![AADONA - GOING BEYOND VISION]

Diana: DDS-48XF-6QXF-DN

Product Overview

Diana: DDS-48XF-6QXF-DN data center 40G switch uses advanced hardware and software architecture design,support built-in modular 1+1 redundant power supplies, 4+1 redundant fans, cross ventilation and wind direction adjustable. It has 48*10GE SFP+ ports and 6*40G QSFP+ ports. DDS-48XF-6QXF-DN is ideal for cloud computing data center server access and core switch of small to medium datacenter. For campus or other large network, DDS-48XF-6QXF-DN could also be deployed at aggregation or core layer as its high performance and reliability.

Appearance	Description
Diana: DDS-48XF-6QXF-DN	☐ 48 x 10G SFP+ and 6 x 40G QSFP ☐ AC+AC Power Supply ☐ 1 console, 1 USB, 1 RJ45 management port ☐ Forwarding performance: 1071Mpps ☐ Switching capacity: 1440Gbps

Key Features and Highlights

High Performance and scalability

With high switching capacity, DDS-48XF-6QXF-DN Supports wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.
The 10 Gigabit Ethernet connectivity of DDS-48XF-6QXF-DN is accomplished via a hot-pluggable 10 Gigabit 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-48XF-6QXF-DN series support modular 1+1 redundant power supplies and 4+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-48XF-6QXF-DN 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.

OpenFlow

Diana: DDS-48XF-6QXF-DN supports OpenFlow 1.0 standard protocol. OpenFlow network is increasingly becoming a trend as the core protocol of SDN network. It makes the network easier programming OpenFlow brings the high performance to datacenter users via self-defined network. With OpenFlow, this product is ideal to build SDN test-bed for research institutes and SDN Experimental Bureau for large ISP and operator.

Rich L3 Features

DDS-48XF-6QXF-DN 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 Diana DDS-48XF-6QXF-DN, customers could easily achieve Policy based Route (PBR), which is important when they need multi exit application.

MPLS/VPLS

Diana: DDS-48XF-6QXF-DN supports MPLS L3 VPN/MPLS L2 VPN(VPLS) and helps customer to construct more secure/extendable network. With max.255 VRF instances, Diana: DDS-48XF-6QXF-DN series could be deployed as P & PE devices, guarantees the variety of services.

Abundant IPv6 Support

Diana: DDS-48XF-6QXF-DN 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-48XF-6QXF-DN will be a right product to meet the requirement. Diana: DDS-48XF-6QXF-DN passed IPv6 form Phase II certification, which is the best proof of the application.

Strong Multicast

Diana: DDS-48XF-6QXF-DN 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-48XF-6QXF-DN provides great application experience for customer.

Specifications

Item	Diana: DDS-48XF-6QXF-DN
Physical port	48 * 10G SFP+ and 6 * 40G QSFP
Management port	Console port RJ45 10/100/1000Mbps RJ45 Ethernet Management port USB2.0 Management port
Performance	
Switching Capacity	1440Gbps
Forwarding Rate	1071Mpps
MAC Address	96K(standard)/32K(routee)/288K(bridgee), UFT configuration, default is standard
ARP Table	208k(standard)/16k(routee)/16k(bridgee), UFT configuration, default is standard
Routing Table	8k(standard)/128k(routee)/8k(bridgee), UFT configuration, default is standard
Physical	
Dimension(W*H*D)	433.8mm*44mm*550mm
Relative Humidity	10%~90% non-condensing
Temperature	Working 0°C~50°C, storage -40°C~75°C
Power Input	AC: 100~240V,50~60 Hz
Power Supply	1+1 Modular Redundant
Main Features	
L1, L2 Features	IEEE 802.3(10Base-T), IEEE 802.3u(100Base-TX), IEEE 802.3z(1000BASE-X) IEEE 802.3ab(1000Base-T), IEEE 802.3ae(10GBase), IEEE802.3x IEEE 802.3ak(10GBASE-CX4) IEEE 802.3ba
	12k Jumbo Frame Port Loopback Detect LLDP and LLDP-MED UDLD 802.3ad LACP, max 128 group trunks with max 8 ports for each trunk 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
	OpenFlow 1.0 (support open controller Opendaylight, Floodlight, Ryu, Pox, etc.)
Data Center Features	IEEE VEPA (Virtual Ethernet Port Aggregator) *
	TRILL *
	VXLAN *
	VSF (Virtual Switch Framework)

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

Application

Date Center Applications
Diana: DDS-48XF-6QXF-DN switch work as TOR switches and connect to the core using 100GE ports.