

Layer 3 32-Port 100G/40G QSFP28 + 2-Port 10G SFP+ Managed Data Center Switch Layer 3 48-Port 25G SFP28 + 8-Port 100G/40G QSFP28 Managed Data Center Switch



Meeting Complex Demands of Today's Data Centers

PLANET DCS-7342 Managed Data Center Switch Series, tailored to meet the complex demands and high-performance standards of modern data centers, offers high performance and flexibility. It excels in providing comprehensive Layer 2, Layer 3, and Layer 4 functionalities. The DCS-7342-48Y8C features up to 48 25G and 8 100G/40G QSFP28 ports while the DCS-7342-32C2X comes with up to 32 100G/40G QSFP28 ports and 2 10G SFP+ ports. PLANET data center switch series is equipped with robust Layer 3 routing protocols including OSPF and BGP addressing the complexities of network architectures. This ensures seamless data transmission and high bandwidth, making it ideal for cloud computing environments, large enterprise data centers, high-frequency trading, and large-scale content delivery networks (CDN).



Physical Ports

- DCS-7342-48Y8C
 - 48-Port 25G SFP28
 - 8-Port 100G/40G QSFP28
- RJ45 to DB9 console interface for switch basic management and setup
- DCS-7342-32C2X
 - 32-Port 100G/40G QSFP28
 - 2-Port 10GBASE-SR/LR SFP+
 - RJ45 to DB9 console interface for switch basic management and setup

Stacking Features

- Hardware Stacking
 - Virtualized multiple PLANET data center switches stacked into one logical device
 - Connects with stack member via 100G/40G QSFP28 and 10G SFP+ interfaces
 - Single IP address stack management, supporting up to 2 hardware units stacked together
 - Stacking architecture supports redundant ring mode

IP Routing Features

- IPv4 static routing
- IPv4 dynamic routing protocols such as OSPFv2, IS-IS and BGP
- IPv6 dynamic routing protocols such as OSPFv3, RIPng, BGP4 and BGP4+
- DHCP/DHCPv6 snooping VLAN-based
- GRE tunneling
- Equal-cost routing
- · Policy-based routing
- Neighbor Discovery (ND)
- Path MTU Discovery (PMTU)
- · IPv6 Ping and IPv6 Telnet
- ACL based on source IPv6 address, destination IPv6 address, Layer 4 port, and protocol type
- Dual-stack for IPv4 and IPv6
- Multiple tunneling techniques
- BFD session binding static routes, VRRP, OSPF, IS-IS, and BGP



Scalable Networks with Robust Performance

Designed for scalability and robust performance, PLANET data center switch series features powerful Layer 3 routing capabilities and supports 100G/40G interfaces. It is built into a durable chassis, allowing administrators to select suitable QSFP transceivers for efficient network expansion and coverage. The series securely handles large data volumes, making it perfect for data center backbone networks and high-capacity servers. It excels in supporting critical applications like VoIP, video streaming, and multicast, ensuring reliable network performance.

Enhanced Reliability with MLAG

PLANET data center switch series is integrated with MLAG (Multi-chassis Link Aggregation Group) technology to enhance network reliability in critical environments. MLAG allows multiple switches to function as a unified entity, ensuring seamless failover and increased bandwidth utilization. This technology synchronizes configurations and state information between paired switches, minimizing downtime and optimizing network resilience. Ideal for high-demand applications like enterprise data centers and cloud environments, PLANET data center switch series with MLAG supports uninterrupted connectivity and scalability without compromising performance.



VXLAN Application and Scalability

Support for VXLAN technology, including Layer 2 and Layer 3 switching functionalities and EVPN VXLAN support, It extends IPv6 application capabilities over IPv4 infrastructure. With stacking design, administrators can virtualize multiple switches into a single logical device, simplifying network management and expansion. Stacking enhances network reliability and availability by sharing

Multicast Routing Features

- Supports PIM-DM (Protocol Independent Multicast Dense Mode)
- Supports IGMP v1/v2/v3

Layer 2 Features

- Supports VXLAN Layer 2 Switching, Routing Switching, and Layer 3 Gateway
- Supports EVPN VXLAN
- Supports IPv6 VXLAN over IPv4
- Supports Link Aggregation
 - 802.3ad Link Aggregation Control Protocol (LACP)
- Supports Link Aggregation
- Multi-Chassis Link Aggregation (MLAG)
 - Static configuration and dynamic MAC learning
 - MAC browsing and removal
 - Configurable aging time of the MAC address
 - Limited number of learnable MAC addresses
 - MAC filtration
 - Black-hole MAC list
 - IEEE 802.1AE MacSec
- Supports up to 4K VLANs
 - 1:1 and N:1 VLAN Mapping based on 802.1p
- Q-in-Q and enhanced flexible Q-in-Q
- Supports 802.1d STP, 802.1w RSTP and 802.1s MSTP
 - BPDU Protection
 - Root Protection
 - Loop Protection
- Supports IGMP v1/v2c/v3
 - IGMP Snooping
 - MLD snooping
- · Supports L2-L4 packet filtering
- Filters based on MAC, IP, port, protocol, IP ToS,
 802.1p priority, VLAN ID, SVLAN ID, VLAN range, etc.
- Supports cross-device link aggregation
- Supports port mirroring and flow mirroring
- Link Layer Discovery Protocol (LLDP)

Quality of Service

- L2-L4 packet filtering with filters based on MAC, IP, port, protocol, IP ToS, 802.1p priority, VLAN ID, SVLAN ID, VLAN range, etc.
- ACL based on time periods
- DLF (Destination Lookup Failure) storm suppression, multicast storm suppression, and broadcast storm suppression
- Port-based bandwidth limiting



ports and enables intelligent management functions, thereby optimizing resource utilization and facilitating flexible network configurations. This makes PLANET data center switch series an ideal choice for handling large-scale network requirements, meeting enterprises' needs for high performance and scalability.



High Availability, Advanced Security and Energy Efficiency

Ensuring high availability, the switch features redundant power supplies and smart fans. Built-in CLI management tools enhance configuration and monitoring convenience, ensuring reliability in various environments. Advanced Security features and an energy-efficient design enhance operational efficiency and environmental sustainability. Layer 4 functionalities refine network management, improving the overall efficiency and responsiveness.



High-density Port Configuration and Advanced QoS Data Security

The switch supports high-density port configurations such as 10G, 40G and 100G ports, facilitating large-scale data transmission and high-bandwidth applications. Advanced Quality of Service (QoS) support ensures efficient transmission of critical business data through intelligent traffic management and prioritization. Advanced security features including ACLs, port security, and data encryption protect against unauthorized access and malicious attacks.

- Flow/VLAN-based bandwidth limiting (single-rate two-color, single-rate three-color, dual-rate three-color)
- · Priority-based scheduling and priority mapping for flows
- SP/PQ (Strict Priority/Priority Queuing), DRR (Deficit Round Robin), and SP/PQ+DRR scheduling algorithms
- Queue management policies such as tail drop and WRED (Weighted Random Early Detection)
- · 8 hardware priority queues per port
- 802.1p, DSCP/ToS priority marking

Multicast

- Supports IPv4 IGMP snooping v1, v2 and v3
- Supports IPv6 MLD snooping v1 and v2
- MVR (Multicast VLAN Registration)

Security

- User permission classification management and command line classification protection
- Authentication support for 802.1x, RADIUS, and TACACS+
- · User level quantity limitation
- User binding (port, source MAC, source IP address access control)
- SNMP login terminal restriction
- SSH v2.0 support
- DDoS attack prevention
- IP Source Guard support
- · MAC black hole support
- · MAC address quantity limitation
- · Static ARP, Gratuitous ARP, ARP inspection

Management

- Supports Console, Telnet and SSH terminal services (5 simultaneous Telnet / SSH sessions at least)
- Supports SNMPv1/v2/v3 network management protocols and standard MIB for general features
- Supports NETCONF network management protocol
- Supports file upload and download via FTP and TFTP methods, unified management of logs, alarms and debug information
- Supports user operation logs and RMON (remote monitoring)
- · Supports port mirroring and flow mirroring
- Supports BootROM upgrade, remote online upgrade and hot patch
- · Supports fan temperature control for automatic adjustment
- · Supports temperature and fan monitoring with alerts



Energy-efficient Design

Optimizing energy utilization efficiency, the switch reduces energy consumption and meets environmental standards. Smart fans adjust speed based on temperature and workload, ensuring efficient cooling with minimal power usage and noise.

VLAN, Q-in-Q and Traffic Management

Extensive VLAN support with up to 4,000 VLAN IDs and support for flexible Q-in-Q functionalities enable dynamic network segmentation and secure isolation. Support for IGMP and MLD Snooping optimizes multicast traffic management, ensuring efficient network operations and resource utilization. Integrated features make the data center switch an ideal choice for handling large-scale data and complex network environments, providing robust support for network architecture and future expansions.

Applications

Cloud Computing Data Centers

PLANET data center switch is deployed in a large cloud computing data center to handle the high demands of virtual machine migration, big data analytics, and real-time processing. It ensures high bandwidth and low latency, essential for efficient cloud operations. The advanced Layer 2, Layer 3, and Layer 4 functionalities enable seamless integration and management of diverse cloud services, improving the overall performance and reliability.



Low Latency and Real-time Processing



- SNMP trap for interface Link Up and Link Down notification
- Network Time Protocol (NTP), RSPAN
- DHCP Functions
 - DHCP Client/Relay/Server
 - DHCP Option 43/60/82
 - DHCP Relay per VLAN
 - DHCPv6 Relay/Server

Redundant Power System

- Supports dual power redundancy and redundant backup for two sets of fans (Include 2 power DCS-PWR800AC)
- · Hot-swappable power modules and fans



Enterprise Data Centers

In a large enterprise data center, PLANET DCS-7342 series is deployed to connect hundreds of servers and storage devices, supporting critical business applications such as enterprise resource planning (ERP), customer relationship management (CRM), and database services. The powerful VXLAN routing capabilities and 100G uplink support of these switches ensure efficient network segmentation and high availability, facilitating smooth operation for mission-critical applications.



VXLAN Routing + 100G Uplink Applications

High-Frequency Trading Networks

In a high-frequency trading firm, PLANET data center switch is deployed to ensure ultra-low latency and high reliability for trading operations. The switch supports MLAG technology, allowing multiple switches to function as a unified entity, which is crucial for seamless failover and maximizing bandwidth utilization. Advanced security features and an energy-efficient design further enhance the switch's performance in handling the demanding environment of high-frequency trading, ensuring uninterrupted and secure trading activities.





Specifications

Product	DCS-7342-48Y8C	DCS-7342-32C2X			
Hardware Specifications					
Switching Ccapacity	4Thns	6 4Thns			
Forwarding Rate	2000Mpps	2000Mpps			
Power supply		2000///pp3			
Power suppry	2 (DCS-PWR800AC)				
Power Supply Slot	2 Supports 1+1 backup and hot swapping				
10G Ports	-	2-port 10GBASE-SR/LR SFP+ interface			
25C Dorto	48-port 25G SFP28				
25G Ports	Backward compatible with 10GBASE-X SFP+	-			
	8-port 100G QSFP28	32-port 100G QSFP28 Backward compatible with 40G			
100G Ports	Backward compatible with 40G QSFP+	QSFP+ transceiver			
Console	1 x RJ45-to-RS232 serial port (115200, 8, N, 1)				
Management Port	1 x 10/100/1000BASE-T RJ45 port				
	1 x USB 2 0 Type A for USB storage device use				
USB	(Configuration backup and restore)				
Fan	2 hot-pluggable fan modules				
	2 hot-pluggable lan modules				
weight	8.1 kg with dual modular power supplies	8.25 kg with dual modular power supplies			
Power Supply	AC: 100-240V, 50Hz±10%				
Power Consumption	Maximum 207W/706.3 BTU(full loading)	Maximum 275W/938.3 BTU (full loading)			
Switching Specifications					
Switch Architecture	Store-and-forward				
Switch Fabric	4.0Tbps/non-blocking	6.4Tbps/non-blocking			
Switch Throughput	4.0Tbps@64bytes	6.44Tbps@64bytes			
Address Table	96K MAC address table with auto learning function				
ARP Table	100K				
IP Interfaces	Max. 4K VLAN interfaces				
	IPv4 128K entries				
Routing Table	IPv6 64K entries				
	IGMP snooping: 4k				
Multicast Table	IGMP: 2K				
	L2ACL in: 768				
	L 2ACL Out: 512				
ACL Table					
	IPv4ACL Our: 512				
Sharad Data Buffar	10MB				
Flow Control	Back pressure for half duplex				
	IEEE 802.3x pause frame for full duplex				
Layer 3 Functions					
	IPv4 static routing				
	IPv4 dynamic routing protocols:				
	- OSPFv2 (Open Shortest Path First)				
	- IS-IS (Intermediate System to Intermediate System)				
	- BGP (Border Gateway Protocol)				
Routing Protocols	IPv6 static routing				
	IPv6 dynamic routing protocols:				
	- OSPFv3 (Open Shortest Path First)				
	- BGP4				
	- BGP4+				
	- RIPng				
	Equal-cost routing				
	Policy-based routing				
	Neighbor Discovery (ND)				
	Path MTU Discovery (PMTU)				
	IPv6 Ping and IPv6 Telnet				
Multipoot Pouting Protocol					
wullicast Routing Protocol	FIIVI-DIVI				



Layer 2 Functions						
Port Configuration	Supports port configuration and management Monitors and manages port status Provides port mirroring functionality Port loopback detect					
Port Status	Monitors and displays the operational status of each port Provides real-time information on port link status (up/down) Reports port-specific statistics such as traffic throughput, error rates, and packet counts Supports detection and notification of port-related events and alarms					
Port Mirroring	Supports port mirroring functionality Allows the replication of traffic from a source port or VLAN to a destination port for monitoring and analysis purposes					
VLAN	IEEE 802.1Q tag-based VLAN IEEE 802.1ad Q-in-Q and enhanced flexible Q-in-Q capabilities Supports up to 4K VLANs Multicast VLAN Register (MVR)					
Spanning Tree Protocol	IEEE 802.1D Spanning Tree Protocol (STP) IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) Features BPDU protection, root protection, loop protection, and BPDU tunneling					
IPv4 IGMP Snooping	IPv4 IGMP v1/v2/v3 snooping IGMP Fast Leave IPv4 Querier					
IPv6 MLD Snooping	IPv6 MLD v1/v2 snooping					
Multicast	Supports IGMP v1/v2c/v3 Implements IPv4 IGMP v1/v2/v3 Snooping Implements IPv6 MLD v1/v2 Snooping					
Link Aggregation	Supports cross-device link aggregation (LACP) Implements Multi-Chassis Link Aggregation (MLAG)					
Storm Control	Implements DLF (Destination Lookup Failure) storm suppression Supports multicast storm suppression Supports broadcast storm suppression					
Bandwidth Control	Port-based bandwidth limitation Supports flow/VLAN-based bandwidth limiting (single-rate two-color, single-rate three-color, dual-rate three-color) Implements priority-based scheduling and priority mapping for flows					
QoS	8 priority queues on all switch ports Traffic Supervision and Traffic Shaping Scheduling for priority queues - Weighted Round Robin (WRR) - Strict priority (SP) - SP+WRR Traffic classification: - IEEE 802.1p CoS - DSCP - DiffServ - Precedence - TOS - VLAN ID - IP ACL - MAC ACL Policy-based ingress and egress QoS 802.1p and DSCP priority remark Supports queue management policies such as tail drop and WRED (Weighted Random Early Detection)					
Security Functions						
Access Control List	ACL support based on source IPv6 address, destination IPv6 address, Layer 4 port, and protocol type ACL support based on time periods Supports L2-L4 packet filtering with filters based on MAC, IP, port, protocol, IP ToS, 802.1p priority, VLAN ID, SVLAN ID, VLAN range, etc. DLF (Destination Lookup Failure) storm suppression, multicast storm suppression, and broadcast storm suppression					



Security	DDoS attack prevention IP Source Guard support MAC black hole support MAC address quantity limitation Port isolation DHCP snooping, DHCP Option 43/60/82 Defend against DOS attacks Port security
ААА	Supports 802.1x, RADIUS, and TACACS+ authentication User level quantity limitation User binding (port, source MAC and source IP address access control)
Network Access Control	SNMP login terminal restriction SSH v2.0 support
Switch Management Functions	
System Configuration	Supports Console and Telnet terminal services Supports SNMPv1/v2c network management protocols and standard MIB for general features
Secure Management Interfaces	Supports SSH v2.0 and SNMPv3 User permission classification management and command line classification protection SNMP login terminal restriction Authentication support for 802.1x, RADIUS, and TACACS+
System Management	Supports file upload and download via FTP and TFTP methods and unified management of logs, alarms and debug information Supports BootROM upgrade, remote online upgrade and hot patch Supports NETCONF network management protocol Supports user operation logs Supports temperature and fan monitoring with alerts Supports MIB and TRAP Supports Ping / traceroute Supports Syslog Supports transceiver DDM
Event Management	Supports port mirroring and flow mirroring Supports RMON (rRemote mMonitoring) Supports DDoS attack prevention Supports MAC black hole support
Hardware Stacking	Supports hardware stacking Virtualizes multiple physical devices into a logical device Stacking virtualization technology improves reliability
Hardware Stacking Compatibility List	Supports 2 units for virtual stacking Supports 20Gbps/200Gbps stacking bandwidth
SNMP MIBs	RFC 1066 TCP/IP-based MIB RFC 1213, 1157 SNMPv2c/v3 MIB RFC1493 bridge MIB RFC 2674 bridge MIB extension RFC1643 ethernet MIB RFC1757 RMON group 1,2,3,9 RFC 2925 Remote Management MIB RFC 2233 (rfc2233) - SMIv2 MIB
Standard Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 25G, 40G, 100G Enternet standards IEEE 802.1Q VLAN standard IEEE 802.1D STP, 802.1w RSTP, 802.1s MSTP standards IEEE 802.1X Network Authentication standard RFC standards, such as RFC 768 (UDP), RFC 791 (IPv4), RFC 2460 (IPv6), etc. IEEE 802.1ab LLDP
Environments	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 90% (non-condensing)
Storage	Temperature: -40 ~ 70 degrees C Relative Humidity: 5 ~ 90% (non-condensing)



Dimensions

DCS-7342-48Y8C





DCS-7342-32C2X





Ordering Information

DCS-7342-32C2XLayer 3 32-Port 100G/40G QSFP28 + 2-Port 10G SFP+ Managed Data Center SwitchDCS-7342-48Y8CLayer 3 48-Port 25G SFP28 + 8-Port 100G/40G QSFP28 Managed Data Center Switch

Available Modules

100Gbps QSFP28 (100GBASE-SR4 QSFP28 Fiber Transceiver)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
QSFP-100G-SR4	100G	MPO/MTP	Multi Mode	100m	850nm	0 ~ 70 degrees C
QSFP-100G-LR4	100G	LC	Single Mode	10km	1310nm	0 ~ 70 degrees C

40Gbps QSFP+ (40GBASE-SR4/LR4 QSFP+ Fiber Transceiver)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
QSFP-40G-SR4	40G	MPO/MTP	Multi Mode	100m	850nm	0 ~ 60 degrees C
QSFP-40G-LR4	40G	LC	Single Mode	10km	1310nm	0 ~ 60 degrees C
CB-DAQSFP-0.5	40G	LC	Multi Mode	0.5M	-	-40 ~ 75 degrees C
CB-DAQSFP-2M	40G	LC	Multi Mode	2M	-	-40 ~ 75 degrees C

25Gbps QSFP+ (TBD)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
SFP28-25G-SR	25G	LC	Multi Mode	100m	850nm	0 ~ 70 degrees C
SFP28-25G-LR	25G	LC	Single Mode	10km	1310nm	0 ~ 70 degrees C
SFP28-25G-LA10	25G	LC	Single Mode	10km	TX 1270nm RD1330nm	0 ~ 70 degrees C
SFP28-25G-LB10	25G	LC	Single Mode	10km	TX 1330nm RD1270nm	0 ~ 70 degrees C
CB-DASFP25G-1M	25G	LC	DAC	1m	-	-
CB-DASFP25G-3M	25G	LC	DAC	3m	-	-
CB-DASFP25G-5M	25G	LC	DAC	5m	-	-

10Gigabit Ethernet Transceiver

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MTB-LB40	10G	SFP+	Single mode	40km	TX 1330nm RX1270nm	0 ~ 50 degrees C
MTB-LA40	10G	SFP+	Single mode	40km	TX 1270nm RX1330nm	0 ~ 50 degrees C
MTB-LB20	10G	SFP+	Single mode	20km	TX 1330nm RX1270nm	0 ~ 50 degrees C
MTB-LA20	10G	SFP+	Single mode	20km	TX 1270nm RX1330nm	0 ~ 50 degrees C
MTB-SR	10G	SFP+	Multi mode	300m	850nm	0 ~ 50 degrees C
MTB-LR	10G	SFP+	Single mode	10km	1310nm	0 ~ 50 degrees C
MTB-LA60	10G	SFP+	Single mode	60km	TX 1270nm RX1330nm	0 ~ 50 degrees C
MTB-LB60	10G	SFP+	Single mode	60km	TX 1330nm RX1270nm	0 ~ 50 degrees C
MTB-RJ	10G	SFP+	Copper	30m	-	0 ~ 50 degrees C
MTB-LR40	10G	SFP+	Multi mode	40km	1310nm	0 ~ 50 degrees C
MTB-SR2	10G	SFP+	Multi mode	2km	850nm	0 ~ 50 degrees C
MTB-LR20	10G	SFP+	Multi mode	20km	1310nm	0 ~ 50 degrees C
MTB-LR60	10G	SFP+	Multi mode	60km	1310nm	0 ~ 50 degrees C
MTB-LR80	10G	SFP+	Multi mode	80km	1550nm	0 ~ 50 degrees C
MTB-LA10	10G	SFP+	Multi mode	10km	TX 1270nm RX1330nm	0 ~ 50 degrees C
MTB-LB10	10G	SFP+	Multi mode	10km	TX 1330nm RX1270nm	0 ~ 50 degrees C

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