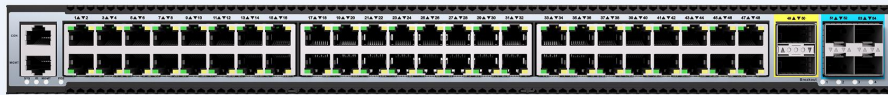




HD5524-2Q4X-EI  
24\*10/100/1000M Base-T, PoE+ 2\*40G QSFP+, 4\*25G/10G SFP28  
408Gbps(bidirectional)  
607.10Mpps (bidirectional)



HD5548P-2Q4X-EI  
48\*10/100/1000M Base-T, PoE+, 2\*40G QSFP+,4\*25G/10G SFP28  
56Gbps (bidirectional)  
678.53Mpps (bidirectional)



HD5624X-2Z-EI  
24\*10G SFP+ 2\*100G QSFP28  
880Gbps(bidirectional)  
1309.44Mpps (bidirectional)

Series	Model	Specification
HD5600	HD5624X-2Z-EI	24*10G SFP+ 2*100G QSFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	HD5624X-2Z-SI	24*10G SFP+ 2*100G QSFP28 4*Fixed Fans 1*Fixed Power Supply

Series	Model	Specification
HD5500	HD5548P-2Q4X-EI	48*10/100/1000M Base-T, PoE+, 2*40G QSFP+, 4*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable Power Modules
	HD5548P-2Q4X-SI	48*10/100/1000M Base-T PoE+, 2*40G QSFP+, 4*25G/10G SFP28 4*Fixed Fans, 1*Fixed Power Supply
	HD5524P-2Q4X-EI	24*10/100/1000M Base-T, PoE+ 2*40G QSFP+, 4*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable Power Modules
	HD5524P-2Q4X-SI	24*10/100/1000M Base-T, PoE+ 2*40G QSFP+, 4*25G/10G SFP28 4*Fixed Fans, 1*Fixed Power Supply

## Platform Overview

VastLakes platform is a purpose built device to address the challenge in the recent network evolution. VastLakes platform combines a feature-rich switch core and an embedded ARM A53 CPU Core running at 800MHz/1.2GHz. Platform supports a variety of port configurations, providing full-rate port capability from 100M to 100G.

## Key Features of the VastLakes Platform

- Ethernet capabilities: MAC table, Vxlan, IPFIX, ACL, EVC etc.
- Full set of Layer 2 and Layer 3 protocols.
- Rich OAM.
- Security feature set.
- Precision timing protocol.

## Performance of the VastLakes Platform

Table 1: Performance of VastLakes Platform

Type	Specification	Value
<b>Ethernet Basic</b>		
Jumbo Frame	Maximum jumbo frame size	9600
		Default profile: 98304
Unicast MAC	MAC address capacity	Extended-buffer: 12288
		IPv6 profile: 98304
		Layer3 profile: 98304
	MAC learning rate (SW)	> 4000pps
	MAC learning rate (HW)	> 10Gbps
	Blackhole MAC address capacity	128
Multicast MAC	MAC address capacity	Default profile: 2048
		Extended-buffer: 1024
		IPv6 profile: 1024
		Layer3 profile: 1024

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
<b>Ethernet Basic</b>		
VLAN	VLAN IDs	4094
	VLAN instances	4094
	VLANs to enable statistics	256
VLAN Mapping	Maximum mapping table	64
	Maximum rules number	1024
EVC	Maximum EVC number	4094
	Maximum member number per group	No limitation
Link Aggregation (Static & LACP)	Maximum Group Num	64
	Load balance key mode	Static/DIb/RR/Resilient/Self-healing
	Convergence time	< 50ms
	Maximum rule number	4096
VLAN Classification	Maximum group number	1
	Base MAC capacity	512
	Base IPv4 capacity	448
	Base IPv6 capacity	32
	Base protocol capacity	7
<b>Ethernet Ring Protection</b>		
STP	Convergence time	< 30s
RSTP	Convergence time	< 1s
MSTP	Instance number	64
	Convergence time	< 1s
ERPS	Domain number	16
	Ring number	1 Primary ring/domain 2 Sub ring/domain
	Protection instance number per Ring	64
	Switchover time	< 50 ms

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
<b>Ethernet OAM</b>		
CFM (802.1ag)	Maximum session number	1024
	Maximum domain number	8
	CCM interval types	7
	CCM minimum interval	3.3ms
	Maximum down MEP number	1024
	Maximum up MEP number	1024
	Maximum LMEP number	1024
<b>IPv4 Unicast</b>		
ARP	ARP capacity	Default profile: 12288
		Extended-buffer: 4096
		IPv6 profile: 6144
IPv4	FIB	Layer3 profile: 16384
		Default profile: 57344
		Extended-buffer: 28672
ECMP	ECMP group	IPv6 profile: 12288
		Layer3 profile: 57344
		240 (Share with IPv6)
PBR	Policy route map	64
		Policy based routing ACE
OSPF	Maximum static neighbors	256
		Maximum summary address
<b>IPv4 Multicast</b>		
IPMC	Multicast routing table	Default profile: 2048
		Extended-buffer: 512
		IPv6 profile: 1024
IPMC	Multicast routing downstream interfaces	Layer3 profile: 2048
		Default profile: 4096
		Extended-buffer: 2048
IGMP Snooping	Maximum groups number	IPv6 profile: 2048
		Layer3 profile: 5120
		2048
MVR	Maximum member number	N/A
		Default profile: 2048
		Extended-buffer: 2048 (Share with IPv6)
MVR	Maximum group number	IPv6 profile: 1024
		Layer3 Profile: 2048
		Maximum member number

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
<b>IPv6 Unicast</b>		
Host Route	NDP capacity	Default profile: 2048
		Extended-buffer: 1024
IPv6	FIBv6	IPv6 profile: 4096
		Layer3 profile: 0
	ECMP group	Default profile: 4096
		Extended-buffer: 1024
		IPv6 profile: 6144
		Layer3 profile: 0
		240 (share with IPv4)
<b>IPv6 Multicast</b>		
IPMC	Multicast routing table	Default profile: 256
		Extended-buffer: 256
	Number of interfaces that support	IPv6 profile: 512
		Layer3 profile: 0
MVR V6	Multicast routing table	Default profile: 512
		Extended-buffer: 1536
	Maximum entry number	IPv6 profile: 1024
		Layer3 profile: 0
IP tunnel	Maximum member number	Default profile: 512
		Extended-buffer: 1536
	Tunnel peer capacity	IPv6 profile: 1024
		Layer3 profile: 0

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
<b>QoS</b>		
Per-port Queue Number	Unicast queue	10
	Multicast queue	10
	Monitor queue	10
Packet Buffer	System packet buffer capacity	Default profile: 4.5MByte
		Extended-buffer: 9MByte
		IPv6 profile: 4.5MByte
		Layer3 profile: 4.5MByte
Granularity	Policer granularity	0~2M: 10K
		2M~100M: 40K
		100M~1G: 80K
		1G~2G: 120K
		2G~4G: 250K
		Queue shape granularity
	Port shape granularity	10k
Flow Entry	Ingress port QoS ipv4 flow entries	1532
	Ingress port QoS ipv6 flow entries	1532
	Ingress port QoS flow statistics entries	511
<b>ACL</b>		
MAC ACL	Ingress port ACL for MAC	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
	Ingress VLAN ACL for MAC	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
	Egress port ACL for MAC	Default profile: 878
		Extended-buffer: 878
		IPv6 profile: 878
		Layer3 profile: 928
Egress VLAN ACL for MAC	Default profile: 878	
	Extended-buffer: 878	
	IPv6 profile: 878	
	Layer3 profile: 928	

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
<b>ACL</b>		
IPv4 ACL	Ingress Port ACL for IPv4	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
	Ingress VLAN ACL for IPv4	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
Egress Port ACL for IPv4	Default profile: 878	
	Extended-buffer: 878	
	IPv6 profile: 878	
	Layer3 profile: 928	
Egress VLAN ACL for IPv4	Default profile: 878	
	Extended-buffer: 878	
	IPv6 profile: 878	
	Layer3 profile: 928	
IPv6 ACL	Ingress Port ACL for IPv6	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
	Ingress VLAN ACL for IPv6	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
Egress Port ACL for IPv6	Default profile: 878	
	Extended-buffer: 878	
	IPv6 profile: 878	
	Layer3 profile: 928	
Egress VLAN ACL for IPv6	Default profile: 878	
	Extended-buffer: 878	
	IPv6 profile: 878	
	Layer3 profile: 928	
ACL Flow Statistics	Ingress ACL flow statistics entries	1022
	Egress ACL flow statistics entries	511
CoPP	CoPP rules	249
	CoPP flow statistics entries	249
UDF	UDF rules	256
	UDF flow stats entries	128



Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
<b>Security</b>		
IP Source Guard	IPv4 maximum rules number	768
	IPv6 maximum rules number	64
802.1x Base MAC	Maximum entries	Default profile: 512
		Extended-buffer: 256
		IPv6 profile: 256
		Layer3 profile: 256
DHCP Snooping	Maximum bound entry	4096
<b>IPFIX</b>		
IPFIX	IPFIX member	4096
<b>Reliability</b>		
BFD	Maximum session number	Share 128
S-BFD	Maximum session number	Share 128
VRRP	Maximum group number	63
Smart Link	Maximum group number	16
	Maximum instance number	64
	Switchover time	<50ms
Monitor Link	Maximum group number	16
	Maximum up-link number per group	16