

DPtech LSW5662 Series Ethernet Switches



Overview

Designed for industries with higher security requirements such as government agencies, the DPtech LSW5662 Series Ethernet Switch is a next generation multi-service high-performance Ethernet switch based on CPU and switching chip. With DPtech's leading high performance hardware architecture and unified ConPlat operating system, this Series is provided with high performance service processing capabilities, flexible Gigabit interfaces, and high-density 10-Gigabit interfaces. It can also be deployed in scenarios such as multi-service aggregation, small- and medium enterprise cores, and data centers through highly scalable high-density interface boards as needed. Therefore, comprehensive and high performance L2/L3 switching services which are secure, stable and reliable can be realized, covering chips, hardware and software.

Product Features

■ High performance port density scalability

With four 10-Gigabit optical interfaces and flexibly scalable Gigabit interfaces, the LSW5662 Series is a full wire-speed interconnection solution with the highest cost-effectiveness.

It supports a wide array of high performance expansion boards, including 2-port 40G expansion boards, 1-port 40G expansion boards, 8-port 10G optical/electrical expansion boards, 4-port 10G optical/electrical expansion boards, and flexible Gigabit optical/electrical expansion boards. With a maximum of 12 10G interfaces or 2 40G interfaces, it provides high performance scalability to meet the diverse networking needs of large-scale network convergence or small-scale network cores.

■ Virtual Switching Matrix (VSM)

The LSW5662 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.

■ **VxLAN features**

With VxLAN (Virtual Extensible LAN) technology, the LSW5662 Series can be used as a VTEP (Virtual Tunnel End Point) to encapsulate packets in the outer header of IP/MAC through MAC in UDP for transmission on physical IP network. It can also get VxLAN packets decapsulated and sent to the destination. In this way, the Series helps address remote migration and data mutual access of virtual machines across data centers.

■ **Multiple services are enabled**

Integrating wireless controllers, the LSW5662 Series offers a seamless fusion of wired and wireless functions, eliminating bandwidth limitation of the wireless controllers and protecting users' investment.

With MCE, the LSW5662 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 LSW5662 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.

■ **Sound security control policy**

The LSW5662 Series provides multiple centralized authentication modes based on MAC address, 802.1x, and Portal. With a built-in authentication server, it supports local access authentication for 1K users. 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 LSW5662 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.

■ **Guaranteed high reliability**

Compatible with fast ring network recovery protocol (FRRP) and fast link recovery protocol (FLRP), the LSW5662 Series provides a self-recovery performance of less than 20 milliseconds. Multiple services and heavy traffic will have no impact on convergence time, thus ensuring the normal business operation.

■ **Rich QoS policy**

The LSW5662 Series supports L2~L4 packet filtering and traffic detection on ports. It provides multiple stream classifications 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.

- **Enhanced environmental adaptability**

The LSW5662 Series adopts an environment-enhanced design, which provides features such as a wide range of operating temperature (i.e., 0~70°C) and pressure, and lightning protection. This helps ensure highly reliable operation in complex electrical environments (e.g., corridor equipment room) and air-conditioning free deployment environments.

With low-power consumption hardware and optimized heat dissipation designs of air ducts and component layout, the LSW5662 Series ensures fully controllable power consumption. Besides, thanks to running status and environment monitoring, it can make adjustment to fan and interface statuses to reduce energy consumption in accordance with ambient temperature, time period and other operating conditions. A number of statuses and alarms can be provided, including environmental alarms, power supply and fan alarms, interface, and CPU status.

- **Full support of IPV4/IPV6 dual stack**

The LSW5662 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 IPv6, or with both IPv4 and IPv6, thus satisfying the transition requirements from IPv4 to IPv6.

- **Outstanding management**

With interface mirroring in both inbound and outbound directions, the LSW5662 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 LSW5662 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



LSW5662-28GT4XGS



LSW5662-48GT4XGS



LSW5662-24GP4XGS



LSW5662-48GP4XGS

Function Descriptions

| Product Name | LSW5662-28GT4XGS | LSW5662-48GT4XGS | LSW5662-24GP4XGS | LSW5662-48GP4XGS |
|--|---|---|--|--|
| Service interface | 20 Gigabit electrical interfaces + 8 Gigabit Combo + 4 10-Gigabit optical interfaces (SFP+) | 48 Gigabit electrical interfaces + 4 10-Gigabit optical interfaces (SFP+) | 16 Gigabit optical interfaces (SFP) + 8 Gigabit Combo + 4 10-Gigabit optical interfaces (SFP+) | 48 Gigabit optical interfaces (SFP) + 4 10-Gigabit optical interfaces (SFP+) |
| Management interfaces | 1 RJ-45 port, 1 RJ-45 Console port, 1 USB port, 1 Mini USB Console port | | | 1 RJ-45 Console port |
| Switching capacity | 598Gbps/5.98Tbps | 598Gbps/5.98Tbps | 598Gbps/5.98Tbps | 598Gbps/5.98Tbps |
| Packet forwarding rate | 342Mpps/450Mpps | 372Mpps/485Mpps | 342Mpps/450Mpps | 372Mpps/485Mpps |
| Expansion Slots | 1 pieces | | | |
| Interface Module | 2-port 40G optical interface module (QSFP), 1-port 40G optical interface module (QSFP), 8-port 10-Gigabit optical interface module (SFP+), 8-port 10-Gigabit Ethernet interface module, 4-port 10-Gigabit optical interface module (SFP+), 2-port 10-Gigabit optical interface module (SFP+), 8-port Gigabit optical interface module (SFP), 8-port Gigabit electrical interface module, 4-port Gigabit optical interface module (SFP) + 4-port Gigabit electrical interface module | | | |
| Dimension (width * depth * height: mm) | 440×400×44 | 440×400×44 | 440×400×44 | 440×400×44 |
| Power supply | hot-plug, modular dual power supply Support AC/DC | hot-plug, modular dual power supply Support AC/DC | hot-plug, modular dual power supply Support AC/DC | hot-plug, modular dual power supply Support AC/DC |
| Power Consumption | 70W | 61W | 90W | 108W |
| Operating environment | 0°C~70°C, interface lightning protection | | | |
| VXLAN | Support VXLAN layer 2 switching Support VXLAN routing Support VXLAN gateway Support VxLAN centralized console of OpenFlow+Netconf | | | |
| MAC | Support 96K MAC entries Support static MAC, dynamic MAC, black hole MAC and source MAC address filtering | | | |
| VLAN | Support 4K VLAN Support VLAN based on MAC/ IP subnet/authentication policy/interface VLAN Support Voice VLAN Support QinQ | | | |

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|----------------------------|--|
| Port features | Support port aggregation, port mirroring, port isolation, port traffic identification, RSPAN |
| Spanning tree | Support STP, RSTP, MSTP |
| DHCP | Support DHCP Client, DHCP Relay, DHCP Snooping |
| Virtualization | Support VSM virtualization |
| IP routing | Support static routing Support RIPv1/v2, OSPF, BGP, VRRP Support RIPng, OSPFv3, BGP4+ for IPv6, and VRRPv3 Support policy-go-together |
| Multicast | Support IGMP Snooping and IGMP Proxy Support GMRP Support PIM-SM, PIM-SSM, PIM-DM |
| ACL | Support ACL rules based on VLAN, MAC address, IP address, TCP/UDP port number |
| QoS | Support 8 priority queues per port 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, port security Support broadcast storm suppression Support SSH2.0 |
| Management and Maintenance | Support MON Support NTP 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 |

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