

## RB10-16G4M

L3 Managed PoE Switch 48x 1G + 4x 10G ports



### Product Overview

The RB10-16G4M is a L3 managed Ethernet switch. It supports 16x 100/1000/2500M adaptive RJ45 ports, 4x 10Gb SFP+ port and 1x RJ45 console port. Each port can support wire-speed forwarding.

Switch has L3 network management functions, supports IPV4/IPV6 management, dynamic routing full line-speed forwarding, complete security protection mechanism, perfect ACL/QoS policy, and rich VLAN functions. Perfect security control strategy and CPU protect policy improve fault tolerance and ensure stable operation of the network and load balancing of the interconnection, unit supports automatic DoS attack defense and SNMP, IEEE 802.1, STP, RSTP, Link aggregation, and other functions. With advanced security functions and quality of service (QoS), it can be used as core layer, distribution layer or access layer switch with high density port and easy management, being an ideal choice for various business network applications.

### Technical Specifications

Product Name	L3 Managed 16-Port 2.5G Ethernet Switch with 10G Uplinks
Network Ports	4x 1/10G uplink SFP+ ports 16x 10/100/1000/2500 Base-T RJ45 ports 1x Console port
Ethernet Ports	Port 1-16 support 10/ 100/ 1000Base-T(X) autosensing, full/half duplex MDI/MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP (≤100 meters) 100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters) 2500BASE-T: Cat6 or later UTP(≤100m)
Optical Fiber Port	1/10G SFP+ optical fiber ports, (no SFPs included, optional available single-mode/ multi-mode/ single fiber/ dual fiber optical module LC)
Optical Fiber Port Expansion	Support Turbo overclocking 2.5G optical module expansion and ring network
Optical Cable/ Distance	Multi-mode:850nm /0~300m(10G) ,850nm /0~500m (1.25G); Single-mode:1310nm/ 0~40Km,1550nm/ 0~120Km, according to SFP
Network Switch Type	Layer 3
Ring Network	Supports ERPS ring network function, with a maximum number of

	rings of 5 and a convergence time of <20ms	
Network Protocols	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3ae 10GBase-LR/SR, IEEE802.3x	
Plan	RTL scheme	
Switching Capacity	1.2Tbps	
Buffer Memory	414MB	
MAC Address	32K	
CPU	800 MHz	
Flash	16 MB	
RAM	512 MB	
LED Indicator	Power Indicator Light	P:1 Green
	Fiber Indicator Light	F:1 Green (Link,SDFED)
	On each RJ45 socket	Yellow: Indicate PoE (n/a) Green: Indicates network working status
Reset Switch	Yes, Press and hold the reset switch for 5s and release it to restore the factory settings	
Power Supply	AC 100-240V, 50/60Hz	
Surge Protection	Surge protection: 6KV 8/20us; Protection level: IP40 IEC61000-4-2(ESD): 8kV contact discharge,15kV air discharge IEC61000-4-3(RS):10V/m(80~ 1000MHz) IEC61000-4-4(EFT): power cable:4kV; data cable: 2kV IEC61000-4-5(Surge): power cable: CM+/-4kV/DM+/-2kV; data cable:+/-4kV IEC61000-4-6(radio frequency transmission): 10V(150kHz~80MHz) IEC61000-4-8(power frequency magnetic field): 100A/m;1000A/m, 1s to 3s IEC61000-4-9(pulsed magnet field): 1000A/m IEC61000-4- 10(damped oscillation): 30A/m 1MHz IEC61000-4- 12/ 18(shockwave): CM 2.5kV, DM 1kV IEC61000-4- 16(common-mode transmission): 30V; 300V, 1s FCC Part 15/CISPR22(EN55022): Class B IEC61000-6-2(Common Standard)	
Mechanical Properties	IEC60068-2-6 (anti vibration) IEC60068-2-27 (anti shock) IEC60068-2-32 (free fall)	
Certifications	CCC, CE mark, commercial, CE/LVD EN62368- 1, FCC Part 15 Class B, RoHS	
Operating Temp/Humidity	-10~+55°C, 5%~90% RH Noncondensing	
Storage Temp/Humidity	-40~+75°C, 5%~95% RH Noncondensing	
Dimension (LxWxH)	440mmx 300mmx 44mm	
Installation	Desktop, 19-inch 1RU cabinet installation (brackets included)	
L3 Functions	Support L3 network management function	

	<p>Supports IPV4 dynamic routing RIPv1/v2, OSPFv2</p> <p>Supports IPV4/IPV6 static routing/default routing, each supporting a maximum of 128 entries</p> <p>Supports three-layer routing forwarding, supports communication between different network segments and VLANs</p>
Port configuration	<p>Auto-negotiation</p> <p>Flow Control</p> <p>Port Mirror: TX/RX/BOTH; Many-to-1 monitor</p> <p>Traffic statistics</p>
Link Aggregation	<p>Static link aggregation</p> <p>LACP</p> <p>Algorithm based on Source/Destination MAC Algorithm based on Source/Destination IP</p>
MAC Table	<p>Aging Time</p> <p>Static MAC address</p> <p>Dynamic MAC address management</p>
VLAN	<p>4094 Active VLANs</p> <p>4094 VID</p> <p>802.1Q Tag VLAN</p> <p>Port VLAN</p> <p>Protocol VLAN</p> <p>MAC VLAN</p> <p>Voice VLAN</p> <p>802.1ad Q-in-Q tunneling Private</p> <p>VLAN (Protected port) GARP/GVRP</p>
ACL	<p>256ACLs</p> <p>L2, L3 e L4</p> <p>Time-based ACL</p>
Spanning Tree	<p>802.1D Spanning Tree Protocol (STP)</p> <p>802.1w Rapid Spanning Tree Protocol (RSTP) 802.1s Multiple Spanning Tree Protocol (MSTP) Loop Guard</p> <p>Root Guard</p> <p>TC-BPDU Guard</p> <p>BPDU Guard BPDU</p> <p>Filter</p>
Ring Protection	<20ms G.8032 ERPS Ring
Multicast	<p>256 groups</p> <p>IGMP v1/v2/v3 Snooping, Fast Leave MLD</p> <p>Snooping</p> <p>Multicast VLAN</p>
QoS	<p>port-based</p> <p>CoS 802.1p-based CoS</p> <p>DSCP-based</p> <p>Scheduling algorithms SP, WRR, SP+WRR</p> <p>Storm Control (Broadcast, Multicast, Unknown Unicast) Bandwidth</p>

	control per port
DHCP	SNMP v1/v2c/v3 with Full Private MIBs RMON 4 groups WEB (HTTP/HTTPS) CLI (Telnet, Console, SSHv1/v2) Firmware upgrade via console/web/TFTP Configuration Backup/Reload Dual Firmware LLDP
Security Features	Port Security MAC address filter ARP Association (Manual, ARP scanning, DHCP snooping) ARP Protection DoS (Denial of Service) Classification of packages based on: End.MAC, IP End, TCP / UDP Ports, Protocol Type; 802.1x Authentication (port-based e MAC-based) TACACS/TACACS+ Authentication RADIUS Authentication DHCP Filter Guest VLAN SSLv2/SSLv3/TLSv1 SSHv1/SSHv2 Restriction of WEB access based on: IP Address, And. MAC and Port; Port Isolation Loopback detection
Other Features	DNS Client DHCP Relay DHCP Client DHCP Snooping DHCP Option 82 SNTP Client UDLD
Maintenance	Cable Diagnostics / Ping SFP DDM(Digital Diagnostics Monitoring) Thermal protection System log (Local and Remote) Memory and CPU Monitoring

## Ordering Information

Model No.	Description
RB10-16G4M	L3 Managed 16-Port Ethernet Switch, 16x1G/2.5G RJ45, 4x10G SFP+, AC power input 90-240V