DH-S7806

L3 Managed S78 Series Switch with 6-Slot-DH-S7806

· Rich layer 3 features.

· Easy to manage.

· Supports Intelligent Resilient Framework.

· Comprehensive security control policies.

· Supports hot swapping for all components.

· High-performance IPv4 and IPv6 service capabilities.

· MACsec technology offers hardware-based encryption.

· Meets the needs of scenarios that have different port densities and performance requirements.

System Overview

With its modular design, S78 Series Switch is a high-performance switch that is reliable, intuitive, and easy to manage and maintain. It supports a variety of Ethernet ports, including 1000M optical ports, 1000M electrical ports, and 10G optical ports that meet the needs of multi-level link bandwidth. All the key components of the switch, such as its main processing units and power modules, have a redundancy design that is built to have carrier-grade reliability. It can be widely used in a variety of network environments, providing solutions for various industries.

Functions

Virtualization Technologies - IRF2

IRF2 can virtualize up to 2 Switches into one logical IRF fabric. IRF2 delivers the following benefits:

High Availability (HA) – Provides data backup and non-stop forwarding to the control plane and data plane. This improves availability, performance, eliminates single-point failures and ensures service continuity.

Distribution – Multi-chassis link aggregation that enables load sharing and backup over multiple uplinks, improving redundancy and link utilization.

Easy Management – A single IP address for managing the entire IRF fabric, which simplifies device and topology management, improves operating efficiency, and lowers network maintenance cost.

Abundant QoS Features

The switch offers abundant QoS features, including:

Priority Settings – Offers packet filtering based on packet header fields from layer 2 through layer 4, including source MAC, destination MAC, source IP, destination IP, TCP/UDP port number, protocol type, and VLAN.

Advanced algorithms – Flexible queuing and scheduling algorithms configured on a per-port or per-queue basis, including strict priority (SP), weighted round robin (WRR), and SP+WRR. It also supports port mirroring in both outbound and inbound directions for network monitoring and troubleshooting.

Outstanding Management Capacity

The switch provides a variety of management features and is easy to manage. It offers the following features for device management:
Multiple management ports – Provides multiple management interfaces, including the console port, micro USB port, and out-of-band management Ethernet port.

Traffic monitoring and analysis – To help customers gain visibility into network application traffic, the switch provides a variety of traffic monitoring and analytics tools, including local port mirroring and layer 2 remote port mirroring. With these tools, multiple ports can be specified to collect network traffic data to evaluate the health status of the network, create traffic analysis reports, perform traffic engineering, and optimize resource allocation.

Core Switch | DH-S7806

Technical Specification

Hardware Feature

Total Number of Slots	8
Number of Line Card Slots	6
Number of MPU Slots	2
Hot Swapping	Yes
Console Port	1 × RJ45 console port 1 × Micro-USB port
Power Supply	Two powers included
	Supports dual power
	100-240V AC 50-60 Hz (Internal)
Power Consumption	Idling: 7.5W Full load: 550W
Operating Temperature	0°C to 45°C (32°F to 113°F)
Operating Humidity	5%RH–95%RH
Storage Temperature	−40°C to 70°C (−40°F to 158°F)
Redundancy	Redundant MPUs, power modules

Performance

Layer	Layer 3
Managed	Yes
Switching Capacity	76.8Tbps
Packet Forwarding Rate	8640Mpps
Packet Buffer Memory	24 Mbit
Jumbo Frame	9,600 Byte

Features

Ethernet	IEEE 802.1P (CoS priority) IEEE 802.1Q IEEE 802.1ad (QinQ), selective QinQ and VLAN mapping DLDP LLDP Static MAC configuration Limited MAC learning Port mirroring and traffic mirroring Port aggregation, port isolation, and port mirroring IEEE 802.1D (STP)/802.1w (RSTP)/802.1s (MSTP) IEEE 802.3ad (dynamic link aggregation), static port aggregation, and multi-chassis link aggregation RRPP (Rapid Ring Protection Protocol) Jumbo frame SuperVLAN PVLAN Multicast VLAN+ MCE
Routing	Static routing, RIP, OSPF, IS-IS, and BGP4 IPv4/IPv6 ECMP VRRP IPv4/IPv6 Policy-based routing IPv4/IPv6 Routing policy IPv6 static routing, RIPng, OSPFv3, IS-ISv6, and BGP4+ VRRPv3 Pingv6, Tenetv6, FTPv6, TFTPv6, DNSv6, and ICMPv6
DHCP	DHCP client DHCP snooping DHCP snooping option82 DHCP relay DHCP server DHCP auto-config

IP routing	80K IPV4 routing entries Static routing RIPv1/v2 and RIPng OSPFv1/v2/v3 BGP and BGP4+ for IPv6 IS-IS VRRP/VRRPv3
Mirroring	Flow mirroring N:4 port mirroring Local port mirroring and remote port mirroring
Multicast	PIM-DM, PIM-SM, PIM-SSM, MSDP, MBGP, and Any-RP IGMP V1/V2/V3 and IGMP V1/V2/V3 snooping PIM6-DM, PIM6-SM, and PIM6-SSM MLD V1/V2 and MLD V1/V2 snooping Multicast policies and multicast QoS
IRF	IRF2 Distributed device management, distributed link aggregation, and distributed resilient routing Stacking through standard Ethernet interfaces Local device stacking and remote device stacking
Security	Hierarchical user management and password protection AAA authentication RADIUS authentication HWTACACS SSH2.0 Port isolation 802.1X authentication, centralized MAC authentication Port security IP source guard HTTPs Hierarchical user management and password protection 802.1X authentication and centralized MAC address authentication Guest VLAN Portal authentication DHCP snooping Dynamic ARP detection BPDU guard and root guard uRPF IP/Port/MAC binding Plaintext authentication and MD5 authentication for OSPF and RIPv2 packets Public Key Infrastructure (PKI)
ACL/QoS	Standard and extended ACLs Ingress and egress ACLs VLAN ACLs Global ACLs Diff-Serv QoS SP, WRR, SP+WRR, CBWFQ Traffic shaping Congestion avoidance Priority marking and remarking 802.1p, TOS, DSCP, and EXP priority mapping
System Management	Loading and upgrading through XModem/FTP/TFTP SNMP v1/v2/v3 sFlow RMON NTP clocks Fault alarm and automatic fault recovery System logs Device status monitoring mechanism, including the CPU engine, backplane, chips and other key components
Network Management	Command line interface (CLI) configuration Telnet remote configuration Configuration via console port SNMP v1/v2/v3 Web network management System log Power, fan, temperature alarm

HA	1+1 redundancy for key components such as MPUs 1+1 redundancy for power modules Passive backplane Hot swapping for all components Real-time data backup on active/standby MPUs CPU protection VRRP Hot patching Ethernet OAM (802.1ag and 802.3ah) RRPP/ERPS VCT Smart-Link ISSU

General

Thunderproof	Common mode: 2kV Differential mode: 1kV
Net Weight	43 kg (94.80 lb)
Gross Weight	44.45 kg (98.00 lb)
Product Dimensions	575 mm × 436 mm × 420 mm (22.63" × 17.17" × 16.54")
Packaging Dimensions	675 mm × 590 mm × 750 mm (26.57" × 23.23" × 29.52")

Ordering Information

Type	Model	Description
SFP Module	GSFP-1310-20-SMF	1.25G 1310nm, 20km, LC, Single-mode [optional]
	GSFP-1310R-20-SMF	1.25G 1550/1310 nm, 20 km, LC, Single-mode [optional]
	GSFP-1310T-20-SMF	1.25G 1310/1550 nm, 20 km, LC, Single-mode [optional]
	SFP-1310T-20-SMF	155M 1310/1550 nm, 20 km, LC, Single-mode [optional]
	SFP-1310R-20-SMF	155M 1550/1310 nm, 20 km, LC, Single-mode [optional]
	TSFP-850-MMF	10G 850 nm, 300m, LC, Multi-mode [optional]
	GSFP-850-MMF	1.25G 850 nm, 500 m, LC, Multi-mode [optional]
	SFP-850-MMF	155M 850 nm, 2km, LC, Multi-mode [optional]
	TSFP-1270T-20-SMF	10G 1270/1330 nm, 20 km, LC, Single-mode [optional]
	TSFP-1270R-20-SMF	10G 1330/1270 nm, 20 km, LC, Single-mode [optional]
Accessories	S7806-MPU	Main processing unit
	S7806-PWR650	Power module
	S78-16XF24GF	16-Port SFP+ and 24-Port SFP Module
	S78-24GF8GT	24-Port SFP and 8-Port RJ45 Module
	S78-24GT20GF4XF	24-Port RJ45 and 20-Port SFP and 4-Port SFP+ Module
	S78-24GT8GF	24-Port RJ45 and 8-Port SFP Module
	S78-48GF	48-Port SFP Module
	S78-48GT	48-Port RJ45 Module