

## RB100-2410G2Q

L3 Managed Switch 24x 1G/2.5G/5G/10G + 2x 40/100G SFP+ ports




### Product Overview

The RB100-2410G2Q switch is a high-performance Layer 3 switch that supports multi-rate access at 1G/2.5G/5G/10G speeds on copper and offers two 40G / 100G uplink routing ports. This switch is designed to meet the high-density and high-bandwidth requirements of next-generation enterprise networks, data centers, and metropolitan area networks. It is suitable for telecom network operators, as well as the aggregation or access layers in campus Ethernet networks, and can serve as a connection layer in data centers or as the core layer for small and medium-sized enterprises, providing extensive server access solutions.

The RB100-2410G2Q offers a comprehensive set of service features, including Layer 2, Layer 3, VXLAN, OAM/APS, and others, along with robust security and flow control features, hardware-based NetFlow, and high-precision clock capabilities. The switch supports elastic stacking, allowing multiple devices to be virtualized into a single logical entity. This feature facilitates port expansion and switching capacity increases while enabling unified management, upgrades, and maintenance of multiple devices.

Designed to handle large data traffic and ensure non-blocking transmission in data centers, the RB100-2410G2Q provides significant cache capacity and supports an advanced cache scheduling mechanism to optimize the use of this capacity. It is versatile enough for use in network operator environments, campus Ethernet aggregation or access layers, data center access layers, and as a core layer in small and medium-sized enterprises, offering rich server access solutions for data centers.

### Connections

	<ul style="list-style-type: none"><li>24x 1G/2.5G/5G/10G Base-T (RJ45) ports</li><li>2x 40G/100G QSFP28 slots</li><li>1x RJ45 serial and 1x USB-A console ports</li><li>1x RJ45 10/100/1000Base-Tx mgmt. port</li><li>1x AC 90-240V power module input</li><li>4x modular Fans</li><li>Size: 440X320X44mm 19" Rackmount 1RU</li><li>AC: 100~240V; 47/63Hz</li></ul>
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## Key Features

### Equipment Stability

- Support IPv4/IPv6 dual protocol stack platform based on Linux operating system
- Support multiple link redundancy and network redundancy protocols such as STP / RSTP / MSTP / ERPS / LACP

### Carrier-level equipment stability

- Based on Linux operating system, support IPv4/IPv6 dual protocol stack platform

### Stackable

- Support Combine the processing power of multiple switches into a single logical device.
- Support When a switch in the stack system fails, traffic can be automatically switched to other switches, network availability and redundancy.
- Support Stacking simplifies the management process. Administrators only need to manage one logical device.

### Perfect safety mechanism

- Support ACL security filtering mechanism, which can provide security control functions based on MAC, IP, L4 port
- Support ARP attack automatic protection and user blocking functions
- Support DHCP attack automatic protection based on Mac Address and user blocking functions
- Support DHCP-snooping/IP-source-Guard/802.1X and other security features
- Support link protection functions such as BFD, FlexLink, LACP
- Support remote loop detection function
- Support remote user authentication based on Tacacs+, Radius, and Local user authentication

### Powerful QoS capabilities

- Support port speed and flow speed limit function
- Support classification based on service flow and Qos flow control function
- Support queue scheduling algorithms such as SP/WRR/SP+WRR
- Support port-based and service flow-based mirroring functions

### Enhanced multi-service capabilities

- Support DHCP Server and DHCP Relay

### Rich routing protocol

- Support static route
- Support dynamic route such as RIP, OSPF, BGP,
- Support IPV4/IPV6 dual protocol stack, support RIPng, OSPFv3

### Simple and easy-to-use network management function

- Support CLI based on RS232 serial port, Telnet and SSHv2
- Support WEB-based configure operation management, support SNMP V1/V2/V3
- Support remote upgrade or equipment through FTP and TFTP

**Hardware Specifications**

<b>Attributes</b>	<b>RB100-2410G2Q</b>
<b>Port</b>	24x 1G/2.5G/5G/10G Base-T (RJ45) 2x 40G/100G QSFP28 slot
<b>Exchange Capacity</b>	880Gbps
<b>Packet Forwarding Rate</b>	654Mpps
<b>Memory and Storage</b>	Memory: 1GB; Storage: 8GB
<b>MAC Address</b>	32K
<b>Packet Buffer</b>	72Mbit
<b>Power</b>	AC: 100 ~ 240V; 47/63Hz
<b>Power Consumption</b>	Idle ≤33W Full load ≤60W
<b>Weight</b>	≤4.4kg
<b>Dimensions (WxHxD)</b>	440mmx 320mmx 44mm
<b>Environment</b>	Working Temperature: -10 ~ 50 Celsius Storage Temperature: -40 ~70 Celsius Relative Humidity: 5%~95%, non-condensing

**LED indicators**

LEDs/Buttons	Color	Function	Description	
PWR	Green	Power status	ON	The AC/DC power module is normal (right)
			OFF	The AC/DC power module faulty or unavailable
ALARM	Red	Port status	ON	Critical alarms are reported for the card.
			OFF	No critical alarm is reported for the card.
SYS	Green	System running status	Green OFF	The device is not running or power off.
			Green Flash	The device is running normally.
MGMT	Green	Port status	ON	The link is properly connected (link up) and in action

LEDs/Buttons	Color	Function	Description	
			OFF	The link is interrupted (link down).
STK	Green	Port status	ON	Enable Stack
			OFF	Disable Stack
USB	Green	Power status	ON	Insert flash (Fat32)
			OFF	NO Insert flash (Fat32)
1G/2.5G/5G/10G	Green/ Orange	port status	Green ON	The link is properly connected (link up) 10G and action
			Orange ON	The link is properly connected (link up) 1G/2.5G and action
			OFF	The link is interrupted (link down).
40G/100G QSFP28	Green	Port status	ON	The link is properly connected (link up) and action
			OFF	The link is interrupted (link down).

### Power Supply and Fan

The power ports are installed on the rear panel of the device. Only one power port is supported. The power ports and fans are fixed(hot swap is not supported).



Characteristics	RB100-2410G2Q
Nominal AC/DC power supply	AC: 100~240V; 47/63Hz
Power supply capacity	100W
Ventilation Fans	4x 8000 RPM adjustable fans (front to back flow)

**Software Specifications**

Attributes	RB100-2410G2Q
<b>VLAN</b>	Support 4K VLAN Support VLAN based on port, MAC and protocol Support dual Tag VLAN, Access/Trunk/Hybrid
<b>Ethernet</b>	Ethernet interface operating modes Ethernet interface operating rates Jumbo Frame Port enable/disable Port based storm-control Unknow-unicast/unknow-multicast/broadcast storm-control Port-isolate
<b>Stackable</b>	Support Sacking of 8 units through a single ip address. Support Unified management. Support Redundancy mechanism. Support High speed interconnect.
<b>VXLAN</b>	Support VXLAN uses MAC in UDP encapsulation Support VMS can move between different Layer 2 network domains. Support VNI is used to isolate different virtual networks to ensure that network traffic of different tenants is isolated . Support Enable virtual machine packets to communicate across different subnets and data centers;
<b>MAC</b>	Support static MAC address setting Support black hole MAC address filtering Support port MAC address limit Automatic learning and aging of MAC addresses
<b>ARP</b>	Static and dynamic ARP entries Aging of ARP entries ARP-Proxy
<b>Port Control</b>	Support two-way bandwidth control Support port storm suppression Support 9K Jumbo ultra-long frame forwarding
<b>Port Aggregation</b>	Support static link aggregation Support dynamic LACP Each aggregation group supports a maximum of 8 ports  LAG load balance (SIP/DIP/SMAC/DMAC)
<b>Mirroring</b>	Supports multi-port mirroring analysis Service flow-based image analysis
<b>ACL</b>	Support standard and extended ACL Support ACL policy based on time period Provide MAC, IP, L4 port and port level security control functions

<p><b>QoS</b></p>	<p>Traffic classification based on COS/DSCP (simple classification)                  Traffic classification based on ACL (complex classification)                  Traffic classification based on inner header of the tunnel packets                  Queue scheduling                  Remark the priority fields (COS/DSCP) of the packet based on ACL                  Flow redirection                  Flow mirror                  Traffic policing based on direction(in/out) of Port                  Traffic policing based on direction(in/out) of VLAN                  Traffic policing based on direction(in/out) of flow                  Traffic policing based on direction(in/out) of aggregated flow                  SP(Strict Priority) scheduling                  WRR(Weighted Round Robin) scheduling                  SP + WRR mixed scheduling</p>
<p><b>Safety</b></p>	<p>Support user hierarchical management and password protection                  Support IEEE 802.1X authentication                  Support Radius &amp; TACACS+ authentication                  Support MAC address learning limit, support black hole MAC function                  Support port isolation                  Support broadcast message rate suppression                  Support IP Source Guard Support ARP flood suppression and ARP spoofing protection</p>
<p><b>Layer 3</b></p>	<p>Support ARP learning and aging                  Support IPv4/IPv6 static route                  Support dynamic route RIP/OSPF/BGP                  Support IPv4/IPv6 dual-stack platform                  Support VRRP, CLI, Telnet, WEB, SNMP V1/V2/V3, SSHv2 mode</p>
<p><b>Terminal Services</b></p>	<p>Configurations through CLI                  Console Terminal service</p>
<p><b>Maintenance</b></p>	<p>Per-module Debug features                  CPU usage display and alarm                  Memory usage display and alarm                  Device temperature, PSU, FAN, status display and alarm                  User operation logs                  Management of logs, alarms, and debugging information                  Detailed Diagnostic-information collection                  Manual /Schedule reboot                  Reboot Information logging                  Ping                  IPv6 Ping                  Traceroute                  Port/Flow/Remote mirror                  To CPU/From CPU packets statistics                  Time configuration                  Timezone</p>

<b>System Security</b>	SSHv1/v2 RADIUS TACACS+ Authentication Accounting Port based dot1x MAC based dot1x MAC/IP ACL Port/VLAN/L4-Port ACL IP Source Guard Limitation on MAC address learning on interface Rate limit CPU Traffic Limit CLI/WEB/SNMP/Telnet/SSH filtering
<b>Spanning-Tree</b>	Rapid Spanning-Tree Protocol Multi-instance Spanning-Tree Protocol
<b>Network Management</b>	DHCP Server DHCP Relay DHCP Snooping DHCP Option60 DHCP Option82 DHCP Option66 DHCP Option120 SNTP Simple Network Time Protocol LLDP
<b>Configuration Management</b>	Inband management interface and configuration Outband management interface and configuration Privileged user priority and privileged commands Network management based on SNMPv1/v2c/v3 Public and private MIB Public and private Trap Configuration and management based on WEB Restore factory default configuration
<b>File system</b>	Upload and download files through FTP or TFTP Upload and download files through Xmodem
<b>System Management</b>	Support FTP, TFTP file upload and download Support SNTP Support LLDP neighbor device discovery protocol Support RFC1213 SNMP network management Support Ping and Traceroute Supports configuration management based on WEB pages
<b>Upgrade</b>	Upgrade with the local image file Upgrade with the remote TFTP server Online upgrade Uboot

## Connector Specifications

The switch provides standardized interfaces, thus facilitating rapid and trouble-free integration into the existing network infrastructures.

## Ordering Information

Model No.	Description
RB100-2410G2Q	Data Center L3 Managed Ethernet Switch, 24x 1G/2.5G/5G/10G BASE-T, 2x40G/100G QSFP28 Ports Single AC 100-240V power supply