User Guide

AsterNOS for Data Center

Release Note

Version 3.1 R0408P04

Asterfusion Data Technologies Co., Ltd.

Preface

The purpose of this document is to provide important information about the software version released.

Target Audience

This manual is primarily intended for following engineers.

- Software Developers
- Software Testers
- Customer Site Implementers

Modification of Records

Date	Version	Modify Remarks
2026-01-15	V1.0	AsterNOS_V3.1_R0408P04 released.

Applicable Hardware Models

Standard products:

- CX308P-48Y-N
- CX308P-48Y-N-V2
- CX532P-N
- CX532P-N-V2
- CX564P-N
- CX664D-N
- CX732Q-N
- CX732Q-N-V2
- CX864E-N

Contents

1 Instruction

The release version is AsterNOS_V3.1_R0408P04.

AsterNOS_V3.1_R0408P04-FL.bin for CX308P-48Y-N-V2, CX532P-N-V2 and CX732Q-N-V2.
md5: 9befab9853fd2abdcb54d09163787365
sha1: e15f7fe1ec9d281fdb9c3cc98ce54325f2a9297f

AsterNOS_V3.1_R0408P04.bin for other models.
md5: 6884ff123732de608b4310838d17dff5
sha1: 16bbf16b1ea95d7ed7467a78809db70f8f1f1240

2 List of Features

Table 2-1 List of Features

Features	Level 1	Level 2
Interfaces	Ethernet Port	1G[1]
		10G[2]
		25G
		40G[3]
		100G
		200G[4]
		400G[5]
		800G[6]
		Breakout[7]
	Logical Interfaces	Ethernet port based L3 Interface
		Port-Channel based L3 Interface
		SVI
		Sub-interface
		Loopback
	Interface management	Port management
		Statistics

Note:
[1] 25GE interfaces of CX308P-48Y-N-V2 support setting the rate to 1G.
[2] 25GE interfaces of CX308P-48Y-N-V2 support setting the rate to 10G.
[3] 100GE interfaces of all series products support setting the rate to 40G.
[4] CX664D-N supports 200GE interfaces, which can be set to 100G/40G.
[5] CX732Q-N and CX732Q-N-V2 support 400GE interfaces, which can be set to 200G, 100G, or 40G
[6] CX864E-N supports 800GE interfaces, which can be set to 400G, 200G, 100G, 50G, or 25G.
[7] The breakout modes supported by different speed interfaces are as follows:
- 100GE interfaces support splitting into 4x25G[10G].
- 200GE interfaces support splitting into 2x100G[50G], 4x50G, or 4x25G[10G].
- 400GE interfaces of CX732Q-N support splitting into 4x100G, 2x200G[100G], or 4x25G[10G]. 400GE interfaces of CX732Q-N-V2 support splitting into 4x100G, 2x200G, or 4x25G[10G].
- 800GE interfaces support splitting into 2x400G[200G] or 4x200G[100G].

Features	Level 1	Level 2
		MTU
		Jumbo Frame
	Optical module	CMIS Diagnostic
		Presence
		Reading info
L2 Switching	MAC	Static MAC configuration
		Dynamic learning
		MAC address move
		MAC Flapping detection
		MAC blackhole
		MAC flushing
		MAC filtering by source
	VLAN	VLAN management
		VLAN member mode: Access/Trunk
		VLAN member type
		BUM forwarding control
		L2PT
	Port-Channel	Port-Channel Mode: Static/LACP
		LACP Parameter
		Load balance mode: Static hash/ Eligible Load Balance
		Load balance hash key
		Hash configuration
	LLDP	Working mode
		LLDP Neighbor Information
	STP	STP mode: MSTP
		STP Parameter
		Edge-port
		BPDU protection
L3 Switching	IP Address	IPv4 address
		IPv6 address
		Secondary IP
	ARP	Static ARP
		Dynamic ARP
		ARP aging and update
		Gratuitous ARP
		ARP proxy
		ARP moving
		ARP-to-host-routing
	NDP	ND
		SLAAC
		NDP proxy

Features	Level 1	Level 2
		ND-to-host-routing
	Basic routing	IPv4 static routing
		IPv6 static routing
		Default routing
		IPv4 routing with IPv6 nexthops
		Loopback Packet Control
	PBR	IPv4 Policy Based Routing
		IPv6 Policy Based Routing
		Bind Port Type
		Nexthop action
	ECMP	Group member type
		Load balance hash key
		Hash configuration
		Load balance mode: Static hash/ Eligible Load Balance
	BGP	IBGP
		EBGP
		Peer Group
		Peer Type
		Route Reflection
		AS-Path replace
		Route redistribution
		Graceful restart
		MP-BGP
		As-Notation
	OSPF	OSPF Version
		Network type
		Instance
		Area
		Authentication
		Route redistribution
		Graceful restart
	IS-IS	-
	Routing Policy	Prefix Lists
		Route Map
	VRF	Loopback interface assignment
		Inter-VRF route leaking
		Management VRF
		ping/ssh to VRF
	DHCP	DHCPv4 server
		DHCPv6 server
		DHCPv4 relay

Features	Level 1	Level 2
		DHCPv6 relay
		DHCP relay over VXLAN
Virtualization and tunnel	VXLAN	VTEP[8]
		VXLAN mapping
		L2 forwarding
		ARP/ND suppression
		VXLAN maintenance
		VXLAN multicast underlay
		VXLAN cross connect
	BGP-EVPN	Route type
		Tunnel auto establish/tear down
		Anycast gateway
		L3 Gateway type
		Symmetry IRB
		Routing dynamic population
		VM migration
		Inter-VRF Local Route Leaking
		Multi-homing
	DCI	VLAN hand-off
QoS and DCB	Classification & Scheduling	Classification
		Queue scheduling
		Traffic shaping
		Bandwidth limiting
		WRED
		Queue statistics
	Rewrite	Matching with ACL
		Mark action
	DCB	ECN
		PFC
		PFC Watchdog
		DCBX
	RoCE	RoCEv2
		Easy RoCE
	Load Balance	Adaptive Routing and Switching [9]
		Packet Spray[10]
Security	CoPP	Bandwidth limit for CPU port
		CoPP Configuration
	Storm Suppression	Suppression type
		Control mode: Value-based

Note:
[8] Only CX308P-48Y-N-V2, CX532P-N-V2 and CX732Q-N-V2 support VXLAN Multi VTEP.
[9] This feature is only supported on CX864E-N.
[10] This feature is only supported on CX864E-N.

Features	Level 1	Level 2
	ACL	Match field
		ACL action
		ACL type
		Time-ranged ACL
		Control-Plane ACL
	AAA	TACACS+
		Radius
	Port Isolation[11]	Working mode: L2
		Interface type: Ethernet port
Service Operation and Reliability	Software Architecture	Apps in container
		Configuration database
		Warm restart
	MC-LAG	Ethernet-based MC-LAG
		MC-LAG peer gateway
		Consistent check
		Secondary ICCP Session
		L3 Forwarding
		Unique IP
		Routing protocol: OSPF/BGP over MC-LAG
		MC-LAG with EVPN
		Loopback detection
	BFD	BFD Mode
		BFD for routing protocol
		BFD acceleration[12]
	SLA	Echo mode
		User defined
		TRACK with static route
	Monitoring Link	Monitoring group
		Monitoring configuration
	VRRP	VRRPv2
		VRRPv3
Visibility and Monitoring	SNMP	SNMP v2
		SNMP v3
		SNMP Trap
	Network Quality Analysis	Port Mirroring
		sFlow
		gRPC
		In-Network-Telemetry
	AsterNOS exporter	Visibility template

Note:
[11 Port isolation is supported on CX308P-48Y-N-V2, CX532P-N-V2 and CX732Q-N-V2.
[12] Hardware BFD is supported on CX308P-48Y-N-V2, CX532P-N-V2 and CX732Q-N-V2.

Features	Level 1	Level 2
		System info
		Device monitoring
		Interface
		VLAN
		ACL
		BGP
		MC-LAG
		EVPN VXLAN
		RoCE
AIDC Intelligent Routing[13]	Static routing	VRF assignment
		Path assignment
		Failure recovery
		Configuration templates
	Dynamic routing	Path Quality Measurement
		Path Quality Advertisement
		Dynamic path selection
		ECMP for multi-tenant
		Adaptive Multipath Load Balancing
Multicast	Multicast Route	IPv4 static multicast routing
		multicast route counter
		multicast route based policer
		multicast route type
	IGMP	IGMP snooping
Management	Device Management	User interface
		NOS Maintenance
		License
		Device Information
	System Management	Login & MOTD
		User management
		Feature Management
		System configuration
		System time
		Syslog
		Critical Resource Monitoring
		NTP
		PTP
	DevOps	ZTP
		Ansible
		FTP
		TFTP

Note:
[13] CX308P-48Y-N-V2, CX532P-N-V2 and CX732Q-N-V2 do not support intelligent routing.

Features	Level 1	Level 2
		SCP
		Toolkit

3 Update Records

3.1 New Features

[BGP] Support for BGP As-Notation.
[SLA] IP SLA supports jitter metric calculation and display.
[Exporter] Support for ACL configuration and statistics counters, as well as VLAN statistics counters.
[VXLAN] CX308P-48Y-N-V2, CX532P-N-V2 and CX732Q-N-V2 support VXLAN Cross-Connect and L2PT.
[VXLAN] Support for BUM traffic replication via VXLAN multicast tunnels.
[AIDC] Dynamic intelligent routing scheme supports VLAN interfaces.

3.2 Major Bug Fixes and Optimizations

[Easy RoCE] Support for specifying lossless queues.
[PTP] Support for configuring the minor_version field in PTP messages.
[ARS] ARS supports for displaying the bound target Nexthop Group members.
[Easy RoCE] A prompt is added when an interface undergoes split and rate changes with an existing RoCE template.
[AIDC] The "show instance" command displays configuration check results.
[MAC] Added a restriction that prevents removal from VLAN after disabling MAC learning on an interface.
[LLDP] Modified the maximum value displayed for TTL value to 65535 to prevent overflow.
[SLA] Fixed an issue where SLA couldn't specify a Lag sub-interface as the src_port..
[AIDC] Fixed a BGP configuration failure when multiple router BGP instances with different ASNs exist.
[DHCP] Fixed an issue where relay instances with the same name across different VRFs were mistakenly treated as the same relay instance.
[BGP] Fixed an issue where BGP route advertisements failed when multiple unnumbered BGP neighbors had the same link-local address.
[Interface] Fixed an issue where the interface of NT devices incorrectly counted received ARP request, IPv6 NS, and RA messages into RX_DRP statistics.