DH-S5600-48GT4XF

Aggregation Switch

- Rich layer 3 features.
- Reliable hardware design with modular dual power supply.
- High-density 10/100/1000 Base-T autosensing Ethernet ports and 1G/10G SFP + fiber ports onboard
- As an access device on enterprise networks, this switch can provide high-density GE connections for desktop applications.
- DH-S5600-48GT4XF—Provides 48 × 10/100/1000 BASE-T ports and 4 × 1G/10 G BASE-X SFP+ ports.

System Overview

DH-S5600-48GT4XF is robust (modular dual power), and easy to deploy Layer 3 access switching solution that offers enhanced security and 10GbE uplinks, BGP and Multicast, IRF enabled, flexible management.

Functions

Virtualization technologies - IRF2

DH-S5600-48GT4XF is pre-built with Intelligent Resilient Framework 2 (IRF2). IRF2 provides the following benefits:

• High scalability: With IRF2, plug-n-play device aggregation can be achieved by adding one or more switches into the IRF2 stack and enabling IRF2 stacking on the new device. New devices can be managed with a single IP, and upgraded at the same time to reduce network expansion cost.

• Load balancing: IRF2 supports cross-device link aggregation, upstream and downstream can be connected to more than one physical link, which creates another layer of network redundancy and boosts the network resource utilization.

High availability

DH-S5600-48GT4XF supports 1+1 power module redundancy. When a power or temperature event occurs, the switch generates alarms.

In addition to hardware redundancy, the switch provides a variety of node and link redundancy and protection mechanisms, including:

Ethernet link aggregation, including LACP.

Spanning tree protocols, including STP, RSTP and MSTP.

Smart Link, which protects faster link switchover for dual uplink network.

Rapid Ring Protection Protocol (RRPP).

Abundant QoS features

DH-S5600-48GT4XF offers abundant QoS features, including:

• 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.

• 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.

• Committed access rate (CAR) with the minimum granularity at 8 kbps. Port mirroring in both outbound and inbound directions for network monitoring and troubleshooting.

Outstanding management capacity

DH-S5600-48GT4XF provides a variety of management features and is easy to manage. It offers the following device management features:

• Provides multiple management interfaces, including the console port, micro USB port, and out-of-band management Ethernet port.

• Supports configuration and management from CLI.

• Supports multiple access methods, including SNMPv1/v2c/v3, Telnet, and more secure SSH 2.0.

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

Technical Specification

Switching capacity	598Gbps
Packet forwarding rate	144 Mpps
Packet buffer memory	3 Mbit
Dimensions (H × W × D)	43.6 × 440 × 360 mm (1.72 × 17.32 × 14.17 in)
Weight	≤ 8.5 kg (18.74 lb)
Management Ethernet ports	1
Console ports	1 × RJ-45 console port
	1 × Micro-USB port
	Only the Micro-USB port is available if you connect both ports.
Service ports	48 × 10/100/1000Base-T autosensing Ethernet ports
	4 × 1G/10G SFP+ ports
Rated input voltage	AC: 100 VAC to 240 VAC @ 50 Hz/60 Hz
Min. power consumption	Dual AC inputs: 30 W
Max. power consumption	Dual AC inputs: 56 W
Operating temperature	0ºC to 45ºC (32°F to 113°F)
Operating humidity	5% RH to 95% RH, non-condensing
OpenFlow	OpenFlow 1.3
Link aggregation	1G/10G port aggregation
	Static aggregation
	Dynamic aggregation
	Multichassis link aggregation
Port features	802.3x flow control (full-duplex)
	Storm suppression based on port bandwidth percentage
	Storm suppression based on PPS
	Storm suppression based on BPS
Jumbo frame	Supported
MAC address table	16K MAC address entries
	Blackhole MAC address
	MAC learning limit
VLAN	Port-based VLAN
	MAC-based VLAN
	Protocol-based VLAN
	IP subnet based VLAN
	QinQ and flexible QinQ
	VLAN mapping
	Voice VLAN
	MVRP
Loop-free redundant Layer 2 topology	STP/RSTP/MSTP and PVST
	Smart Link
	RRPP
	G.8032 Ethernet ring protection switching (ERPS)
DHCP	DHCP client
	DHCP snooping
	DHCP relay
	DHCP server
	DHCP snooping Option 82/DHCP relay Option 82
IRF2	IRF2
	Distributed device management, distributed link aggregation, and distributed resilient routing
	Stacking through standard Ethernet interfaces
	Local device stacking and remote device stacking
IP routing	12K IPV4 routing entries
	Static routing
	RIPv1/v2 and RIPng
	OSPFv1/v2/v3
	BGP and BGP4+ for IPv6
	IS-IS
	VRRP/VRRPv3
IPv6	Neighbor Discovery (ND)
	PMTU
	IPv6-Ping, IPv6-Tracert, IPv6-Telnet, and IPv6-TFTP
Multicast	IGMP Snooping v1/v2/v3 and MLD Snooping v1/v2
	PIM Snooping
	MLD Proxy
	Multicast VLAN
	IGMP v1/v2/v3 and MLD v1/v2
	PIM-DM, PIM-SM, and PIM-SSM
	MSDP and MSDP for IPv6
	MBGP and MBGP for IPv6
Mirroring	Flow mirroring
	N:4 port mirroring
	Local port mirroring and remote port mirroring
QoS/ACL	Layer 2 to Layer 4 packet filtering
	Traffic classification based on source MAC, destination MAC, source IP, destination IP, TCP/UDP port number, and VLAN
	Time range-based ACL

QoS/ACL	Bi-directional ACLs (inbound and outbound)
	VLAN-based ACL issuing
	Rate limit for receiving and transmitting packets (a minimum CIR of 8 Kbps)
	Packet redirection
	802.1p priority and DSCP priority
	Committed Access Rate (CAR)
	Eight queues per port (including the CPU port)
	Flexible queue scheduling algorithms based on both port and queue, including SP, WRR, WFQ, SP+WRR, and WDRR
	WRED
Security	Hierarchical user management and password protection
	802.1X authentication and centralized MAC address authentication
	Guest VLAN
	RADIUS authentication
	SSH 2.0
	Port isolation
	Port security
	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)
Management and maintenance	Loading and upgrading through XMODEM/FTP/TFTP
	Configuration through CLI, Telnet, and console ports
	SNMPv1/v2/v3
	System log, alarming based on severity, debugging information output
	NTP
	Power, fan, and temperature alarming
	Ping and Tracert
	Virtual Cable Test (VCT)
	Device Link Detection Protocol (DLDP)
	LLDP
	Loopback detection

Installation	19-inch rack mounted
Power saving	802.3az EEE
	Automatic port power-down
	Scheduled port power-down (schedule job)