48-PORT L3 Gigabit managed fiber ethernet switch

Overview

EN-ML3CSW10G-48S4S+ is an L3 Gigabit managed fiber ethernet switch. It comes with 48x SFP based ports and 4x 1G/10G SFP+ based port. It is a full fiber stackable routing switch with fixed, built-in 10Gb uplink ports. The fully managed switch provides high availability, scalability, security, energy efficiency, and easy operation with rich L3 features. It is ideal for aggregation or access layer for campus, enterprise, government and service provider networks, deployed as Access switch with 10G uplink in FTTH network.

Key Features & Highlights

Performance and Scalability

- With high switching capacity, it supports wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.
- The 10 Gigabit Ethernet connectivity of the switch is accomplished via a hot-pluggable 10 Gigabit SFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 40km over single- mode fiber (The distance depends on the optical module chosen).

VSF (Virtual Switch Framework)

- Virtual Switch Framework can virtualize multiple switches into one logical device, achieving the sharing of information and data tables between different switches. The performance and ports density of the virtualized device is greatly enlarged by times under VSF. VSF also simplifies management work for the network administrator and provides more reliability.

Rich L3 Features

- The switch delivers high-performance, hardware-based IP routing. RIP, OSPF, and BGP provide dynamic routing by exchanging routing information with other Layer 3 switches and routers. With the switch, customers could easily achieve Policy-based Route (PBR), which is important when they need a multi exit application.

Multicast support

- Supports abundant multicast features. In Layer 2, such as IGMP v1/v2/v3 snooping and fast leave. L3 multicast protocols such as IGMP v1/v2/v3. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detect functions. It provides a great application experience for the customer.

High-Reliability network

- MRPP is a Multi-layer Ring Protection Protocol, which is UETPO's private fast Ethernet ring protocol. Compared to spanning tree protocol, it has the advantages of fast convergence, simple protocol calculation, fewer system resources cost, and so on, which can improve the reliability of Ethernet network operation.

Comprehensive QoS

- With 8 queues per port, the switch enables differentiated management of up to 8 traffic types. The traffic is prioritized according to IEEE 802.1p, DSCP, IP precedence, and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video.
- It also supports Bidirectional rate limiting, per port or traffic class preserves network bandwidth, and allows full control of network resources.

Abundant IPv6 Support

- Supports IPv6 switching and routing based on hardware for maximum performance. With increased network devices growing the need for larger addressing and higher security become critical, it will be the right product to meet this requirement.

Product Specifications

EN-ML3CSW10G-48S4S+	
Physical Ports	
Downlink Ports	48*100/1000 Base-X SFP
Uplink Ports	4*10GbE SFP+
Management Ports	1*Console port
	1*RJ-45 Ethernet management port 1*USB 2.0 Interface
Switch Property	
Switching Capacity	176Gbps
Packet Forwarding Rate	131Mpps
Jumbo Frame	10kB
MAC Table	16k
ARP Table	4k
Routing Table	1k
ACL Table	1k
Physical Parameter	
Input Voltage	AC: 100~240V AC, 50~60Hz + 12V DC RPS
Power Consumption	≤60W
Operating Temperature	0℃~50℃
Storage Temperature	-40℃~70℃
Operating Humidity	5%~95% (non-condensation)

Fan	Support automatic speed adjustment
Dimensions (W*D*H)	440mm*320mm*44mm
Net Weight	＜6kg

Software Specifications	
L1, L2 Features	IEEE 802.3 (10 Base-T), IEEE 802.3u (100 Base-TX), IEEE 802.3z (1000 BASE-X),
	IEEE 802.3ab (1000 Base-T), IEEE 802.3ae (10G Base), IEEE 802.3x,
	IEEE 802.3ak (10G BASE-CX4)
	Port loopback detection
	LLDP and LLDP-MED
	UDLD
	IEEE 802.3ad LACP, max 128 group trunks with max 8 ports for each trunk
	LACP load balance
	ERPS (G.8032)
	N:1 Port Mirroring
	RSPAN
	IEEEE 802.1d (STP)
	IEEEE 802.1w (RSTP) IEEEE 802.1s (MSTP)
	Root Guard
	BPDU Guard
	BPDU Tunnel
	802.1Q, 4K VLAN
	MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN
	QinQ, Flexible QinQ
	GVRP
	N:1 VLAN Translation
	Broadcast / Multicast / Unicast Storm Control

	IGMP v1/v2/v3 Snooping and L2 Query
	ND Snooping
	MLDv1/v2 Snooping
	Port Security
	Flow Control: HOL, IEEE 802.3x
	Bandwidth Control
Software Specifications	
L3 Features	Static Routing, RIP v1/v2, OSPF v2, BGP4 OSPF v3, BGP4+
	OSPF multiple processes LPM Routing
	Policy-based routing (PBR) for IPv4 and IPv6 VRRP
	URPF ECMP BFD
	IGMP v1/v2/v3, IGMP Proxy, Static Multicast Route Multicast Receive Control Illegal Multicast Source Detect
	ARP Guard, Local ARP proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit Anti ARP Cheat, Anti ARP Scan
	DNS Client, DNS Relay
	GRE Tunnel
	6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel ICMP v6, ND, DNS v6
	IPv6 LPM Routing, IPv6 Policy-based Routing (PBR) IPv6 VRRP v3, IPv6 URPF, IPv6 RA
IPv6	RIPng, OSPF v3, BGP4+
	MLD Snooping, IPv6 Multicast VLAN MLDv1/v2, IPv6 Anycast RP, IPv6 ACL, IPv6 QoS
	8 Queues
QoS	SWRR, SP, WRR, WDRR, SWDRR
	Traffic Classification Based on 802.1p COS, ToS, DiffServ DSCP, ACL, port number Traffic Policing
	PRI Mark/Remark
	IP ACL, MAC ACL, IP-MAC ACL

	Standard and Expanded ACL based on source/destination IP or MAC, IP Protocol, TCP/UDP port, DSCP, ToS, IP Precedence), VLAN, Tag/Untag, CoS
ACL	Redirect and statistics
	Rules can be configured to port, VLAN, VLAN routing interfaces Time Ranged ACL
	802.1x AAA
	Port, MAC-based authentication Accounting based on time length and traffic Guest VLAN and auto VLAN
	RADIUS for IPv4 and Ipv6
Security	TACACS+ for IPv4 and Ipv6
	MAB
	DHCP Server/Client for IPv4/IPv6 DHCP Relay/Option 82
DHCP v4/v6 Traffic Monitor	DHCP Snooping/Option 82
Traffic Monitor	sFlow Traffic Analysis
	CLI, WEB, Telnet, SNMP v1/v2c/v3 through IPv4 and IPv6 Syslog and external Syslog Server
	HTTP SSL
	SNMP MIB, SNMP TRAP FTP/TFTP
	SNTP/NTP RMOM 1,2,3,9
Security Network Management	Authentication by Radius/TACACS SSH v1/v2
	Dual firmware images/ Configuration files 802.3ah OAM, 802.1ag OAM
Data Center Features	VSF (Virtual Switch Framework)

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