OPL-SWM3-DC10G04X2.5G08

Multi-Gigabit Ethernet Switch with 8x1G/2.5G RJ45, 4x10G SFP+

Общие сведения

OPL-SWM3-DC10G04X2.5G08 - это мульти-гигабитный Ethernet-коммутатор, ориентированный на IP-межгородские сети нового поколения, крупные региональные и корпоративные сети. На основе предоставления высокопроизводительных услуг скоростной коммутации L2/L3/L4, он дополнительно интегрирует различные сетевые услуги, такие как IPv6 и сетевая безопасность. В сочетании с многочисленными высоконадежными технологиями, такими как непрерывное обновление, непрерывная переадресация, плавный перезапуск и защита от избыточности, он обеспечивает долгосрочную стабильную коммуникационную способность сети.

Коммутатор имеет разнообразные технические характеристики, поддерживает 8x2.5G портов доступа, 10G высокоскоростных портов восходящей линии связи. Коммутатор широко используется в высококлассных сетях WiFi6, интернет-кафе, киберспортивных отелях и высокоскоростных корпоративных сетях.

Characteristics

Advanced Hardware Architecture, Cutting Edge Processing Capability

- 1U pizza-box switch realizes the ultra-high port density of 8x2.5G ports, 4xSFP+ ports. Equipped with high-performance ASIC switch chips, it can meet the application requirements of various complex scenarios.

Innovative VSS

- Supports innovative Virtual Switch System (VSS), which can virtualize multiple physical devices into one logical device with unparalleled performance, reliability, and management compared to stand-alone physical devices.
- Doubled performance: The virtualized system makes full use of every link between physical devices, avoiding the link congestion of the traditional networking model Spanning Tree Protocol, making the best use of devices, doubling the performance, and protecting the original link investment to the greatest extent.
- High reliability: Based on advanced distributed processing technology, the efficient cross-physical device link aggregation function separates the logical control plane, service control plane and service data plane, providing uninterrupted Layer 3 routing and forwarding and avoiding business interruption caused by the single failure. Therefore, the reliability of the virtual system is greatly improved.
- Easy management: The entire virtual system realizes unified management of a single IP, and physical devices are visible to users, which simplifies the management of network devices and network topology, greatly improves operation efficiency, and effectively reduces operation and maintenance costs.

Carrier-level High Reliability

- Based on Hitless Protection System (HPS), the key components such as power supply modules, are redundant backup and hot-swap, which supports seamless switchover in case of failure without manual intervention.
- Supports STP/RSTP/MSTP, VRRP, ring network protection, dual uplink active/standby link protection, LACP and other simple and efficient redundancy protection mechanisms.
- Supports In-Service Software Upgrade (ISSU), ensuring the unremitting data forwarding during system upgrade.
- The ultra-high-precision BFD mechanism, through linkage with Layer 2 and Layer 3 protocols, realizes millisecond-level fault detection and service recovery, which greatly improves the reliability of the network system.
- Perfect Ethernet OAM mechanism, supporting 802.3ah and 802.1ag, realizes rapid detection and location of faults through real-time monitoring of network operation status.
- The high reliability hardware and software meet the fault recovery time requirement of 50ms for carrier-level services, and truly achieve the high reliability (99.999%) of carrier-class core devices.

Rich Service Features

- Perfect Layer 2 and Layer 3 multicast routing protocols meet the access requirements of IPTV, multi-terminal high-definition video surveillance and video conferencing;
- Complete Layer 3 routing protocols and large routing table capacity meet the needs of various network interconnection, and can built up ultra-large campus network, enterprise network and industry private network.

Comprehensive IPv6 Solutions

- Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc.
- Supports Ping, Traceroute, Telnet, SSH, ACL and so on, meeting IPv6 networks' device management and service control requirements.
- Supports IPv6 multicast features such as MLD, MLD Snooping, IPv6 static routing, IPv6 Layer 3 routing protocols such as RIPng, OSPFv3, BGP4+, providing complete IPv6 Layer 2 and Layer 3 solutions.
- Supports a wealth of IPv4 to IPv6 transition technologies, including: IPv6 manual tunnel, automatic tunnel, 6to4 tunnel, and ISATAP tunnel to ensure the smooth transition from IPv4 network to IPv6 network.

Perfect Security Mechanisms

- 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 TACACS+.
- Enhanced service security mechanism: Supports clear text or MD5 authentication of related routing protocols, and Unicast Reverse Path Forwarding (uRPF), which can effectively control illegal services; supports in-depth detection and filtering of control packets and data packets, thereby effectively isolating illegal data packets and improving the security of the network system.

Innovative Eco-friendly Design

- Intelligent power management system: it adopts advanced power system architecture design to achieve efficient power conversion, unique power monitoring, slow start function, real-time monitoring of the running status, intelligent adjustment, and deep energy saving.
- Intelligent fan management system: Intelligent fan design supports automatic speed regulation, effectively reduces the speed, reduces noise, and prolongs the service life of the fan.
- Supports energy efficient Ethernet function and complies with the international standard IEEE 802.3az EEE, effectively reducing energy consumption.

Specifications

Model No.	OPL-SWM3-DC10G04X2.5G08
Backplane	120Gbps
Forwarding	90Mpps
MAC Table	16K
Ports	8x1G/2.5GE ports, 4x10GE SFP+ ports
Dimensions mm (W×D×H)	440×180×44mm
Power Supply	AC: 100V-240V, 50/60Hz
Environment	Operating temperature/humidity: 0℃+50℃; 10%-90% non-condensing Storage temperature/humidity: -20℃+70℃; 5%-95% non-condensing
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 IEEE 802.1AE MacSec
VLAN	4K 802.1Q VLAN GVRP 1:1 VLAN mapping and N:1 VLAN mapping QinQ and flexible QinQ Private VLAN
STP	802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP) BPDU protection, root protection, and loopback protection
Multicast	IGMP v1/v2/v3 IGMP Snooping IGMP Fast Leave Multicast group strategy and quantity limitation MVR PIM-SM and PIM-DM
IPv4	Static routing, RIP v1/v2, OSPF, BGP PBR ECMP BFD for OSPF, BGP

IPv6	ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet IPv6 neighbor discovery Path MTU discovery MLD V1 MLD snooping IPv6 Static Routing, RIPng, OSPFv3, BGP4+ Manual tunnel, ISATAP tunnel, 6-to-4 tunnel
MPLS VPN	MCE
QoS	Flow classification based on L2/L3/L4 protocols CAR rate-limit 802.1P/DSCP priority re-labeling SP, WRR, and 'SP+WRR' Congestion avoidance mechanisms like Tail-Drop and WRED Flow monitoring and flow shaping Supports Hash-based load balancing algorithm to ensure session integrity
Security Features	L2/L3/L4 ACL flow identification and filtration DDoS attack prevention, TCP's SYN Flood attack prevention, UDP Flood attack prevention, etc. Broadcast/multicast/unknown unicast storm-control Port isolation Port security, and 'IP+MAC+port' binding DHCP snooping and DHCP option 82 IEEE 802.1x authentication Radius, TACACS+ authentication URPF Level-based command line protection
Reliability	Power 1+1 backup 802.3ad Static/LACP link aggregation EAPS G.8032 ERPS HSRP, VRRP GR for OSPF and BGP BFD for OSPF and BGP ISSU
Management	Console, Telnet, SSH 2.0 ZTP (Zero Touch Provisioning) Web-GUI SNMP v1/v2/v3 TFTP/FTP RMON sFlow
Energy Saving	IEEE 802.3az EEE (Energy Efficient Ethernet)

Optical Modules	
Gigabit Optical Modules	
OPL-OT-GTA-RJ45	Gigabit SFP-to-RJ45 module
OPL-OT-GMM8-05	Gigabit SFP multi-mode, 500m, 850nm, LC, DDM
OPL-OT-G3-10	Gigabit SFP single mode, 10km, 1310nm, LC, DDM
OPL-OT-G3-20	Gigabit SFP single mode, 20km, 1310nm, LC, DDM
OPL-OT-G3-40	Gigabit SFP single mode, 40Km, 1310nm, LC, DDM
OPL-OT-G5-80	Gigabit SFP single mode, 80km, 1550nm, LC, DDM
OPL-OT-G5-120	Gigabit SFP single mode, 120km, 1550nm, LC, DDM
OPL-OT-GBD35-10 OPL-OT-GBD53-10	Gigabit SFP Bidi, 10km, Tx1310/Rx1550, LC, DDM Gigabit SFP Bidi, 10km, Tx1550/Rx1310, LC, DDM
OPL-OT-GBD35-20 OPL-OT-GBD53-20	Gigabit SFP Bidi, 20km, Tx1310/Rx1550, LC, DDM Gigabit SFP Bidi, 20km, Tx1550/Rx1310, LC, DDM
OPL-OT-GBD35-40 OPL-OT-GBD53-40	Gigabit SFP Bidi, 40km, Tx1310/Rx1550, LC, DDM Gigabit SFP Bidi, 40km, Tx1550/Rx1310, LC, DDM
OPL-OT-GBD45-80 OPL-OT-GBD54-80	Gigabit SFP Bidi, 80km, Tx1490/Rx1550, LC, DDM Gigabit SFP Bidi, 80km, Tx1550/Rx1490, LC, DDM
OPL-OT-GBD45-120 OPL-OT-GBD54-120	Gigabit SFP Bidi, 120km, Tx1490/Rx1550, LC, DDM Gigabit SFP Bidi, 120km, Tx1550/Rx1490, LC, DDM
10GE Optical Modules	
OPL-OT-GMM8-03	10GE SFP multi-mode, 300m, 850nm, LC, DDM
OPL-OT-G3-10	10GE SFP single mode, 10km, 1310nm, LC, DDM
OPL-OT-G3-20	10GE SFP single mode, 20km, 1310nm, LC, DDM
OPL-OT-G5-40	10GE SFP single mode, 40Km, 1550nm, LC, DDM
OPL-OT-G5-80	10GE SFP single mode, 80Km, 1550nm, LC, DDM
OPL-OT-10GBD23-10 OPL-OT-10GBD32-10	10GE SFP+ Bidi, 10km, Tx1270/Rx1310, LC, DDM 10GE SFP+ Bidi, 10km, Tx1310/Rx1270, LC, DDM
OPL-OT-10GBD23-20 OPL-OT-10GBD32-20	10GE SFP+ Bidi, 20km, Tx1270/Rx1310, LC, DDM 10GE SFP+ Bidi, 20km, Tx1310/Rx1270, LC, DDM
OPL-OT-10GBD23-40 OPL-OT-10GBD32-40	10GE SFP+ Bidi, 40km, Tx1270/Rx1310, LC, DDM 10GE SFP+ Bidi, 40km, Tx1310/Rx1270, LC, DDM

Информация для заказа

Модель	Описание
OPL-SWM3-DC10G04X2.5G08	Multi-Gigabit L3 Managed Switch 8Port 1G/2.5G Uplink 4-Port 10G SFP+, AC-220V power supply Cooling fan, 1U, standard 19-inch rack-mounted installation