifications

Model	RG-NBF5300M-12MFS12MG4XS
ACL	Yes
IPv6 ACL	Yes
Extended MAC ACL	Yes
Extended IP ACL	Yes
Maximum number of ACEs	1900
Applying an inbound ACL to a Layer 2 interface	Yes
DHCP snooping	Yes
CPU Protection Policy	Yes
IP source guard	Yes
Unknown unicast storm control	Yes
Broadcast storm control	Yes
Multicast storm control	Yes
Standard ACL	Yes
OLT Features	
PON/Ethernet optical transceiver auto-sensing	Yes
1G PON optical transceiver	Yes
2.5G PON optical transceiver	Yes
10G PON optical transceiver	No

Software Specifications

Model	RG-NBF5300M-12MFS12MG4XS
Maximum number of ONUs per 2.5G PON port	32
Maximum number of ONUs per 2.5G OLT	256
2.5G PON port	12
Accuracy of ranging between OLT and ONU	100 m (328.08 ft.)
Layer 2 isolation for ONUs connected to the same OLT port (disabled by default)	Yes
Maximum registration distance for registered ONUs (default: 5 km, maximum: 10 km)	Yes
Static Bandwidth Allocation (SBA): fixed bandwidth for ONUs	Yes
Dynamic Bandwidth Allocation (DBA): maximum bandwidth for ONUs	Yes
Displaying OLT optical transceiver information on OLT (temperature/voltage/current/Tx	Yes

Software Specifications

Model	RG-NBF5300M-12MFS12MG4XS
power and Rx power/operating status/port mode)	
Displaying ONU optical transceiver information on OLT (temperature/voltage/current/Tx power and Rx power/operating status/port mode)	Yes
ONU optical transceiver exception reporting (abnormal temperature, voltage, current, and Tx/Rx power)	Yes
OLT automatically connecting to ONUs	Yes
Type B single-homing link protection	Yes
Network Management and Monitoring	
Port mirroring	Yes
NTP client	Yes
eWeb management	Yes
Mirroring	Yes
Link aggregation mirroring	Yes
Zero configuration	Yes
SNMP	Yes

Software Specifications

Model	RG-NBF5300M-12MFS12MG4XS
Ruijie Cloud management	Yes
Syslog	Yes
Upgrading device software version through Ruijie Reyee App	Yes
Restarting devices through Ruijie Reyee App	Yes
HTTP login	Yes
HTTPS login	Yes
Resolution of management port IP address conflicts	No
WLAN	
AP management	Yes
Maximum number of devices on the SON	300

Package Contents

Model	RG-NBF5300M-12MFS12MG4XS
Device	
Device	1
Manual	
User Manual	1
Warranty Card	1
Accessories	
Mounting bracket	No
Rack-mount bracket	2
Screw	8 M4 x 8 mm cross recessed countersunk head screws



Ruijie Networks Co., Ltd.

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