



DIANA : DCS-16F-8C-4XF

16 1G SFP + 8 1G Combo + 4 10G SFP+ Port Dual Stack 10G L3 Fully Managed Routing Fiber Switch

OVERVIEW

DSC-16F-8C-4XF next-generation 10G stackable routing switch that has advanced hardware and software architecture design. These switches provide high availability, scalability, security, energy efficiency, and ease of operation with innovative features such as VSF, IEEE 802.3at optional. It is ideal for core, aggregation or access layer for its high performance, availability and reliability.

Bandwidth-intensive applications such as multimedia streaming, VoIP and video surveillance are used daily in business networks for more efficient workfiows. However, the networks could be overloaded and that causes reduced business productivity. Deploying 10-Gigabit ports at the aggregation layer to deal with bandwidth-intensive networks becomes the top choice of users such as hospitality venues and education institutions. AADONA's Layer-3 stackable Switch Series comes with Gigabit SFP connectivity with 4 Gigabit Combo ports and four integrated 10-Gigabit SFP+ slots that enable high-speed uplink connections for affordable, reliable network elements. The front panel with carbon fiber look brings a totally fresh look than traditional switches. Under the elegant hood, the Layer-3 switches not only features advanced L2 switching functionality, but also L3 routing capabilities for communications between networks.

FEATURES

KEY FEATURES AND BENEFITS		
Performance and Scalability	With high switching capacity, DSC-16F-8C-4XF supports wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols. The 10 Gigabit SFP connectivity of DSC-16F-8C-4XF is accomplished via a hot-pluggable 10 Gigabit SFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 40km over single-mode fiber(The distance depends the optical module chosen). DSC-16F-8C-4XF fiber switches support AC+48VDC RPS power supplies.	
VSF(Virtual Switch Framework)	Virtual Switch Framework can virtualize multiple DSC-16F-8C-4XF switches into one logical device, achieving the sharing of information and data tables between different switches. The performance and ports density of virtualized device greatly increase by time under VSF. VSF also simplifies management work for network administrator and provides more reliability.	
High availability	To implement fault-tolerant networks, the DCS-16F8C4XF allows creating a physical stack through one or two 10-Gigabit SFP+ slots. Four units can be configured as a stack using optional direct attach cables or transceivers to provide high bandwidth on the DCS-16F8C4XF switch for more fiexible management. The stacking topology under the ring architecture provides high redundancy in case one of the stacking links fail. The system can quickly recover through another stacking connection. DCS-16F8C4XF supports redundant power supply to trigger backup power supply to take over in case the main power supply fails.	
L3 Features	DSC-16F-8C-4XF 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 DSC-16F-8C-4XF, customers can easily achieve Policy based Route(PBR), which is important when they need multi exit application.	
Advanced L3 features	Hierarchical business networks become more complex because of the increased communication among subnets. DCS-16F8C4XF switch features dynamic routing to simplify cross-subnet communications for businesses such as hospitality venues and education institutions that operate complex networks. In addition, DCS-16F8C4XF comes with full Layer-2 switching and Layer-3 routing capabilities if the system is working under the stacking mode. The stackable structure greatly enlarges network coverage as well as network resiliency that most enterprise networks require.	
Strong Multicast	DSC-16F-8C-4XF supports abundant multicast features: Layer 2, such as IGMPv1/v2/v3 snooping & fast leave and L3 multicast protocols such as IGMPv1/v2/v3. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detect functions; DSC-16F-8C-4XF provides great application experience for customer.	

Easy High Reliability network	MRPP is Multi-layer Ring Protection Protocol, which is AADONA's private fast Ethernet ring protocol. Comparing to spanning tree protocol, it has advantages of fast convergence, simple protocol calculation, less system resources cost and so on, which can improve the reliability of Ethernet network operation.
Flexible management and future-proof networks	DCS-16F8C4XF switch can be managed via CLI which is consistent with Diana managed switches, while the intuitive Web-based GUI helps skilled network administrators to quickly become more productive. As the IP address scheme evolves to accommodate a growing number of network devices, the DCS-16F8C4XF switch assures businesses a smooth migration path from IPv4-based networks to a full IPv6 infrastructure for protection to the investments in future network upgrades.
Comprehensive QoS	With 8 queues per port, DSC-16F-8C-4XF enables differentiated management of up to 8 traffic types. The traffic is prioritized according to IEEE802.1p, DSCP, IP precedence and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video. DSC-16F-8C-4XF also supports Bi-directional rate-limiting, per port or traffic class, preserves network bandwidth and allows full control of network resources
Enhanced Security	IEEE 802.1X port-based access control and MAC-based access control ensure all users are authorized before being granted access to the network. Ingress/Egress Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers information. And for some services that are based on time, the product can support time based ACL to match the requirement. Secure Shell (SSH) encrypts network management information via Telnet providing secure network management. RADIUS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.
Abundant IPv6 Support	DSC-16F-8C-4XF supports IPv6 switching and routing based on hardware for maximum performance. With network devices growing the need for larger addressing and higher security becomes critical, DSC-16F-8C-4XF will be the right product to meet this requirement.
Green-Energy	Temperature monitoring, alarming, automatic cooling, energy saving features are realized on DSC-16F-8C-4XF. According to the temperature monitoring, Fan speed can be adjusted or stopped to reduce energy consumption and noise.

SPECIFICATIONS

BASIC		
Model Name	DSC-16F-8C-4XF	
Product Series	DIANA	
Warranty	3 Year Default + 2 Year Extended Warranty Pack (Total 5 Year)	
PHYSICAL PORT		
100/1000 Base-X (SFP)	16	
100/1000 Combo(GT/SFP)	8	
10GE(SFP+)	4	
RJ45 Ethernet Management port	1	
Console port	1	
USB2.0 interface	1	
PERFORMANC	CE	
Switching Capacity	128Gbps	
Throughput	95Mpps	
Jumbo Frame	12К	
MAC Address	16K	
ARP Table	4К	
Routing Table	1К	
ACL Table	1К	

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L1, L2 FEATUR	RES
IEEE802.3(10Base-T)	Υ
IEEE802.3u(100Base-TX)	Υ
IEEE802.3z(1000BASE-X)	Υ
IEEE802.3ab(1000Base-T)	Υ
IEEE802.3ae(10GBase)	Υ
IEEE802.3x	Υ
IEEE802.3ak(10GBASE-CX4)	Υ
Port loopback detection	Υ
LLDP and LLDP-MED	Υ
UDLD	Υ
802.3ad LACP	Υ
Max 128 group trunks with max 8 ports for each trunk	Υ
LACP load balance	Υ
N:1 Port Mirroring	Υ
RSPAN	Υ
ERSPAN	Y
IEEE802.1d(STP)	Υ
IEEEE802.1w(RSTP)	Υ
IEEEE802.1s(MSTP)	Υ
Root Guard	Υ
BPDU Guard	Υ
BPDU Tunnel	Υ
802.1Q	Υ

4K VLAN	Υ
MAC VLAN	Υ
Vocie VLAN	Υ
PVLAN	Υ
Protocol VLAN	Υ
Multicast VLAN	Υ
QinQ, Selective QinQ	Υ
Flexible QinQ	Υ
GVRP	Υ
N:1 VLAN Translation	Υ
Broadcast / Multicast / Unicast Storm Control	Υ
IGMP v1/v2/v3 Snooping and L2 Query	Υ
ND Snooping	Υ
MLDv1/v2 Snooping	Υ
Port Security	Υ
Flow Control: HOL, IEEE802.3x	Υ
Bandwidth Control	Υ
L3 FEATURE	- S
Static Routing	Υ
RIPv1/v2	Υ
OSPFv2	Υ
OSPFv3	Υ
BGP4	Υ
BGP4+	Υ

OSPF multiple process	Υ
LPM Routing	Υ
Policy-based Routing(PBR) for IPv4 and IPv6	Υ
VRRP	Υ
URPF	Y
ЕСМР	Y
BFD	Υ
IGMP v1/v2/v3	Y
IGMP Proxy	Y
Static Multicast Route	Y
Multicast Receive Control	Y
Illegal Multicast Source Detect	Y
ARP Guard	Y
Local ARP proxy	Y
Proxy ARP	Y
ARP Binding	Y
Gratuitous ARP	Y
ARP Limit	Y
Anti ARP/NDP Cheat	Y
Anti ARP/NDP Scan	Υ
DNS Client, DNS Relay	Υ
GRE Tunnel	Y
IPV6	
6 to 4 Tunnel	Υ
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Configured Tunnel	Υ
ISATAP Tunnel	Υ
ICMPv6	Y
ND	Y
DNSv6	Y
IPv6 LPM Routing	Υ
IPv6 Policy-based Routing(PBR)	Υ
IPv6 VRRPv3	Υ
IPv6 URPF	Υ
IPv6 RA	Υ
RIPng	Υ
MLD Snooping	Υ
IPv6 Multicast VLAN	Υ
MLDv1/v2	Υ
IPv6 Any Cast RP	Υ
IPv6 ACL	Υ
IPv6 QoS	Υ
QOS	-
8 Queues	Υ
SWRR	Υ
SP	Υ
WRR	Υ
DWRR	Υ
SDWRR	Υ

Traffic Classification Based on 802.1p COS	Y
ToS	Y
DiffServ DSCP	Υ
ACL	
Port number	Y
Traffic Policing	Υ
PRI Mark/Remark	Υ
IP ACL	Υ
MAC ACL	Υ
IP-MAC ACL	Υ
Standard and Expanded ACL Based on source/destination IP or MAC	Y
IP Protocol	Y
TCP/UDP port	Υ
DSCP	Y
IP Precedence	Υ
VLAN, Tag/Untag	Υ
CoS	Y
REDIRECT and Accounting based ACL	Y
Rules can be configured to port	Y
VLAN	Υ
VLAN routing interfaces	Υ
Time Ranged ACL	Υ

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SECURITY		
802.1x AAA	Υ	
Port, MAC based authentication	Υ	
Accounting based on time length and traffic	Υ	
Guest VLAN and auto VLAN	Υ	
RADIUS for IPv4 and IPv6	Υ	
TACACS+ for IPv4 and IPv6	Υ	
МАВ	Υ	
DHCPV4/V6 TRAFFIC N	MONITOR	
DHCP Server/Client for IPv4/IPv6	Υ	
DHCP Relay/Option 82	Υ	
DHCP Snooping/Option 82	Υ	
TRAFFIC MONI	TOR	
sFlow Traffic Analysis	Υ	
SECURITY NETWORK MANAGEMENT		
CLI	Υ	
WEB	Υ	
Telnet	Υ	
SNMPv1/v2c/v3 through IPv4 and IPv6	Υ	
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Syslog and external Syslog Server	Υ	
НТТР	Y	
SSL	Y	
SNMP MIB	Y	
SNMP TRAP	Υ	
FTP/TFTP	Υ	
SNTP/NTP	Υ	
RMOM 1,2,3,9	Υ	
Authentication by Radius/TACACS	Υ	
SSH v1/v2	Υ	
Dual firmware images/ Configuration files	Υ	
802.3ah OAM	Υ	
802.1ag OAM	Υ	
DATA CENTER FEA	TURES	
VSF(Virtual Switch Framework)	Υ	
CERTIFICATIONS AND REGULATORY COMPLIANCES		
CE	Y	
RoHS	Y	
EN61000-4-5	Y	
EN 55022 Class A	Y	

Dimension (W*H*D)	440mm x 44mm x 240mm
Relative Humidity	10%~90% non-condensing, storage 95%
Temperature	Working -5°C~50°C, storage -40°C~70°C
Power Supply	AC: 100~240VAC, 50~60Hz + 48VDC RPS
Power Consumption	<34W

*ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

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