

HOHUNET VASTLAKES PLATFORM

PERFORMANCE

High Performance Switching Hardware Platform

Version: V3.1

Release Date: 2025/11/24

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
Ethernet Basic		
Jumbo Frame	Maximum jumbo frame size	9600
Unicast MAC	MAC address capacity	Default profile: 98304
		Extended-buffer: 12288
		IPv6 profile: 98304
		Layer3 profile: 98304
		MPLS profile: 98304
	MAC learning rate (SW)	> 4000pps
	MAC learning rate (HW)	> 10Gbps
	Blackhole MAC address capacity	128

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
Ethernet Basic		
Multicast MAC	MAC address capacity	Default profile: 2048
		Extended-buffer: 1024
		IPv6 profile: 1024
		Layer3 profile: 1024
		MPLS profile: 2048
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
Link Aggregation (Static & LACP)	Maximum member number per group	No limitation
	Maximum Group Num	64
	Load balance key mode	Static/DIb/RR/Resilient/Self-healing
	Convergence time	< 50ms
VLAN Classification	Maximum rule number	4096
	Maximum group number	1
	Base MAC capacity	512
	Base IPv4 capacity	448
	Base IPv6 capacity	32
	Base protocol capacity	7
Ethernet Ring Protection		
STP	Convergence time	< 30s
RSTP	Convergence time	< 1s
MSTP	Instance number	64
	Convergence time	< 1s
ERPS	Domain number	16

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
Ethernet Ring Protection		
ERPS	Ring number	1 Primary ring/domain
		2 Sub ring/domain
	Protection instance number per Ring	64
	Switchover time	< 50 ms
Ethernet OAM		
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
IPv4 Unicast		
ARP	ARP capacity	Default profile: 12288
		Extended-buffer: 4096
		IPv6 profile: 6144
		Layer3 profile: 16384
		MPLS profile: 12288
IPv4	FIB	Default profile: 57344
		Extended-buffer: 28672
		IPv6 profile: 12288
		Layer3 profile: 57344
		MPLS profile: 57344
ECMP	ECMP group	240 (Share with IPv6)
PBR	Policy route map	64
	Policy based routing ACE	256
OSPF	Maximum static neighbors	256
	Maximum summary address	2048

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
IPv4 Multicast		
IPMC	Multicast routing table	Default profile: 2048
		Extended-buffer: 512
		IPv6 profile: 1024
		Layer3 profile: 2048
		MPLS profile: 1024
	Multicast routing downstream interfaces	Default profile: 4096
		Extended-buffer: 2048
		IPv6 profile: 2048
		Layer3 profile: 5120
		MPLS profile: 2048
IGMP Snooping	Maximum groups number	2048
	Maximum member number	N/A
MVR	Maximum group number	Default profile: 2048
		Extended-buffer: 2048 (Share with IPv6)
		IPv6 profile: 1024
		Layer3 Profile: 2048
		MPLS profile: 1024
	Maximum member number	4096
IPv6 Unicast		
Host Route	NDP capacity	Default profile: 2048
		Extended-buffer: 1024
		IPv6 profile: 4096
		Layer3 profile: 0
		MPLS profile: 2048
IPv6	FIBv6	Default profile: 4096
		Extended-buffer: 1024
		IPv6 profile: 6144

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
IPv6 Unicast		
IPv6	FIBv6	Layer3 profile: 0
		MPLS profile: 1024
	ECMP group	240 (share with IPv4)
IPv6 Multicast		
IPMC	Multicast routing table	Default profile: 256
		Extended-buffer: 256
		IPv6 profile: 512
		Layer3 profile: 0
		MPLS profile: 0
	Number of interfaces that support Multicast routing table	Default profile: 512
		Extended-buffer: 1536
		IPv6 profile: 1024
		Layer3 profile: 0
		MPLS profile: 0
MVR V6	Maximum entry number	Default profile: 256
		Extended-buffer: 2048 (Share with IPv4)
		IPv6 profile: 512
		Layer3 profile: 0
		MPLS profile: 0
	Maximum member number	Default profile: 512
		Extended-buffer: 4096
		IPv6 profile: 1024
		Layer3 profile: 0
		MPLS profile: 0
IP tunnel		
IP Tunnel	Tunnel peer capacity	8

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
QoS		
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
		MPLS profile: 4.5MByte
Granularity	Policer granularity	0~2M: 10K
		2M~100M: 40K
		100M~1G: 80K
		1G~2G: 120K
		2G~4G: 250K
	Queue shape granularity	4G~10G: 500K
	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
ACL		
MAC ACL	Ingress port ACL for MAC	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
		MPLS profile: 2976
	Ingress VLAN ACL for MAC	Default profile: 2926
		Extended-buffer: 2926

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
ACL	Ingress VLAN ACL for MAC	IPv6 profile: 2926
		Layer3 profile: 2976
		MPLS profile: 2976
	Egress port ACL for MAC	Default profile: 878
		Extended-buffer: 878
		IPv6 profile: 878
		Layer3 profile: 928
		MPLS profile: 928
	Egress VLAN ACL for MAC	Default profile: 878
		Extended-buffer: 878
		IPv6 profile: 878
		Layer3 profile: 928
		MPLS profile: 928
IPv4 ACL	Ingress Port ACL for IPv4	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
		MPLS profile: 2976
	Ingress VLAN ACL for IPv4	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
		MPLS profile: 2976
	Egress Port ACL for IPv4	Default profile: 878
		Extended-buffer: 878
		IPv6 profile: 878
		Layer3 profile: 928
		MPLS profile: 928

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
ACL		
IPv4 ACL	Egress VLAN ACL for IPv4	Default profile: 878
		Extended-buffer: 878
		IPv6 profile: 878
		Layer3 profile: 928
		MPLS profile: 928
IPv6 ACL	Ingress Port ACL for IPv6	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
		MPLS profile: 2976
	Ingress VLAN ACL for IPv6	Default profile: 2926
		Extended-buffer: 2926
		IPv6 profile: 2926
		Layer3 profile: 2976
		MPLS profile: 2976
	Egress Port ACL for IPv6	Default profile: 878
		Extended-buffer: 878
		IPv6 profile: 878
		Layer3 profile: 928
		MPLS profile: 928
	Egress VLAN ACL for IPv6	Default profile: 878
		Extended-buffer: 878
		IPv6 profile: 878
		Layer3 profile: 928
		MPLS profile: 928
ACL Flow Statistics	Ingress ACL flow statistics entries	1022
	Egress ACL flow statistics entries	511

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
ACL		
CoPP	CoPP rules	249
	CoPP flow statistics entries	249
UDF	UDF rules	256
	UDF flow stats entries	128
Security		
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
		MPLS profile: 512
DHCP Snooping	Maximum bound entry	4096
IPFIX		
IPFIX	IPFIX member	4096
Reliability		
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	24
Data center		
VARP	Virtual IP Num per Port	15
VXLAN	VXLAN tunnel	Default profile: 6144

Table 1: Performance of VastLakes Platform (Continued)

Type	Specification	Value
Data center		
VXLAN	VXLAN tunnel	Extended-buffer: 6144
		IPv6 profile: 6144
		Layer3 profile: 6144
		MPLS profile: 2040
	VNI	Default profile: 2000
		Extended-buffer: 2000
		IPv6 profile: 2000
		Layer3 profile: 2000
		MPLS profile: 1000
	VTEP Peer	Default profile: 2048
		Extended-buffer: 2048
		IPv6 profile: 2048
		Layer3 profile: 2048
		MPLS profile: 256

Product List Based on VastLakes Platform

Table 2: Product List Based on VastLakes Platform

Series	Model	Specification
S5600	S5648T-4X2Z-EI	48*100M/1G/2.5G/5G/10G Base-T 4*10G SFP+ +2*100G QSFP28, 2*350W Hot-swappable modules 4*Hot-swappable modules
	S5648T-4X2Z-SI	48*100M/1G/2.5G/5G/10G Base-T+4*10G SFP+ 2*100G QSFP28 1*200W Fixed Power Supply 4*Fixed Fan
	S5648X-2Z-SI	48*10G SFP+ +2*100G QSFP28, 1*200W Fixed Power Supply Fan: 4*Fixed Fan
	S5624T-2Z-EI	24*100M/1G/2.5G/5G/10G Multi-Gigabit Base-T 2*100G QSFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S5624T-2Z-SI	24*100M/1G/2.5G/5G/10G Multi-Gigabit Base-T 2*100G QSFP28 4*Fixed Fans 1*Fixed Power Supply
	S5624P-2Z-EI	24*100M/1G/2.5G/5G/10G Multi-Gigabit PoE++, 2*100G QSFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S5624X-2Z-EI	24*10G SFP+ 2*100G QSFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S5624X-2Z-SI	24*10G SFP+ 2*100G QSFP28 4*Fixed Fans 1*Fixed Power Supply
	S5624X-8N-EI	24*10G SFP+ 8*25/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules

Table 2: Product List Based on VastLakes Platform (Continued)

Series	Model	Specification
S5600	S5624T-8N-EI	24*100M/1G/2.5G/5G/10G Multi-Gigabit Base-T 8*25/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S5624P-8N-EI	24*100M/1G/2.5G/5G/10G Multi-Gigabit PoE++, 8*25/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S5612X-16G8N2Q-EI	12*10G SFP+ 8*100M/1000M Base-T 8*1G SFP 8*25G SFP28 2*40G QSFP+ 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
S5000	S5048-4X2Q-EI	48*100M/1G/2.5G Multi-Gigabit Base-T 2*40G QSFP+, 4*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S5048-4X2Q-SI	48*100M/1G/2.5G Multi-Gigabit Base-T 2*40G QSFP+, 4*25G/10G SFP28 4*Fixed Fans, 1*Fixed Power Supply
	S5040P-8T2Q4N-EI	40*100M/1G/2.5G Multi-Gigabit Base-T(PoE++90W) 8*100M/1G/2.5G/5G/10G Multi-Gigabit Base-T(PoE++90W) 2*40G QSFP+, 4*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S5032P-16T8N-EI	32*100M/1G/2.5G Multi-Gigabit Base-T(PoE++90W) 16*100M/1G/2.5G/5G/10G Multi-Gigabit Base-T(PoE++90W) 8*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S5016P-8T8N-EI	16*100M/1G/2.5G Multi-Gigabit Base-T(PoE++90W) 8*100M/1G/2.5G/5G/10G Multi-Gigabit Base-T(PoE++90W) 8*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules

Table 2: Product List Based on VastLakes Platform (Continued)

Series	Model	Specification
S4600	S4624T-2Z	24*100M/1G/2.5G/5G Multi-Gigabit Base-T 2*100G QSFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S4624P-2Z	24*100M/1G/2.5G/5G Multi-Gigabit Base-T, PoE++ 2*100G QSFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S4624T-8N	24*100M/1G/2.5G/5G Multi-Gigabit Base-T 8*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S4624P-8N	24*100M/1G/2.5G/5G Multi-Gigabit Base-T, PoE++ 8*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable CRPS Modules
	S4634-1X2Z-SI	34*100M/1G/2.5G/5G Multi-Gigabit Base-T 1*10GSFP+ 2*100G QSFP28 4*Fixed Fans 1*Fixed Power Supply
	S4648T-4Z-EI	48*100M/1G/2.5G/5G Base-T+4*100G QSFP28 2*Hot-swappable Fan Modules 2*Hot-swappable PSU
	S4648T-4Z-SI	48*100M/1G/2.5G/5G Base-T+4*100G QSFP28 4*Fixed Fans 1*Fixed Power Supply

Table 2: Product List Based on VastLakes Platform (Continued)

Series	Model	Specification
DynamicDuo	S7606X-2Z-EI	6*40G QSFP+, 2*100G QSFP28 1*Hot-swappable Fan Module 1*Hot-swappable CRPS Module 1*ATX(2*3pin) power connector for redundancy
	S7606X-2Z-SI	6*40G QSFP+, 2*100G QSFP28 2*Fixed Fans, 1*Fixed Power Supply
	S5624XH-2Z-EI	24*10G SFP+, 2*100G QSFP28 1*Hot-swappable Fan Modules 1*Hot-swappable CRPS Modules 1*ATX(2*3pin) power connector for redundancy
	S5624XH-2Z-SI	24*10G SFP+, 2*100G QSFP28 2*Fixed Fans, 1*Fixed Power Supply 1*ATX(2*4pin) power connector for redundancy
	S5612X12TH-2Z-EI	12*10G SFP+, 12*10G Base-T, 2*100G QSFP28 1*Hot-swappable Fan Module 1*Hot-swappable PSU 1*ATX(2*3pin) power connector for redundancy
	S5612X12TH-2Z-SI	12*10G SFP+, 12*10G Base-T, 2*100G QSFP28 3*Fixed Fans, 1*Fixed Power Supply 1*ATX(2*4pin) power connector for redundancy
	S5624TH-2Z-EI	24*10G Multi-Gigabit Base-T, 2*100G QSFP28 1*Hot-swappable Fan Module 1*Hot-swappable CRPS Modules 1*ATX(2*3pin) power connector for redundancy
	S5624TH-2Z-SI	24*10G Multi-Gigabit Base-T, 2*100G QSFP28 3*Fixed Fans, 1*Fixed Power Supply 1*ATX(2*4pin) power connector for redundancy

Table 2: Product List Based on VastLakes Platform(Continued)

Series	Model	Specification
S5500	S5548-2Q4X-EI	48*10/100/1000M Base-T, 2*40G QSFP+ 4*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable Power Modules
	S5548-2Q4X-SI	48*10/100/1000M Base-T, 2*40G QSFP+ 4*25G/10G SFP28 4*Fixed Fans, 1*Fixed Power Supply
	S5548P-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
	S5548P-2Q4X-SI	48*10/100/1000M Base-T PoE+, 2*40G QSFP+, 4*25G/10G SFP28 4*Fixed Fans, 1*Fixed Power Supply
	S5548PB-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
	S5524-2Q4X-EI	24*10/100/1000M Base-T 2*40G QSFP+, 4*25G/10G SFP28 2*Hot-swappable Fan Modules 2*Hot-swappable Power Modules
	S5524-2Q4X-SI	24*10/100/1000M Base-T 2*40G QSFP+, 4*25G/10G SFP28 4*Fixed Fans, 1*Fixed Power Supply
	S5524P-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
	S5524P-2Q4X-SI	24*10/100/1000M Base-T, PoE+ 2*40G QSFP+, 4*25G/10G SFP28 4*Fixed Fans, 1*Fixed Power Supply
	S5524PB-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

About HOHUNET:

HOHUNET was established in 2015 as a technology-oriented company specializing in the independent development of switch products based on domestic chips. With the continuous evolution of chip technology, HOHUNET has launched a range of differentiated products based on this chip platform. Currently, the company's product line covers a range from 1G to 800G and can be used in scenarios such as enterprise networks, carrier networks, data centers, and AI computing power. Currently, the main cooperation model for the company is OEM/ODM, dedicated to providing customers with flexible and end-to-end customized products and technical consulting services. Becoming the most trusted business partner for customers has always been the company's mission and principle.

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