100G Datacenter Switch

Product Overview

DDS-QXF28 data center 100G switch uses advanced hardware and software architecture design, support built-in modular 1+1 redundant power supplies, 5+1 redundant fans
DDS-QXF28 is ideal for cloud computing data center TOR or spine switches of datacenter. For campus or other large network, DDS-QXF28 could also be deployed at aggregation or core layer as its high performance and reliability.

Appearance	Description
 DDS-32QXF28	32 x 100G QSFP28 AC+AC Power Supply 1 x console, 1 x USB, 1 x 100/1000Base-T MGMT Forwarding performance: 4.7Bpps Switching capacity: 6.4Tbps
 DDS-48XF28-6QXF28	48 x 25G/10G SFP28 + 6 x 100G QSFP28 AC+AC Power Supply 1 x console, 1 x USB, 1 x 100/1000Base-T MGMT Forwarding performance: 2.6Bpps Switching capacity: 3.6Tbps

Key Features and Highlights

High Performance and scalability

With high switching capacity, DDS-QXF28supports wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.
The 25G/10G Ethernet connectivity of DDS-QXF28 is accomplished via a hot-pluggable 25G/10G SFP28/SFP+ transceiver which supports distance up to 300 meters over multi-mode fiber and 10 to 40km over single-mode fiber (The distance depends the optical module chosen).

High Reliability

DDS-QXF28series support modular 1+1 redundant power supplies and 5+1 redundant fans. Business won't be interrupted in case replacing power supplies and fans. System supports dual images. Even though the primary image was destroyed, system will still boot via backup image normally.

VSF (Virtual Switch Framework)

As new generation data center switch, DDS-QXF28 support VSF which not only guarantees the flexibility, but also enhanced the scalability of datacenter network.

Flex Resource

Flex Resource is able to allocate, recover and reallocate hardware resource dynamically according to demand. It can increase the utilization of the hardware resource.

Rich L3 Features

DDS-QXF28 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 DDS-QXF28 customers could easily achieve Policy based Route (PBR), which is important when they need multi exit application.

MPLS/VPLS

DDS-QXF28 supports MPLS L3 VPN/MPLS L2 VPN(VPLS) and helps customer to construct more secure/extendable network. With max.255 VRF instances, DDS-QXF28 series could be deployed as P & PE devices, guarantees the variety of services.

Abundant IPv6 Support

DDS-QXF28 supports IPv6 switching and routing based on hardware for maximum performance. With increased network devices growing and the need for larger addressing and higher security becomes critical, DDS-QXF28will be a right product to meet the requirement. DDS-QXF28 passed IPv6 form Phase II certification, which is the best proof of the application.

Strong Multicast

DDS-QXF28 supports abundant multicast features such as IGMPv1/v2/v3 snooping and fast leave and IGMPv1/v2/v3, PIM-DM, PIM-SM, PIM-SSM and even MSDP. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detection functions, DDS-QXF28 provides great application experience for customer.

Specifications

Item	DDS-32QXF28	DDS-48XF28-6QXF28
Physical port	32 x 100G QSFP28	48 x 25G/10G (SFP28) + 6x 100G QSFP28
Management port	Console port RJ45 100/1000Mbps RJ45 Ethernet Management port USB2.0 Management port	
Performance		
Switching Capacity	6.4Tbps	3.6Tbps
Forwarding Rate	4.7Bpps	2.6Bpps
MAC Address	8K min./104K max.	
ARP Table	8K min./32K max.	
Routing Table	8K min./128K max.	
Physical		
Dimension(W*H*D)	438mm*44mm*515mm	438mm*44mm*473mm
Relative Humidity	5%~95% non-condensing	
Temperature	Working 0°C~45°C, storage -40°C~70°C	
Power Input	AC: 100~240V,50~60 Hz	
Power Supply	1+1 Modular Redundant AC	
Main Features		
L1, L2 Features	9k Jumbo Frame Port Loopback Detect LLDP and LLDP-MED UDLD 802.3ad LACP, 16 groups LACP Load Balance	
	N:1 Port Mirroring RSPAN ERSPAN	
	IEEEE802.1d(STP) IEEEE802.1w(RSTP) IEEEE802.1s(MSTP) Root Guard BPDU Guard BPDU Tunnel	
	802.1Q, 4096 VLAN MAC VLAN, VOICE VLAN, PVLAN, Protocol VLAN, Multicast VLAN QinQ, Selective 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, IEEE802.3x Bandwidth Control
L3 Features	Static Routing, RIPv1/v2, OSPFv2, BGP4 OSPFv3, BGP4+ OSPF Multiple Process LPM Routing Policy-based Routing (PBR) for IPv4 and IPv6 VRRP URPF, ECMP BFD
	IGMP v1/v2/v3, IGMP Proxy, DVMRP, PIM-DM, PIM-SM, PIM-SSM, any cast RP, MSDP Static Multicast Route Multicast Receive Control Illegal Multicast Source Detection
	ARP Guard, Local ARP Proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit Anti ARP Cheat, Anti ARP Scan
	DNS Client
	GRE Tunnel
IPv6	6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel ICMPv6, ND, DNSv6 IPv6 LPM Routing, IPv6 Policy-Based Routing (PBR) IPv6 VRRPv3, IPv6 URPF, IPv6 RA RIPng, OSPFv3, BGP4+ MLD Snooping, IPv6 multicast VLAN MLDv1/v2, PIM-SM/DM for IPv6, IPv6 Anycast RP, IPv6 ACL, IPv6 QOS
MPLS	MPLS, VRF, LDP
	MPLS L3 VPN, MPLS L2 VPN(VPLS), VPWS
QoS	8 Queues SWRR, SP, WRR, DWRR, SDWRR, WRED Traffic Classification Based on 802.1p CoS, ToS, DiffServ DSCP, ACL, port number Traffic Shaping PRI Mark/Remark
ACL	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 REDIRECT and accounting-based ACL Rules can be configured to port, VLAN Time ranged ACL
Security	802.1x AAA Port, MAC based authentication Accounting based on time length and traffic Guest VLAN and Auto VLAN

	RADIUS for IPv4 and IPv6
	TACACS+ for IPv4 and IPv6
	MAB
DHCPv4/v6	DHCP Server/Client for IPv4/IPv6 DHCP Relay/Option 82 DHCP Snooping/Option 82
Traffic Monitor	sFlow Traffic Analysis
Security Network Management	CLI, WEB, Telnet, SNMPv1/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 Authentication by radius SSH v1/v2 Dual firmware images/ Configuration files 802.3ah OAM, 802.1ag OAM
Data Center Features	VXLAN MLAG Telemetry Netconf VSF (Virtual Switch Framework)

The contents marked with "*" need future upgrade or are under development

Application

Date Center Applications

DDS-QXF28 work as TOR switches or spine switches for high-performance data centers.