

RBG-F4808M3-AC

48x 100/1000Base-X SFP slot and 8x 10GBase-X SFP+
Layer 3 Managed Switch with optional redundant power



The managed RBG-F4808M3-AC model is a new generation intelligent Layer 3 aggregation switch. The new high performance hardware supports functions such as ACL, QinQ and comprehensive QoS designed for carrier IP MANs, campus or enterprise data networks. Switch supports multiple services like IPv6, MPLS, VPN and network security based on L2/L3/L4 wire-speed switching service. It supports hot firmware upgrade, continuous forwarding, soft restarting and redundancy protection.

Capabilities

RBG-F4808M3-AC switch design is 1RU/19" wide box with 48x GE/FE SFP ports and 8x 10GE ports, powered by a high-performance ASIC switch chip, supporting 32K MAC addresses and 32K routing items and offering redundant power input. Supports Virtual Cluster Switching Technique: the logic control plane, service control plane and service data plane are separated and therefore device can support continuous Layer3 routing forwarding, avoiding service interruption as a result of a single point of failure.

Carrier-Level Reliability

- Based on HPS (Hitless Protection System), key components such as the dual power module back-up support, are seamlessly switching without any manual intervention;
- Supports STP/RSTP/MSTP, VRRP protocol, Ethernet ring protection, dual master-slave uplink protection and LACP link aggregation;
- Supports ISSU (In-Service Software Upgrade);
- Supports BFD mechanism;
- Supports Ethernet OAM mechanism, 802.3ah, 802.1ag and ITU-Y.1731;
- High reliability (99.999%): MTTR is 50ms, meeting the requirements of carrier-level service
- Supports Layer2 and Layer3 multicast routing protocol, enabling access to IPTV, HD video surveillance or HD video conference services;
- Supports Layer3 routing protocol with super-large routing table capacity, allowing operation in large campus networks, enterprise networks or carrier grade networks;
- Supports Layer2 and Layer3 MPLS VPN.
- Intelligent fan management system: fan system supports automatic speed regulation, mitigating noise issues;
- Compliant with IEEE 802.3az (Energy Efficient Ethernet).

Comprehensive IPv6 Solutions

- Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc;
- Supports Ping, Traceroute, Telnet, SSH, ACL based on IPv6;
- Supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc;
- Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4 tunnel, ISATAP;
- Supports IPv4 transiting to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel

Enhanced QoS

- Priority retagging and complex flow classification based on VLAN, MAC, source address, destination address, IP or priority, better streamlining carrier's services
- Provides flexible bandwidth control policies, supporting port-/flow-based flow limit, ensuring the line speed forwarding of each port
- Multiple queue schedule algorithms such as SP, WRR and "SP + WRR"

Security+

- Equipment-level security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP- related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions
- Perfect security authentication mechanisms: IEEE 802.1x, Radius and BDTacacs+
- Storm/multicast/unicast limit, ensuring the normal running of equipment in harsh network conditions
- Perfect ring detection mechanism, ensuring the long-term stable running of network
- Port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding

Easy Management and Maintenance

- Many management modes such as the CLI, Telnet, SSH, SSL and SNMP WEB management mode, which is easy and efficient for installing and debugging the device
- FTP,TFTP and SFTP
- ISSU (In-Service Software Upgrade)
- SNMP and NMS smart network management platform. The combination realizes automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management
- Zero Touch Provisioning (ZTP) function to minimize manual operator intervention and helps reduce customers' initial deployment costs

Features

- **VLAN:** 4K 802.1Q VLAN, GVRP, 1:1 VLAN mapping and N:1 VLAN mapping, QinQ and flexible QinQ, Private VLAN, Voice VLAN
- **Spanning Tree:** 802.1D (STP) 802.1W (RSTP) and 802.1S (MSTP) BPDU guard, root guard and loopback guard
- **MAC:** Static configuration and dynamic MAC learning, MAC browsing and removal, Configurable aging time of the MAC address, Limited number of learnable MAC addresses, MAC filtration, Black-hole MAC list
- **Multicast:** IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter
Multicast group strategy and quantity limitation, Multicast flow copying over VLANs, PIM-SM and PIM-DM
- **IPv4:** Static routing, RIP v1/v2, OSPF, BGP, Strategy routing, Load balance by equivalent routing, BFD for OSPF, BGP
- **IPv6:** IPv4/v6 dual stack, ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet, IPv6 neighbor discovery, Path MTU discovery, MLD V1/V2
MLD snooping, IPv6 Static Routing, RIPng, OSPFv3, BGP4+, Manual tunnel, ISATAP tunnel, 6-to-4 tunnel
- **MPLS VPN:** LDP protocol, MCE
- **Accessories:** Power cord, rackmount kits, console cable
- **QoS:** CAR, HQoS, MAC/IP/TCP/UDP/ VLAN/ COS/ DSCP/ TOS based QoS, 802.1P/ DSCP priority re- labeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and traffic shaping
- **Security:** Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky DHCP Snooping and option 82, DAI & IP source guard, PPPoE+, IEEE 802.1x, Radius and BDTacacs+ L2/L3/L4 ACL flow identification and filtration
Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc. Broadcast/multicast/unknown unicast storm-control
MD5, SHA-256, RSA-1024, AES256, etc.
- **Reliability:** Power 1+1 backup, 802.3ad Static/LACP link aggregation, EAPS, G.8032 ERPS, VRRP, GR for OSPF and BGP,
BFD for OSPF and BGP, ISSU uninterrupted system upgrade
- **Management:** Console, Telnet, SSH v1/2, HTTP, HTTPS SNMP v1/v2/v3,RMON TFTP,FTP,SFTP NTP ZTP(Zero Touch Provisioning) , SPAN, RSPAN
- **Environment:** Operating temperature/humidity: 0°C -50°C ,10%-90% non-condensing
Storage temperature/humidity: -20°C -70°C , 5%-95% non-condensing
- **Energy Saving:** compliant with IEEE 802.3az
- **Certification:** CE, FCC, ROHS

Specifications

PART NO	RBG-F4808M3-AC
Interface	48x GE SFP ports + 4x GE SFP/Base-T combo + 8x 10G SFP+ ports
Console	1 RJ45
Backplane	256 Gbps
Forwarding Rate	192 Mpps
Total output BTU (1000BTU/H=293W)	1347.44
Fan Number	2
Noise@25°C(dBA)	45
MTBF(H)	>60,000
Forwarding Mode	Store-forward
Flash (MB)	16
DRAM (MB)	256
MAC	32K
Buffer Size(MB)	4
Jumbo Frame	9K
Total SVI	10
Power Supply	AC:100V-240V,50Hz ± 10% 100W
Power Consumption	
Full-load	<60W
Chassis	
Dimensions(WxDxH)(mm)	442*350*44
Weight(KG)(empty)	4.3
Package	
Dimensions(WxDxH)(mm)	576*448*94
Weight(KG)	5.5

Ordering Information

PART NO	DESCRIPTION
RBG-F4808M3-AC	Ethernet Switch with 48x GE/FE SFP ports and 8x 10G SFP+ ports, (1 console port, 44x Gigabit SFP ports and 4x combo SFP/RJ45 Gigabit ports, 8x 10G SFP+ ports, 1x AC 110V power supply included, 1RU, 19" rack mountable)

Transceiver Modules	
10G SFP+ Transceivers	
SFP-1000-RJ45	10G-BaseT copper RJ45 module (1G/2.5G/5G compatible)
SFP-1000-SR	10GE SFP+ multi-mode (300m, 850nm, LC)
SFP-1010-LR	10GE SFP+ single-mode (10Km, 1310nm, LC, DDM)
SFP-1020-LR	10GE SFP+ single-mode (20Km, 1310nm, LC, DDM)
SFP-1040-ER	10GE SFP+ single-mode (40Km, 1310nm, LC, DDM)
SFP-1080-ZR	10GE SFP+ single-mode (80Km, 1550nm, LC, DDM)
SFP-1010-WA/SFP-1010-WB	10GE SFP+ single-mode, single-fiber (10Km, TX1270/RX1330, LC, DDM) 10GE SFP+ single-mode, single-fiber (10Km, TX1330/RX1270, LC, DDM)
SFP-1020-WA/SFP-1020-WB	10GE SFP+ single-mode, single-fiber (20Km, TX1270/RX1330, LC, DDM) 10GE SFP+ single-mode, single-fiber (20Km, TX1330/RX1270, LC, DDM)
SFP-1040-WA/SFP-1040-WB	10GE SFP+ single-mode, single-fiber (40Km, TX1270/RX1330, LC, DDM) 10GE SFP+ single-mode, single-fiber (40Km, TX1330/RX1270, LC, DDM)
Gigabit SFP Transceivers	
SFP-7000-RJ45-ALL	10/100/1000-BaseTx copper RJ45 module
SFP-7000-85	GE SFP multi-mode(500m,850nm,LC,DDM)
SFP-7010-31	GE SFP single-mode(10Km,1310nm,LC,DDM)
SFP-7020-31	GE SFP single-mode (20Km, 1310nm, LC, DDM)
SFP-7040-31	GE SFP single-mode (40Km, 1310nm, LC, DDM)
SFP-7080-55	GE SFP single-mode (80Km, 1550nm, LC, DDM)
SFP-7120-55	GE SFP single-mode (120Km, 1550nm, LC, DDM)
SFP-7002-WA/SFP-7002-WB	GE SFP single-mode, single fiber (2Km, TX1310/RX1550, LC, DDM) GE SFP single-mode, single fiber (2Km, TX1550/RX1310, LC, DDM)
SFP-7020-WA/SFP-7020-WB	GE SFP single-mode, single fiber (20Km, TX1310/RX1550, LC, DDM) GE SFP single-mode, single fiber (20Km, TX1550/RX1310, LC, DDM)
SFP-7040-WA/SFP-7040-WB	GE SFP single-mode, single fiber (40Km, TX1310/RX1550, LC, DDM) GE SFP single-mode, single fiber (40Km, TX1550/RX1310, LC, DDM)
SFP-7080-WA/SFP-7080-WB	GE SFP single-mode, single fiber (80Km, TX1490/RX1550, LC, DDM) GE SFP single-mode, single fiber (80Km, TX1550/RX1490, LC, DDM)
SFP-7120-WA/SFP-7120-WB	GE SFP single-mode, single fiber (120Km, TX1490/RX1550, LC, DDM) GE SFP single-mode, single fiber (120Km, TX1550/RX1490, LC, DDM)