NADDOD S4600 Series Switches

Product introduction

Naddod S4600 series switches are a new generation of 10G Ethernet switches launched by Naddod With large switching capacity, high-density 10GE/40GE wire-speed forwarding ports and plenty of layer 3 functions, the switch supports features such as VXLAN, etc. and supports two pluggable power supplies and is widely used by enterprise, service providers, universities and government.

Features and advantages

High-density ports

Naddod S4600 series switches have higher forwarding performance and 10G port scalability. S4600-24X2C supports 24 SFP+ 10G/1G adaptive optical ports and 2 QSFP28 100G/40G adaptive ports, where through one-to-four cables the QSFP ports can be converted into 4 25G/10G optical ports for wire-speed forwarding.

M-LAG (Multi-chassis Link Aggregation Group technology)

Naddod S4600 series switches support M-LAG (Multi-chassis Link Aggregation Group technology) and can realize link aggregation among a number of devices and thereby improve the board-based link reliability to the device-level link reliability, forming a dual-active system significantly advantaged in scalability, reliability, overall architecture and usability as reflected in the following three aspects:

- **High performance:** The switch members forward independently and the CPU load remains unchanged.

- **High reliability:** The control plane is separated from the forwarding plane, the control plane is independent and the fault domain is isolated. When a switch fails, all data will be transmitted through another switch to ensure high reliability of user's network.

- **Imperceptible service upgrade:** During the upgrade process, no service interruption will be perceived on the client. This enables low risk and fast efficiency.

Flexible Ethernet networking

With built-in high-performance processor chips, Naddod S4600 series switches are designed exclusively for Ethernet. With flexible packet processing and flow control capabilities, the switches are applicable to services. The chip has a unique switch table entry management (STM) function to support the optimization of specific functions by switching the system resources of the switch to meet the requirements of system resources in different scenarios and maximize the usage of TCAM resources.

The switches support standard Spanning Tree Protocol (STP), IEEE 802.1s/w Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP).

This series switches support SmartLink and VRRP functions, and can be connected to multiple aggregation switches through multiple links. Uplink backup is realized by the SmartLink/VRRP function so that the reliability of the access-side device is greatly improved.

VXLAN feature

This series switches support VXLAN feature, centralized and distributed gateway deployment, as well as the BGP-EVPN protocol to realize the dynamic establishment of VXLAN tunnels. By encapsulating layer 2 packets in UDP tunnel packets, a large layer 2 network that is the same as VLAN can be provided to achieve greater scalability and flexibility of the network architecture and resolve the problem that traditional data center networks have insufficient quantity of VLANs, which are hardly scalable.

Impeccable security control strategy

Naddod S4600 series switches provide a complete set of security control strategies, which can restrict access to the network and reduce threats:

- Supporting multiple access control technologies and user authentication security technologies, such as ACL, AAA, Dot1X, TACAS + and RADIUS, the switches can flexibly adapt to various network environment authentication requirements.

- Support plenty of ARP defense functions, such as dynamic ARP inspection, to realize the user authentication function and the ARP packet validity check function and avoid a large number of ARP packets from impacting the CPU by limiting the ARP speed.

- Support the DHCP Snooping binding table, where illegal packets that do not match the binding table entries are directly discarded. With the trusted port feature of DHCP Snooping, the legality of the DHCP server can be guaranteed.

Multiple reliability protections

Naddod S4600 series switches have multiple device-level and link-level reliability protections, and support M-LAG (Multi-chassis Link Aggregation Group) technology as well as overcurrent, overvoltage and overheating protection technologies.

Pluggable power supplies and fans improve the hardware reliability of the devices. This

series supports modular dual-power-supply and dual-fan assemblies. Both power supply modules and fan modules are hot-swappable without affecting the normal operation of the device. In addition, the switch also supports power supply and fan fault checks and alarms, and the fan speed can be automatically adjusted as temperature changes.

Easy operations and maintenance management

This series switches have plenty of management ports, such as Console port, USB port and independent out-of-band network management port, support SNMP v1/v2c/v3, support various management methods: NDD IDE network management, the CLI command line and Telnet to enable easy maintenance and support the SSH2.0 encryption method to enable higher management security.

Support local port mirroring and RSPAN remote port mirroring, stream mirroring, multiple mirroring monitoring ports and ERSPAN. Support sFlowv4/v5 and other flow collection protocols to facilitate the extraction and analysis of network flows for taking corresponding maintenance measures.

Product specifications

Device Model		S4600-24X2C
Service ports		24*1/10G SFP +, 2* 40/100G QSFP28 ports
Switching capacity		2.56Tbps
Packet forwarding rate		1260Mpps
Console port		1
Out-of-band management port		1
USB port		1
Input voltage	AC	Operating voltage: 100 –240V; 50/60H Voltage range: 90–264V; 47–63Hz
	DC	Operating voltage: 240V Voltage range: 180～400V;
Power supply modules		Two modular power supplies
Fan modules		Two hot-swappable fan modules
Heat dissipation modes		Air cooling, intelligent speed regulation
Power consumption (typical/maximum)		80W / 100W
Chassis size mm (H×W×D)		44X440X360mm
Operating temperature range		0℃ － 45℃
Operating humidity (non-condensing)		10%～90%
MAC features		Supports maximum address capacity of 144K MAC

Device Model	S4600-24X2C
	In accordance with the IEEE 802.1d standard
	Supports MAC address automatic learning and aging
	Supports static and dynamic black hole MAC
	Supports MAC address drift detection
	Supports Port and VLAN–based MAC address learning limit
VLAN features	Supports 4K VLANs
	Supports Port, MAC, subnet and protocol–based VLAN division
	Supports Basic QinQ and flexible QinQ
	Supports The VLAN Mapping function
	Supports Private VLAN
	Supports Voice VLAN
	Supports Guest VLAN
	Supports VLAN statistics
Link aggregation	Supports 10G-port aggregation Supports 40G/100G-port aggregation
	Supports Static and dynamic link aggregation
Jumbo Frame	9600
VXLAN	Supports VXLAN gateway
	Supports VXLAN bridge
	Supports VXLAN routing
	Supports Centralized or distributed gateway deployment
IP routing	Supports IPv4 static routing, RIPv1/2, OSPF, BGP
	Supports IPv6 static routing, RIPng, OSPFv3
	Supports ECMP, routing strategy, strategic routing, uRPF check, VRF, etc.
Ring network protection protocol	Supports SmartLink tree topology and SmartLink multi-instance.
	Supports The protocol of BFD For Static/OSPF/ VRRP
	Supports STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s)
	Supports BPDU protection, root protection and loopback protection
IPV6 features	Supports IPv6 ND (Neighbor Discovery)
	Supports PMTU.
	Supports NDP.
	Supports IPv6 Ping, IPv6 Tracert, IPv6 Telnet
	Supports IPv6 ACL
	Supports MLD v1/v2, MLD v1/v2 snooping
	Supports IPv6/IPv4 Tunnel
	Supports ICMPv6
Multicasting	Supports Static multicasting
	Supports IGMP v1/v2/v3 Snooping
	Supports IGMP Snooping Fast-leave
	Supports MVR, intra-VLAN multicast forwarding and cross-VLAN multicast replication
	Supports IGMPv1/v2/v3, IGMP-Proxy, PIM-SM, PIM-SSM, PIM-DM
DHCP	Supports DHCP Client
	Supports DHCP Snooping
	Supports DHCP Relay

Device Model	S4600-24X2C
	Supports DHCP Server
	Supports DHCP Option82
Flow monitoring	Supports SFlow v4/v5
QoS/ACL	Supports limiting of the inbound and outbound flow rates of the port
	Supports 8 queues per port
	Supports The queue scheduling modes: SP, WDRR, SP+WDRR
	Supports Port/ VLAN/flow–based flow monitoring
	Supports Re-marking of the 802.1p and DSCP priority of packets
	Supports L2 (Layer 2)–L4 (Layer 4) packet filtering function. Provides the packet filtering Function based on source MAC address, destination MAC address, source IP Address, destination IP address, source/destination port number for the TCP/UDP protocol, protocols and VLAN
	Supports The CAR function
	Supports WRED and tail drop congestion avoidance mechanisms
Mirroring	Supports Port mirroring
	Supports Stream mirroring
	Supports Remote mirroring
	Supports ERSPAN
Security features	Supports Port/MAC-based 802.1X authentication
	Supports AAA authentication, RADIUS authentication, TACAS+ authentication
	Supports Port/VLAN-based MAC number limiting
	Supports illegal MAC learning and defense
	Supports User authority classification management and password protection
	Supports ARP attack defense, CPU protection and DOS attack defense
	Supports ACL filtering
	Supports SSHv1/v2
	Supports Port isolation
	Supports IP+MAC+port binding
	Supports IP Source Guard
	Supports Blacklist and whitelist
Reliability	Supports LACP
	Supports M-LAG (Multi-chassis Link Aggregation Group)
	Supports VARP
	Supports VRRP
	Supports LLDP
Management and maintenance	Supports Command line interface (CLI) configuration
	Supports Terminal services such as Console, Telnet, SSH, etc.
	Supports SNMPv1/v2c/v3 and other network management protocols
	Supports Ping, Tracert
	Supports Uploading and downloading files through FTP and TFTP
	Supports RMON
	Supports System logs, hierarchical alarms
	Supports Hot patches

Device Model	S4600-24X2C
	Supports NTP
	Supports LLDP
	Supports VCT (Virtual Cable Test)
	Supports Unidirectional link detection (UDLD)
	Supports Power supply, fan and temperature alarms
	Support network management system

Purchase information

Product Model	Description
S4600-24X2C	S4600-24X2C switch with 24 1/10G SFP+ optical ports, 2 40/ 100G QSFP28 ports and supporting 2 expansion slots and double power supplies.

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