

AsterNOS Features List - Data Center Version						
Features	Level 1	Level 2	Level 3	Stable	Latest	Next
				R0407P04	R0408P03	R0409
				May, 2025	Nov, 2025	Dec. 2025
Interfaces	Ethernet Port	Ethernet Port	1G	✓	✓	✓
			10G	✓	✓	✓
			25G	✓	✓	✓
			40G	✓	✓	✓
			50G	✓	✓	✓
			100G	✓	✓	✓
			200G	✓	✓	✓
			400G	✓	✓	✓
		Breakout Mode	800G	✓	✓	✓
			4x25G[10G]	✓	✓	✓
			2x100G[50G]	✓	✓	✓
			4x100G[50G]	✓	✓	✓
			2x200G[100G]	✓	✓	✓
			4x200G[100G]	✓	✓	✓
			2x400G[200G]	✓	✓	✓
	Logical Interfaces	Logical Interfaces	Ethernet port based L3 Interface	✓	✓	✓
			Port-Channel based L3 Interface	✓	✓	✓
			SVI	✓	✓	✓
		Sub-interface	Ethernet port based L2 sub-interface	✗	✗	✗
			Ethernet port based L3 sub-interface	✓	✓	✓
	Interface management	Interface management	Port-Channel based L2 sub-interface	✗	✗	✗
			Port-Channel based L3 sub-interface	✓	✓	✓
			Loopback	✓	✓	✓
			Null0	✗	✗	✗
		Port management	Startup & Shutdown	✓	✓	✓
			Port description	✓	✓	✓
		Statistics	Startup delay	✓	✓	✓
			Linkup delay	✓	✓	✓
			FEC	✓	✓	✓
			Auto-negotiation	✓	✓	✓
			Dynamic Port Breakout	✓	✓	✓
			CRC check	✓	✓	✓
			lpmode	✓	✓	✓
			Packets & Bytes	✓	✓	✓
	Optical module	Optical module	Error & Drop packets	✓	✓	✓
			Speed & Utilization ratio	✓	✓	✓
			v4/v6 Packets	✓	✓	✓
			MTU	✓	✓	✓
			Ethernet port	✓	✓	✓
			Port-Channel	✓	✓	✓
			SVI	✓	✓	✓
			Sub-interface	✓	✓	✓
		Jumbo Frame	Jumbo Frame	✓	✓	✓
			Interface range support	✗	✗	✓
L2 Switching	MAC	MAC	CMIS Diagnostic	✓	✓	✓
			Presence	✓	✓	✓
		Reading info	Vendor & Model info	✓	✓	✓
			RX/TX power	✓	✓	✓
		VLAN	Temperature	✓	✓	✓
			Wavelength	✗	✓	✓
		VLAN	Static MAC configuration	✓	✓	✓
			Dynamic learning	✓	✓	✓
			MAC aging	✓	✓	✓
			MAC Learning limit	✓	✓	✓
		VLAN member mode	MAC address move	✓	✓	✓
			MAC Flapping detection	✓	✓	✓
			MAC scan	✗	✗	✗
			MAC blackhole	✓	✓	✓
	Port-Channel	Port-Channel	MAC flushing	✓	✓	✓
			MAC filtering by source	✓	✓	✓
		BUM forwarding control	VLAN management	✓	✓	✓
			VLAN Description	✓	✓	✓
			VLAN range	✓	✓	✓
			VLAN range on switch-port	✓	✓	✓
		VLAN member type	VLAN member mode	Access	✓	✓
			Trunk	✓	✓	✓
		Load balance hash key	VLAN member type	Ethernet port	✓	✓
			Port-Channel	✓	✓	✓
			Broadcast	✓	✓	✓
			Unknown unicast	✓	✓	✓
		Load balance mode	Unknown multicast	✓	✓	✓
			Port-Channel Mode	Static	✓	✓
				LACP	✓	✓
			System Priority	✓	✓	✓
			Port Priority	✓	✓	✓
			LACP key	✓	✓	✓
			LACP port-id	✓	✓	✓
			System Id	✓	✓	✓
			Minimum links	✓	✓	✓
			Fast rate	✓	✓	✓
			LACP fallback	✓	✓	✓
			Graceful down	✓	✓	✓

		ipv4-rdma	✗	✓	✓
		ipv6-rdma	✗	✓	✓
	Hash configuration	Hash key	✓	✓	✓
		Hash seed	✓	✓	✓
LLDP	Working mode	TX&RX (default)	✓	✓	✓
		Rx only	✓	✓	✓
		Tx only	✓	✓	✓
	LLDP Neighbour Information	Chassis ID	✓	✓	✓
		Port ID	✓	✓	✓
		TTL	✓	✓	✓
		Port Description (optional)	✓	✓	✓
		System name (optional)	✓	✓	✓
STP	STP mode	System Capability (optional)	✓	✓	✓
		Management Address (optional)	✓	✓	✓
	STP Parameter	STP	✗	✗	✗
		MSTP	✓	✓	✓
		Instance priority	✓	✓	✓
		Interface priority	✓	✓	✓
		Interface cost	✓	✓	✓
		forward delay	✓	✓	✓
		max aging-time	✓	✓	✓
		hello interval	✓	✓	✓
	Edge-port	Auto Edge-port	✓	✓	✓
		Static Edge-port	✓	✓	✓
L3 Switching	BPDU protection	BPDU filter	✓	✓	✓
		BPDU guard	✓	✓	✓
		TC protection	✗	✗	✗
		Root protection	✗	✗	✗
	Loop protection	Loop protection	✗	✗	✗
		IP4 address	✓	✓	✓
		IP6 address	✓	✓	✓
	ARP	Secondary IP	✓	✓	✓
		Static ARP	✓	✓	✓
		Dynamic ARP	✓	✓	✓
		ARP aging and update	✓	✓	✓
		Gratuitous ARP	✓	✓	✓
		ARP proxy	✓	✓	✓
		ARP moving	✓	✓	✓
		ARP-to-host-routing	IPv4 routing filter by IP-Prefix/SVI	✓ ✓	✓ ✓
	NDP	ND	✓	✓	✓
		SLAAC	Router Advertisement (M/O/A/L Flag)	✓	✓
		NDP proxy	✓	✓	✓
		ND-to-host-routing	IPv6 routing filter by IP-Prefix/VLAN interface	✓ ✓	✓ ✓
	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	Ethernet port Port-Channel	✓ ✓	✓ ✓
		Nexthop action	Load balance	✓	✓
		Group member type	Ethernet port based L3 interface Port-Channel based L3 interface SVI	✓ ✓ ✓	✓ ✓ ✓
	ECMP	Load balance hash key	ipv4	✓	✓
			ipv6	✓	✓
			ipv4-rdma	✗	✓
			ipv6-rdma	✗	✓
		Hash configuration	Hash key	✓	✓
			Hash seed	✓	✓
		Load balance mode	Static Hash	✓	✓
			Resilient hash	✗	✗
			Eligible Load Balance	✓	✓
BGP	BGP	IBGP	✓	✓	✓
		EBGP	✓	✓	✓
		Peer Group	✓	✓	✓
		Peer Type	IPv4 peer	✓	✓
			IPv6 peer	✓	✓
			Unnumbered BGP	✓	✓
		Route Reflection	✓	✓	✓
		AS-Path replace	✓	✓	✓
		Route redistribution	✓	✓	✓
		Graceful restart	✓	✓	✓
		MP-BGP	✓	✓	✓
	OSPF	OSPF Version	OSPFv2	✓	✓
			OSPFv3	✓	✓
		Network type	Broadcast	✓	✓
			Non-Broadcast	✓	✓
			P2P	✓	✓
		Instance	P2MP	✓	✓
			Single & Multiple	✓	✓
		Area	Stub	✓	✓
			NSSA	✓	✓
		Authentication	MD5	✓	✓
		Route redistribution	✓	✓	✓
		Graceful restart	✓	✓	✓
	IS-IS			✓	✓

	Routing Policy	Prefix Lists	IPv4 Prefix List	✓	✓	✓
			IPv6 Prefix List	✓	✓	✓
			Route Map Using Prefix List	✓	✓	✓
		Route Map	Match	✓	✓	✓
			Set	✓	✓	✓
	VRF	Loopback interface assignment		✓	✓	✓
		Inter-VRF route leaking		✓	✓	✓
		Management VRF		✓	✓	✓
		ping/ssh to VRF		✓	✓	✓
	DHCP	DHCPv4 server		✓	✓	✓
		DHCPv6 server		✓	✓	✓
		DHCPv4 relay		✓	✓	✓
		DHCPv6 relay		✓	✓	✓
		DHCP relay over VXLAN		✓	✓	✓
Virtualization and tunnel	VXLAN	VTEP	v4 over v4	✓	✓	✓
			v6 over v4	✓	✓	✓
			v4 over v6	✗	✗	✗
			v6 over v6	✗	✗	✗
			Encap	✓	✓	✓
			Decap	✓	✓	✓
			Multi-VTEP	✓	✓	✓
		VXLAN mapping	VLAN-VNI (1:1)	✓	✓	✓
			VRF-VNI	✓	✓	✓
			L2 forwarding	Known Unicast	✓	✓
		ARP/ND suppression	BUM	✓	✓	✓
			UDP port configuration	✓	✓	✓
			VXLAN maintenance	VXLAN ping	✗	✗
			VXLAN traceroute	✗	✗	✗
		VXLAN multicast underlay		✗	✗	✓
			VXLAN cross connect	✗	✗	✓
	BGP-EVPN	Route type	Ethernet auto-Discovery	✓	✓	✓
			MAC/IP advertisement	✓	✓	✓
			Inclusive multicast ethernet	✓	✓	✓
			Ethernet segment route	✓	✓	✓
			IP prefix advertisement	✓	✓	✓
		Tunnel auto establish/tear down	Tunnel auto establish/tear down	✓	✓	✓
			Anycast gateway	✓	✓	✓
			L3 Gateway type	Distributed gateway	✓	✓
		Symmetry IRB	Centralized gateway	✓	✓	✓
			Routing dynamic population	✓	✓	✓
			VM migration	✓	✓	✓
			Inter-VRF Local Route Leaking	✓	✓	✓
			L2 overlay ECMP	✓	✓	✓
		Multi-homing	DF election	✓	✓	✓
			Split horizon filtering	✓	✓	✓
			IPv6 over IPv4	✗	✗	✓
	DCI	VLAN hand-off		✓	✓	✓
		Segment VXLAN		✗	✗	✓
		Multi-Site		✗	✗	✗
		NVGRE		✗	✗	✗
		GRE tunnel	v4 over v4	✗	✗	✗
			v6 over v4	✗	✗	✗
			v4 over v6	✗	✗	✗
			v6 over v6	✗	✗	✗
QoS and DCB	Classification & Scheduling	Classification	Dot1q	✓	✓	✓
			DSSCP	✓	✓	✓
		Queue scheduling	Strict priority	✓	✓	✓
			DWRR	✓	✓	✓
		Traffic shaping	Port based	✓	✓	✓
			Queue based	✓	✓	✓
		Bandwidth limiting	Ingress	✓	✓	✓
		WRED		✓	✓	✓
		Queue statistics	Packets & Bytes, Speed	✓	✓	✓
	Rewrite	Matching with ACL		✓	✓	✓
			Remark TCI	✓	✓	✓
			Remark DSSCP	✓	✓	✓
		Mark action	Remark PCP	✗	✓	✓
	DCB	ECN		✓	✓	✓
		PFC		✓	✓	✓
		PFC Watchdog		✓	✓	✓
		DCBX		✓	✓	✓
	RoCE	RoCEv2		✓	✓	✓
		Load balance	Packet Spray	✗	✓	✓
			Adaptive Routing and Switching(ARS)	✗	✓	✓
		Easy RoCE	One-Step configuration	✓	✓	✓
			Param Auto-Generation	✓	✓	✓
			Config sync between multiple devices	✗	✓	✓
		Fast CNP		✗	✗	✓
	Multicast Route	IPv4 static multicast routing		✗	✓	✓
		IPv6 static multicast routing		✗	✗	✗
		multicast route counter		✗	✓	✓
		multicast route based policer		✗	✓	✓
		multicast route type	(S,G)	✗	✓	✓
			(*,G)	✗	✓	✓
	MLD		v1	✗	✗	✓
		IGMP version	v2	✗	✗	✓
			v3	✗	✗	✓
			host query interval	✗	✗	✓

Multicast	IGMP	IGMP querier	max query response time	✗	✗	✓
			last member query count	✗	✗	✓
			last member query interval	✗	✗	✓
			static group member	✗	✗	✓
		IGMP snooping	querier	✗	✗	✓
			host-proxy	✗	✗	✓
			prompt-leave	✗	✗	✓
			static group member	✗	✗	✓
	PIM	PIM version	v4	✗	✗	✓
		PIM version	v6	✗	✗	✗
		PIM Dense Mode	Any-Source Multicast	✗	✗	✓
			Source-Specific Multicast	✗	✗	✓
			Rendezvous Point	✗	✗	✓
			DR	✗	✗	✓
		PIM BFD		✗	✗	✓
	MSDP			✗	✗	✗
Security	CoPP	Bandwidth limit for CPU port		✓	✓	✓
		CoPP Configuration	Packet type	✓	✓	✓
	Storm Suppression	Suppression type	Meter	✓	✓	✓
			Broadcast	✓	✓	✓
			Unknow unicast	✓	✓	✓
		Control mode	Unknow multicast	✓	✓	✓
			Value-based	✓	✓	✓
	ACL	Match field	Percent-based	✗	✗	✗
			L3 IPv4	✓	✓	✓
			L3 IPv6	✓	✓	✓
		ACL action	User-defined	✓	✓	✓
			permit	✓	✓	✓
			deny	✓	✓	✓
		ACL type	counter	✓	✓	✓
			Ingress	✓	✓	✓
		Time-ranged ACL	Egress	✓	✓	✓
				✓	✓	✓
		Control-Plane ACL		✓	✓	✓
Service Operation and Reliability	AAA	TACACS+	Authentication	✓	✓	✓
			Authorization	✓	✓	✓
			Accounting	✓	✓	✓
		Radius	Authentication	✓	✓	✓
			Authorization	✗	✗	✗
	DHCP Snooping		Accounting	✗	✗	✗
	ND Snooping			✗	✗	✗
	ND Protection	SMAC consistence check		✗	✗	✗
		RA Guard		✗	✗	✗
		ND speed limit		✗	✗	✗
	Port Isolation	Working mode	L2	✓	✓	✓
		Interface type	Ethernet port	✓	✓	✓
			Port-Channel	✗	✗	✗
	NAT	Mode	Static	✗	✗	✓
			Dynamic	✗	✗	✓
		Type	NAT	✗	✗	✓
			NAPT	✗	✗	✓
Management	MC-LAG	Apps in container		✓	✓	✓
		Configuration database		✓	✓	✓
		Warm restart	BGP	✓	✓	✓
		Ethernet-based MC-LAG		✓	✓	✓
		MC-LAG peer gateway		✓	✓	✓
		Consistent check		✓	✓	✓
		Secondary ICCP Session		✓	✓	✓
		L3 Forwarding		✓	✓	✓
		Unique IP		✓	✓	✓
		Routing protocol	OSPF over MC-LAG	✓	✓	✓
			BGP over MC-LAG	✓	✓	✓
		MC-LAG with EVPN		✓	✓	✓
		Loopback detection		✓	✓	✓
	BFD	BFD Mode	Asynchronous	✓	✓	✓
			Passive mode	✓	✓	✓
			Echo mode	✓	✓	✓
		BFD for routing protocol	Static routing	✓	✓	✓
			BGP	✓	✓	✓
			OSPFv2	✓	✓	✓
			OSPFv3	✓	✓	✓
			IS-IS	✓	✓	✓
			VRPP	✗	✓	✓
				✓	✓	✓
	SLA	IP Unnumbered		✗	✗	✗
		BFD acceleration		✓	✓	✓
		Echo mode		✓	✓	✓
	Monitoring Link	User defined		✓	✓	✓
		TRACK with static route		✓	✓	✓
		Monitoring configuration	Uplink port	✓	✓	✓
			Downlink port	✓	✓	✓
			Recovery time	✓	✓	✓
	VRRP	Downlink recovery interval		✗	✗	✓
				✓	✓	✓
Management	SNMP	SNMP v2		✓	✓	✓
		SNMP v3		✓	✓	✓
		SNMP Trap		✓	✓	✓
	Port Mirroring	SPAN		✓	✓	✓
				✓	✓	✓
		ERSPAN		✓	✓	✓

Visibility and Monitoring	AsterNOS exporter	Network Quality Analysis	v4 collector	✓	✓	✓
			v6 collector	✗	✓	✓
			source ip/source interface	✗	✓	✓
		INT(In-band Network Telemetry)	gRPC	✓	✓	✓
			BDC(Buffer drop capture)	✓	✓	✓
			HDC(High delay capture)	✓	✓	✓
			IPT(Innovium Path Telemetry)	✗	✗	✓
		MoD(Mirror-on-Drop)	P4INT	✗	✗	✗
			MoD(Mirror-on-Drop)	✗	✗	✓
		Device monitoring	Visibility template	Grafana dashboard	✓	✓
			System info	Software version	✓	✓
			Hardware info	✓	✓	✓
			NTP	✓	✓	✓
			CPU	✓	✓	✓
			Memory	✓	✓	✓
			Fan	✓	✓	✓
			PSU	✓	✓	✓
			Temperature	✓	✓	✓
			FIB resource	✓	✓	✓
AIDC Intelligent Routing	AsterNOS exporter	Interface	Link status	✓	✓	✓
			Statistics	✓	✓	✓
			Tranceivers	✓	✓	✓
		BGP	BGP	✓	✓	✓
			MC-LAG	✓	✓	✓
			EVPN VXLAN	✓	✓	✓
		RoCE	Queue	✓	✓	✓
			Buffer	✓	✓	✓
			PFC	✓	✓	✓
		SLA, track	ECN	✓	✓	✓
			High latency flow tracking	✓	✓	✓
			Buffer drop flow tracking	✓	✓	✓
System Management	AsterNOS exporter	Static routing	SLA, track	✗	✗	✗
			Alarm & Alert	Support prometheus	✓	✓
			VRF assignment	✓	✓	✓
		Dynamic routing	Path assignment	✓	✓	✓
			Failure recovery	✓	✓	✓
			Configuration templates	✓	✓	✓
		E2E integration	Path Quality Measurement	✗	✓	✓
			Path Quality Advertisement	✗	✓	✓
			Dynamic path selection	✗	✓	✓
		Dashboard support	ECMP for multi-tenant	✗	✓	✓
			Adaptive Multipath Load Balancing	✗	✓	✓
			NIC configuration	✗	✗	✓
Device Management	AsterNOS exporter	User interface	Credit-token flow control	✗	✗	✗
			Visualization of path quality	✗	✗	✗
			Management agent	✗	✗	✗
		NOS Maintenance	Device info via uCentral	✗	✗	✓
			Networking topology via uCentral	✗	✗	✓
			Deployment agent	✗	✗	✗
		License	Console	✓	✓	✓
			SSH	✓	✓	✓
			Telnet	✓	✓	✓
System Management	AsterNOS exporter	Device Information	Cisco-like CLI	✓	✓	✓
			RESTful API	✓	✓	✓
			Netconf	✗	✗	✓
		Login & MOTD	ONIE	✓	✓	✓
			Dual-OS	✓	✓	✓
			OS Upgrade & Downgrade	✓	✓	✓
		User management	Reboot cause	✓	✓	✓
			License Management	✓	✓	✓
			Expiration limit	✓	✓	✓
		Feature Management	PSU	✓	✓	✓
			FAN	✓	✓	✓
			Thermal	✓	✓	✓
System Management	AsterNOS exporter	System configuration	Out-band	✓	✓	✓
			In-band	✓	✓	✓
			MGMT VRF	✓	✓	✓
		System time	Hostname	✓	✓	✓
			Password Security	✓	✓	✓
			limit of logged-in users	✓	✓	✓
		Syslog	Access permission per account	✓	✓	✓
			DHCP	✓	✓	✓
			NAT	✗	✗	✗
		Critical Resource Monitoring	SNMP	✓	✓	✓
			Telemetry	✓	✓	✓
			LLDP	✓	✓	✓
System Management	AsterNOS exporter	System configuration	Configuration persistence	✓	✓	✓
			Configuration reset	✓	✓	✓
			System time	✓	✓	✓
		Syslog	Syslog	✓	✓	✓
			Remote syslog	✓	✓	✓
			Syslog level	✗	✓	✓
		NTP	polling interval	✓	✓	✓
			thresholds	✓	✓	✓
			Monitoring resources	✓	✓	✓
		DNS	NTPv4	✓	✓	✓
			NTPv6	✓	✓	✓
			Loopback as NTP source	✓	✓	✓
System Management	AsterNOS exporter	User management	SNTP	✗	✗	✗
			Client	✗	✗	✗
			Relay	✗	✗	✗

Management	PTP	PTP Profile	Smpte-2059-2	✗	✓	✓
			1588v2	✗	✓	✓
			g8275.1	✗	✓	✓
			g8275.2	✗	✓	✓
			AES67	✗	✓	✓
		PTP Clock	OC/BC/E2E_TC/P2P_TC	✗	✓	✓
			T-GM/T-BC/T-TSC/T-TC	✗	✓	✓
			T-GM/T-BC/P/T-TSC-P	✗	✓	✓
		Clock Synchronization Mode	One-Step	✗	✓	✓
			Two-Step	✗	✓	✓
		Delay Mechanism	E2E	✗	✓	✓
			P2P	✗	✓	✓
		Clock Parameter	Domain ID	✗	✓	✓
			Priority	✗	✓	✓
			Priority1	✗	✓	✓
			Priority2	✗	✓	✓
			Clock ID	✗	✓	✓
			Accuracy	✗	✓	✓
			Class	✗	✓	✓
			Dscp	✗	✓	✓
			Source ip	✗	✓	✓
			SM-TLV	✗	✓	✓
		Interface Parameter	Sync-message interval	✗	✓	✓
			Pdelay-req interval	✗	✓	✓
			Delay-req interval	✗	✓	✓
			Announce timeout	✗	✓	✓
			Announce interval	✗	✓	✓
			Dscp	✗	✓	✓
		Interface Role	Priority	✗	✓	✓
			Master	✗	✓	✓
			Slave	✗	✓	✓
		Transport Type	Dynamic	✗	✓	✓
			IPv4	✗	✓	✓
		Communication Mode	IPv6	✗	✓	✓
			Unicast	✗	✓	✓
			Multicast	✗	✓	✓
			Mixed	✗	✓	✓
		Log	Loglevel	✗	✓	✓
			Counter	Domain	✗	✓
			PTP port	✗	✓	✓
		PTP in non-default VRFs	PTP in non-default VRFs	✗	✓	✓
			Out-of-band Provisioning	✓	✓	✓
			In-band Provisioning	✓	✓	✓
			ZTP over DHCPv4	✓	✓	✓
			ZTP over DHCPv6	✓	✓	✓
			Upgrade image	✓	✓	✓
			Install configuration	✓	✓	✓
			Execute user defined script	✓	✓	✓
			Check host connectivity	✓	✓	✓
			Ansible	✓	✓	✓
		FTP	FTP client	✓	✓	✓
			FTP server	✓	✓	✓
		TFTP	TFTP client	✓	✓	✓
			TFTP server	✓	✓	✓
		SCP	SCP client	✓	✓	✓
			SCP server	✓	✓	✓
		Toolkit	Ping	✓	✓	✓
			Traceroute	✓	✓	✓
DevOps	ZTP	ZTP	Out-of-band Provisioning	✓	✓	✓
			In-band Provisioning	✓	✓	✓
			ZTP over DHCPv4	✓	✓	✓
			ZTP over DHCPv6	✓	✓	✓
			Upgrade image	✓	✓	✓
			Install configuration	✓	✓	✓
			Execute user defined script	✓	✓	✓
			Check host connectivity	✓	✓	✓
			Ansible	✓	✓	✓
			FTP	✓	✓	✓