DPtech LSW6600 Series Ethernet Switches

Overview

DPtech LSW6600 Series Switches are the next generation high-density 10G Ethernet switches presented by DPtech. Based on the industry's leading 40G/100G hardware architecture and DPtech's ConPlat operating system, the Series is equipped with virtualization technology and rich data center features. It provides up to 48 wire-speed 10G interfaces on 1U equipment. It also has 40G uplink interfaces to meet the requirements of high-density 10G access and 40G/100G uplink in TOR deployment of the next generation data centers. In addition to 10G access switches for cloud data centers, the LSW6600 can also serve as a core for small- or medium-sized secure networks or a aggregation equipment for large-scale secure networks.

Product Features

■ **High-capacity high-density 10G interface**

The LSW6600 Series provides a maximum switching capacity of 2.56Tbps, 1200Mpps forwarding performance, and full wire-speed switching architecture. It is the industry's first-class 1U cassette switch, with up to 48 SFP+ optical interfaces and 6 40G QSFP+ interfaces. In 40G mode or 4 10G mode, the 40G QSFP+ interfaces can be expanded to provide the whole unit with up to 72 10G interfaces capability, meeting the challenge of high density and high bandwidth access in next-generation cloud computing data centers.

■ **Rich data center features**

The LSW6600 Series is equipped with the TRILL (Transparent Interconnection of Lots of Links) technology to enable construction of ultra-large layer 2 networks consisting of more than 10,000 physical servers. In combination of ISIS routing, the TRILL technology calculates the forwarding paths to address the issue of a single forwarding path and loops, thus improving bandwidth utilization to 100%. In this way, it significantly enhances network stability and realizes quick convergence of the Layer 2 network.

Compatible with VXLAN, 802.3 Qbg, DCB (Data Center Bridging), PFC (Priority-based Flow Control) and ETS (Enhanced Transmission Selection), the LSW660 Series enables a highly integrated network combining traditional front-end server and back-end storage.

■ **Multiple services are enabled**

With MCE, the LSW6600 Series creates and maintains separate routing tables for each VPN to ensure user isolation on the same device. It can serve as a reliable and economical solution for the secure isolation of multi-services in the network.

The LSW6600 Series supports multiple protocols such as IGMP, IGMP Snooping, GMRP, and

PIM. It supports large-scale multicast entries to fully satisfy the requirements of IP HD video surveillance and other multicast services.

Compatible with fast ring network recovery protocol (FRRP) and fast link recovery protocol (FLRP), the LSW6600 Series provides a self-recovery performance of less than 20 milliseconds in applications that are prone to lose packets, such as video conferencing and IP HD video surveillance. Multiple services and heavy traffic will have no impact on convergence time, thus ensuring the normal business operation.

■ **Virtual Switching Matrix (VSM)**

The LSW6600 Series adopts Virtual Switching Matrix (VSM) technology, which performs virtualization of multiple physical devices into a single logical device for unified configuration and management. VSM brings about the following benefits to users:

Unified management VSM technology enable users to log in to a logical device from any port of any device, achieving unified management of all devices in the Virtual Switching Matrix without physically connecting to each device for configuration and management.

Simplified services VSM is compatible with various layer 2 and layer 3 network protocols. In a layer-3 network, VSM technology can perform virtualization of multiple layer-3 switches into a single logical device for unified routing computing. Thanks to the cross-device link aggregation technology, aggregation on physical ports of different devices can be realized. The Series also supports load sharing and can be used to replace the traditional spanning tree protocols, increasing bandwidth utilization and shorten the convergence time in case of a network failure.

Flexible expansion hot-plug is enabled when a new device joins or leaves the VSM group. Therefore, there will be no impact on the normal operation of other devices, ensuring flexible expansion as needed.

■ **Sound security control policy**

With a built-in authentication server, the LSW6600 Series provides multiple authentication modes based on MAC address, 802.1x, and Portal. It supports dynamic or static binding of user identity, such as user account, IP, MAC, VLAN, and interface. Dynamic distribution of policies is supported.

The LSW6600 Series is provided with enhanced ACL by supporting large-capacity ingress and egress ACLs. It also enables ACL distribution based on VLAN, which simplifies user configuration and avoids waste of ACL resources.

■ **Rich QoS policy**

The LSW6600 Series supports traffic identification on interfaces. It provides multiple stream classification based on source MAC address, destination MAC address, source IP address, destination IP address, TCP/UDP port number, protocol type, and VLAN. With priority queues based on hardware, it is compatible with multiple queue scheduling algorithms such as SP, WRR, and SP+WPP. Support congestion management and rate limits on interfaces.

- **Full support of IPV4/IPv6 dual stack**

  The LSW6600 Series supports IPv4/IPv6 dual stack and IPv6 over IPv4 Tunnel (including manual Tunnel, 6to4 Tunnel, ISATAP Tunnel) as well as IPv6 layer 3 wire-speed forwarding. It can be flexibly deployed on a network with only IPv4 or IPv4, or with both IPv4 and IPv4, thus satisfying the transition requirements from IPv4 to IPv6.

- **Outstanding management**

  With interface mirroring in both inbound and outbound directions, the LSW6600 Series can monitor packets on specified interfaces, and copy packets from these interfaces to monitoring interface for network detection and troubleshooting.

  Compatible with SNMPv1/v2/v3 standard network management protocol, the LSW6600 Series provides CLI command lines and a Web management interface, and realizes centralized management of the devices through DPtech's Unified Management Center (UMC).

Product Series

LSW6600-48XGS6QXP

LSW6600-8GT24XGS

Function Descriptions

Product Name	LSW6600-48XGS6QXP	LSW6600-8GT24XGS
Service interface	48 10-Gigabit optical interfaces (SFP+) + +6 40-Gigabit optical interfaces (QSFP+)	8 Gigabit electrical interfaces (RJ45) + +24 10-Gigabit optical interfaces (SFP+)
Management interfaces	Console port	
Switching capacity	2.56Tbps/40.96Tbps	2.56Tbps/36Tbps
Forwarding performance	1200Mpps/1740Mpps	372Mpps
Delay	<6us	
Size of MAC address table	128K	
VLAN	4K	
Maximum length of long frame	13K	12K
Dimension (width * depth * height) (in mm)	440×690×44	440×420×44

Power supply	Modular power supply redundancy	Solidified power supply redundancy
Power Consumption	250W	130W
Operating environment	0℃～45℃	
Interface management	Support Port trunk, basic port functions, LACP, etc.	
Spanning tree	Support STP, RSTP, MSTP	
DHCP	Support DHCP Client, DHCP Relay, DHCP Snooping	
IP routing	IPv4: Static routing, RIP v1/2, OSPF, BGP, policy-go-together, etc. IPv6: IPv6 static routing, RIPng, OSPFv3, BGP4+, transition tunnel technology from IPv4 to IPv6, etc.	
Virtualization features	Support VSM virtualization	
Multicast features	Support GMRP Support IGMP Snooping, IGMP Proxy; Support PIM-SM, PIM-SSM, PIM-DM	
Data Center Features	Support 802.1Qbg, TRILL, VXLAN, etc.	
QoS features	Support traffic classification based on 802.1p/DSCP/TOS Support speed limit on ports and streams Support SP, WRR, SP + WRR queue scheduling	
Security features	Support local and centralized authentication based on MAC address Support local and centralized authentication based on 802.1x Support local and centralized authentication based on Portal Support dynamic ARP detection, one-click ARP binding, authorized ARP, ARP source suppression, ARP source address inspection; Support port isolation, Static Port Access Control Support broadcast storm suppression Support SSH2.0	
High reliability	Compatible with fast ring network recovery protocol (FRRP) and fast link recovery protocol (FLRP) Support VRRP	
Management and Maintenance	Support MON Support IEEE 1588v2 PTP Support real-time temperature detection and alarm Support SNMP, CLI, Web management, and Unified Management Center (UMC) Support local and remote output of system logs, operation logs, debugging information	