

RB10-F2404M3-AC

24x 1000/10GBase-X SFP+ and 4x 40/100GBase-X QSFP+/QSFP28
Layer 3 Managed Switch with optional redundant power



The managed RB10-F2404M3-AC model is a new generation full-10GE TOR switch oriented for high-performance computing. The new hardware supports 2.56Tbps backplane and 24 10GE ports + 4 100G ports.

Capabilities

Data Center High Level Reliability

- Redundancy protection mechanism such as STP/RSTP/MSTP protocol, VRRP protocol, ring network protection, dual uplink active/standby link protection and LACP link aggregation.
- Supports BFD and realizes fault detection and service recovery in seconds through linking with layer-2 or layer-3 protocol
- Perfect Ethernet OAM, 802.3ah, 802.1ag and ITU-Y.1731 implementation for real time monitoring of network
- Adopts HPS(Hitless Protection System) in which all key components such as power system and fan system support a redundancy design. All system modules support hot-swap and seamless switching without need of manual intervention.
- Supports ISSU (In-Service Software Upgrade), guaranteeing the user data non-stop forwarding when the system is upgrading
- High Reliability (99.999%): MTTR is 50ms, meeting the requirements of carrier-level services

Comprehensive IPv6 Solutions

- Supports IPv6 Neighbor Discovery, ICMPv6, Path MTU Discovery and DHCPv6, IPv6 based Ping, Traceroute, Telnet, SSH, ACL, meeting the need of IPv6 network equipment management and service control
- Supports IPv6 multicast characteristics including MLD, MLD Snooping and IPv6 layer-3 routing protocols including IPv6 static routing, RIPng, OSPFv3 and BGP4+
- Supports IPv4-to-IPv6 technologies including IPv6 manual/automatic tunnel, auto tunnel, IPv6-to-IPv4 tunnel, and ISATAP tunnel

Enhanced QoS

- Supports complete Layer-2 and Layer-3 multicast routing protocols meeting access requirements of IPTV, multi-terminal high-definition video monitoring and high-definition video meetings
- Supports complete Layer-3 routing protocols with a super-large routing table capacity, making super-large data center networks, campus networks, enterprise networks or private industry networks suitable applications

Security+

- Advanced hardware architecture design, achieving hierarchical scheduling and protection of data packets. Switch provides multiple security measures against attacks such as SYN Flood, UDP Flood, broadcast storm and large flows of DoS or TCP data
- Perfect Security Certification: compliant with IEEE 802.1x, Radius
- Enhanced Service Security Mechanism: supports plain text or MD5 authentication; uRRF; DPI (Deep Packet Inspection) and (Deep Packet Filtration); DPI for both control packets and data packets

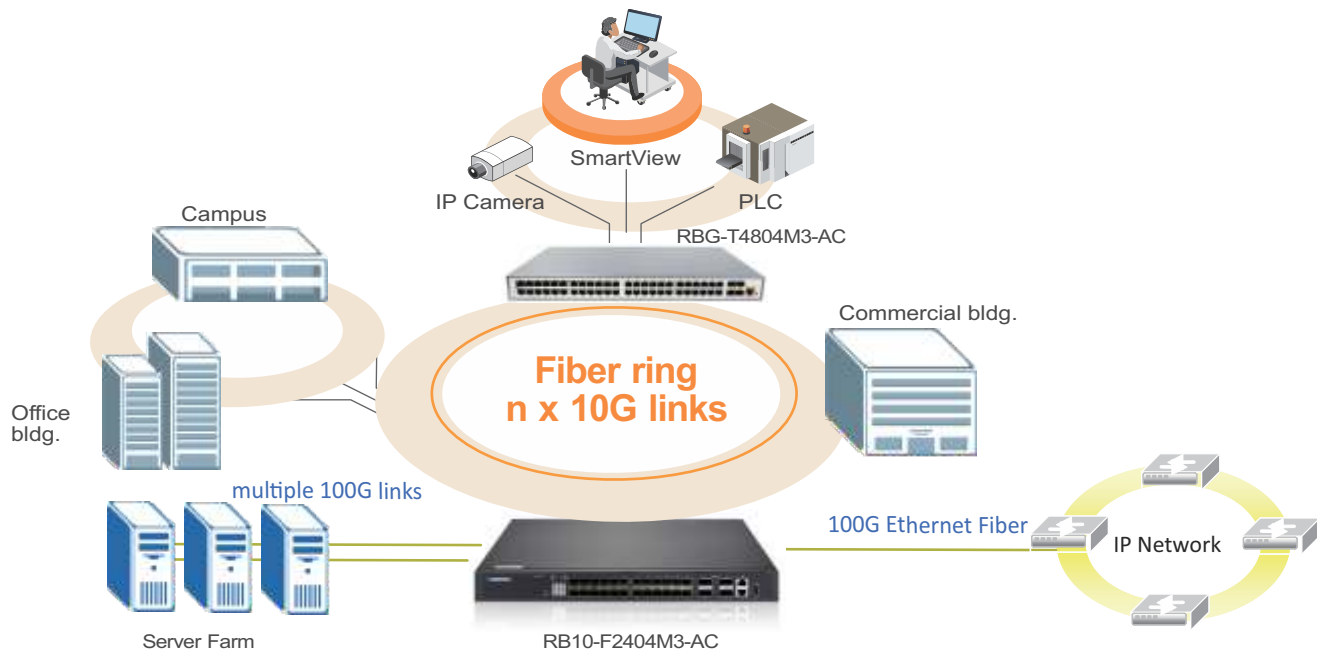
Easy Management and Maintenance

- 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 Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN, Voice VLAN
- **Spanning Tree:** 802.1D (STP) 802.1W (RSTP) and 802.1S (MSTP) BPDU guard, root guard and loopback guard
- **Multicast:** IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter, PIM-SM and PIM-DM
- **MAC Switching:** Static Configuration and Dynamically Learning of MAC Address, Check and Delete MAC Address, MAC Address Aging Time, Limit on MAC Address Learning Number, MAC Address Filtering Function, Black-Hole MAC Items
- **IPv4:** Static Routing, RIP V1/V2, OSPF and BGP, Policy Routing, Load Balance through Equal-Cost Routing, BFD for OSPF and BGP
- **Data Center Capabilities:** TRILL support, FCoE (Fiber Channel over Ethernet) support, VxLAN (Virtual Extended LAN) support
- **IPv6:** ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet, IPv6 neighbor discovery, Path MTU discovery, MLD v1/2, MLD snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, Manual Tunnel, ISATAP Tunnel and 6-To-4 Tunnel
- **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:** Dual hot-swap power supply, Static/LACP Link Aggregation and Cross Service Card Link Aggregation, Ring Network Protection Including EAPS and ERPS, VRRP/HSRP, Ethernet OAM 802.3ah/802.1ag/ITU-T Y.1731, GR for OSPF and BGP, BFD for OSPF and BGP, ISSU
- **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
- **Certification:** CE, FCC, ROHS

Application



RB10-F2404M3-AC 10G Ethernet Managed L3 Switch Application w/ 100G uplinks

Specifications

PART NO	RB10-F2404M3-AC
Interface	24×10 GE SFP+, 4×100GE QSFP28(or 40G QSFP+) ports
Console	1 RJ-45, 1 x USB and 1x RS-232 (CLI)
Backplane	800 Gbps
Forwarding Rate	600 Mpps
Total output BTU (1000BTU/H=293W)	238.91
Fan Number	4
Noise@25°C(dBA)	57
MTBF(H)	>50,000
Forwarding Mode	Store-forward
Flash (MB)	32
DRAM (MB)	1024
MAC	32K
Routing Table	IPv4: 16K, IPv6: 12K
Jumbo Frame	9K
Total SVI	1K
Power Supply	AC:100V-240V,50Hz ± 10% 100W
Power Consumption	
Full-load	<75W
Chassis	
Dimensions(WxDxH)(mm)	440*350*44
Weight(KG)(empty)	7.1
Package	
Dimensions(WxDxH)(mm)	576*448*94
Weight(KG)	8.3

Ordering Information

PART NO	DESCRIPTION
RB10-F2404M3-AC	Ethernet switch with 24 x10G ports and 4 x 100G/40G ports (1 console port, 24 x10GE SFP+ ports and 4 x 100G/40G QSFP28/QSFP+ ports 1 AC 220 power supply, 1RU 19" rack mount installation

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)