

# 40G Data Center Switch

## PRODUCT OVERVIEW

AP-DSG7510-48S6Q-HI 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.

AP-DSG7510-48S6Q-HI is ideal for cloud computing data center server access and core switch of small to medium datacenter. For campus or other large network, AP-DSG7510-48S6Q-HI could also be deployed at aggregation or core layer as its high performance and reliability.

## FEATURES

- 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, AP-DSG7510-48S6Q-HI supports wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

The 10 Gigabit Ethernet connectivity of AP-DSG7510-48S6Q-HI 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

DSG7510 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, DSG7510 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

AP-DSG7510-48S6Q-HI 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 AP-DSG7510-48S6Q-HI, customers could easily achieve Policy based Route (PBR), which is important when they need multi exit application.

### MPLS/VPLS

AP-DSG7510-48S6Q-HI supports MPLS L3 VPN/MPLS L2 VPN(VPLS) and helps customer to construct more secure/extendable network. With max.255 VRF instances, AP-DSG7510-48S6Q-HI series could be deployed as P & PE devices, guarantees the variety of services.

### Abundant IPv6 Support

AP-DSG7510-48S6Q-HI 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, AP-DSG7510-48S6Q-HI will be a right product to meet the requirement. AP-DSG7510-48S6Q-HI passed IPv6 form Phase II certification, which is the best proof of the application.

### Strong Multicast

AP-DSG7510-48S6Q-HI 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, AP-DSG7510-48S6Q-HI provides great application experience for customer.

## PRODUCT SPECIFICATIONS

### Hardware Specifications

Item	AP-DSG7510-48S6Q-HI
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
<b>Performance</b>	
Switching Capacity	1440Gbps
Forwarding Rate	1071Mpps
MAC Address	96K(standard)/32K(routee)/288K(bridge), UFT configuration, default is standard
ARP Table	16k
Routing Table	16k
<b>Physical</b>	
Dimension(W*H*D)	433.8mm*44mm*475mm
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
<b>Main Features</b>	
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
	IEEE802.1d(STP) IEEE802.1w(RSTP) IEEE802.1s(MSTP) Root Guard BPDU Guard BPDU Tunnel ERPS (ITU-T G.8032)
	802.1Q, 4096 VLANs MAC VLAN, VOICE VLAN, Private VLAN, 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

**PRODUCT SPECIFICATIONS**  
**Hardware Specifications**

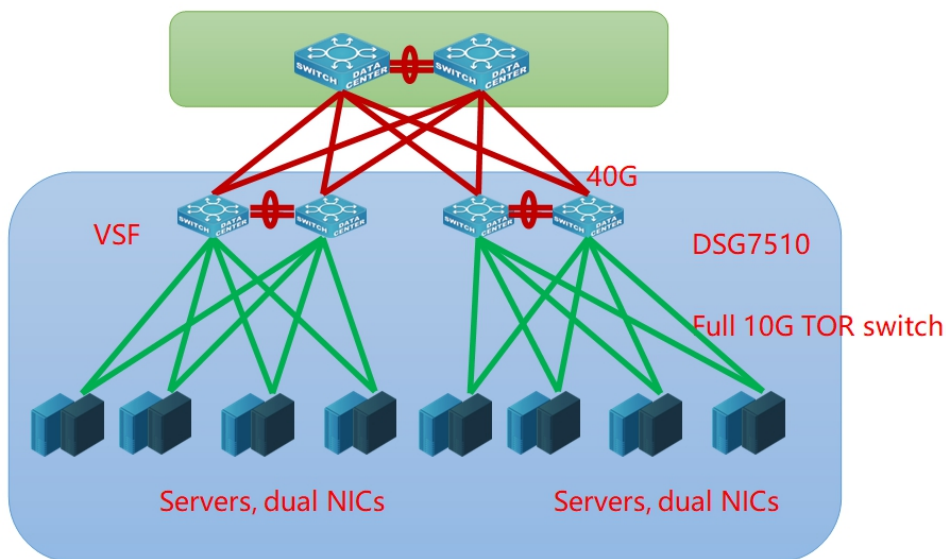
<i>Item</i>	<i>AP-DSG7510-48S6Q-HI</i>
<i>L3 Features</i>	Static Routing, RIPv1/v2, OSPFv2, BGP4 OSPFv3, BGP4+ OSPF Multiple Process LPM Routing Policy-based Routing (PBR) for IPv4 and Ipv6 VRRP URPF, ECMP BFD IGMP v1/v2/v3, IGMP Proxy,
	DVMRP, PIM-DM, PIM-SM, PIM-SSM, any cast RP, MSDP Static Multicast 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
<i>IPv6</i>	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
<i>MPLS</i>	MPLS, VRF, LDP MPLS L3 VPN, MPLS L2 VPN(VPLS), VPWS
<i>QoS</i>	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
<i>ACL</i>	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
<i>Security</i>	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
<i>DHCPv4/v6</i>	DHCP Server/Client for IPv4/IPv6 DHCP Relay/Option 82 DHCP Snooping/Option 82
<i>Traffic Monitor</i>	sFlow Traffic Analysis
<i>Security Network Management</i>	CLI, WEB, Telnet, SNMPv1/v2c/v3 through IPv4 and IPv6 Syslog and external Syslog server HTTP SSL SNMP MIB, SNMP TRAP FTP/TFTP/SFTP SNTP/NTP RMOM 1,2,3,9 Authentication by radius SSH v1/v2 Dual firmware images/ Configuration files 802.3ah OAM, 802.1ag OAM
<i>Data Center Features</i>	VSF (Virtual Switch Framework)

## ORDER INFORMATION

Product	Description
AP-DSG7510-48S6Q-HI	40G Advance Enhanced Datacenter Switch (48*10GbE (SFP+) +6*40GbE (QSFP+)), redundant and modular design, high performance. Full L3 features, Default with two hot-swap AC power supply, Default with 5 (4+1) fans, Broadcom chipset

## DATE CENTER APPLICATIONS

AP-DSG7510-48S6Q-HI switch work as TOR switches and connect to the core.



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