# OcNOS Aggregation Router (AGGR)

April 2024

1.0 OcNOS for Aggregation Router

The OcNOS Aggregation Router product fits seamlessly with traditional services like Layer 2 VPN (L2VPN), Layer 3 VPN (L3VPN), Virtual Private Wire Service (VPWS) and Virtual Private LAN Service (VPLS). It provides advanced services like Ethernet VPN (EVPN) with traditional and next-generation transport including Multiprotocol Label Switching (MPLS), Virtual Extensible LAN (VxLAN), Segment Routing (SR) and SRv6. It allows for migration paths between traditional and next-generation transports and services.
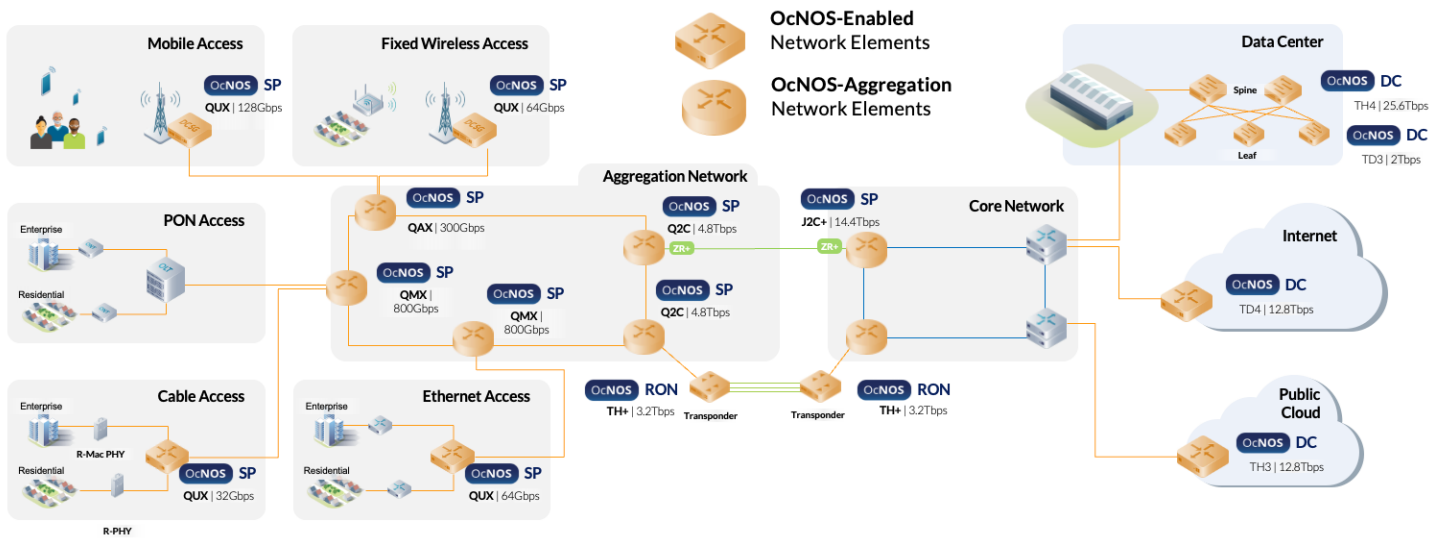
OcNOS-SP-CSR	OcNOS-SP	OcNOS-RON	OcNOS-DC
Mobile Backhaul, Access Networks	Aggregation / Metro Network	Routed Optical Network	Data Center Network
D-RAN, C-RAN, O-RAN, and Private 5G Fixed Access, Metro Aggregation	Fixed Access: Cable, PON, Ethernet, FWA Metro Aggregation, Provider Edge, IPoDWDM	Open Optical Packet Transport	Open DC Spine and Leaf Switches
Supported Capacities: 32G – 360G	Supported Capacities: 32G – 14.4T	Supported Capacities: 3.2T	Supported Capacities: 128G – 25.6T

Aggregation Router Key Benefits

- Efficiently aggregate traffic at scale of up to 14.4 Tbps
- Proven migration for legacy services
- Enables hardware independence delivering faster roll-out of new services and shorter time-to-market
- Simplify operations to reduce Total Cost of Ownership (TCO)

2.0 IP Infusion Product Release Version

OcNOS-AGGR-6.5.y

Product Family	**Major**	**Minor**	**Maintenance**
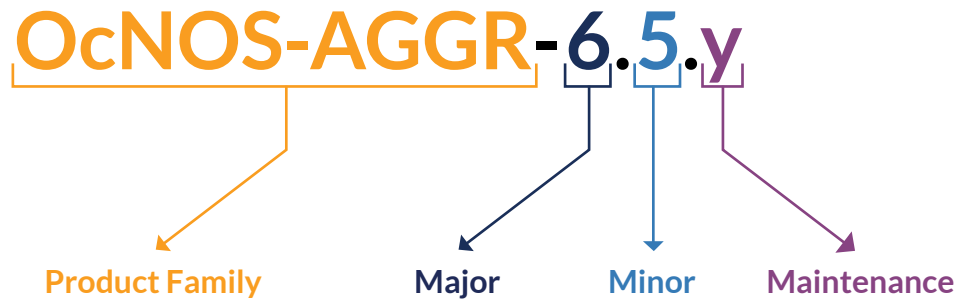
Product Name: Refers to IP Infusion Product Family.

Major Version: A major release consists of major new features and/or large architectural changes.

Minor Version: A minor release includes some feature enhancement, functions and bug fixes.

Maintenance: Improvements and fixes to existing features enhancing stability of the product.

3.0 OcNOS Aggregation Router Features

The table below lists the software features for Aggregation Router. Note, the following mentioned features are only indicative and the detailed feature list may vary. Please refer to the Feature Matrix for the complete feature list on supported ODM platforms.

3.1 Aggregation Router Software Features

SOFTWARE FEATURE	SPECIFICATION
Layer 2 Switching	• VLAN • Spanning Tree Protocol (STP) • Multiple Spanning Tree Protocol (MSTP) • Rapid Spanning Tree (RSTP) • Link Layer Discovery Protocol (LLDPv2) • Link Aggregation • Multi-Chassis Link Aggregation (MLAG) • MLAG with RSTP • MLAG + Provider Bridging (PB) with RSTP • MLAG + VRRPv4 with RSTP • MLAG + VRRPv6 with RSTP • Provider Bridging • Static MAC Address Assignment • Bridge Protocol Data Unit (BPDU) Protect • Root Guard • MAC Learning Disable • Port-based Authentication with RADIUS Server • Port Security • Unidirectional Link Detection (UDLD)

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SOFTWARE FEATURE	SPECIFICATION
Layer 3 Routing	• Ethernet ARP • Transmission of IP Datagrams over Ethernet • Congestion Control in IP/TCP Networks • IP Broadcast • IP Broadcast in the Presence of Subnets • IP Subnetting • Classless Inter-Domain Routing (CIDR) • Requirements for IP Version 4 Routers • Route Redistribution across RIP, OSPF and BGP • VLAN Routing • Policy Based Routing • Inter Virtual Routing and Forwarding (VRF) Route Leaking • Static Inter VRF Route Leaking for IPv6 (between Default and Non-Default instances) • Multiple Loopback interfaces in same VRF • Static route tracking using object tracking (IP SLA) • Route Advertisement for IPv6 • Route Monitor • Unidirectional Link Detection (UDLD) on L3 interface • URPF • BGP • RIP • OSPF • ISIS • BFD • VRRPv3
Multi-Protocol Label Switch (MPLS)	• Label Distribution Protocol (LDP) • Resource Reservation Protocol (RSVP) • Layer 2 VPN (VPWS and VPLS) • Layer 3 VPN • MPLS OAM

Carrier Ethernet	• Connectivity Fault Management (CFM)
	  – CFM over L2 Bridge with xSTP
	  – CFM over VPWS
	  – CFM over EVPN ELINE Single Homing
	  – CFM over EVPN MPLS ELINE Multi Homing
	• ITU-T Y.1731 over MPLS/VPWS using Subinterface
	• Ethernet Ring Protection Switching (ERPS)
	  – ERPS over CFM on Provider/Customer domain
	  – Sub-ring support (Multiple ring and ladder topologies)
	  – Support of multiple ERP Instances on single ring
	  – ERPS Over Bridge-domain
	• Ethernet Linear Protection (ELPS)
	• Ethernet in the First Mile (EFM)

Virtual Extensible LAN (VxLAN)	• Layer 2 EVPN for VXLAN • Layer 2 EVPN Auto RT for VxLAN • Layer 2 EVPN Multihoming for VXLAN • VxLAN QoS • VxLAN support over SVI interface • VxLAN IRB • VxLAN-IRB QoS

SOFTWARE FEATURE	SPECIFICATION
Virtual Extensible LAN (VxLAN) (cont'd)	• VXLAN IRB - Inter-VRF route leaking • DHCP Relay for VXLAN IRB • Static VXLAN • VXLAN Trunk as access port • VXLAN - Overlay Equal-Cost Multipath (ECMP) • VxLAN E-LINE/X-Connect • VxLAN Sub-interface as access • IRB support for advertising host routes • OSPF and ISIS support on an IRB Interface(SH)
Multicast Features	• Protocol Independent Multicast – Sparse Mode (PIM-SM) • Protocol Independent Multicast – Dense Mode (PIM-DM) • Multicast Source Discovery Protocol (MSDP) • Bidirectional Protocol Independent Multicast (BIDIR-PIM) • Internet Group Management Protocol (IGMP), Version 2 • Internet Group Management Protocol (IGMP), Version 3 • Multicast Listener Discovery (MLD) • Protocol Independent Multicast (PIMv6) • PIM - Sparse Mode (PIM-SM)-IPv6 • PIM - Dense Mode (PIM-DM): Protocol Specification (Revised)-IPv6 • Multicast Source Discovery Protocol (MSDP)-IPv6 • Bidirectional Protocol Independent Multicast (BIDIR-PIM)-IPv6
Quality of Service (QoS)	• DiffServ Field in IPv4/IPv6 Headers • Assign matching traffic flow to a specific queue • 1/2/3 Level queuing hierarchy • L2 and L3 QoS • Shaping per queue, per port • Multiple hardware queues per port • WFQ/SP Scheduling Per Queue • WRED • 802.1p remarking • Classification based on interface, ACL, DSCP, IP precedence, 802.1p, and VLAN, • Trust IEEE 802.1p/DSCP • Police Rate (SRTCM/TRTCM) • Minimum and Maximum Bandwidth Per Queue • Service Queuing (Mapping services to specific vlans and shaping each vlan based traffic) • IP SLA (ICMP Echo) • ToS Based queue distribution over Layer 2 Interface

Management	• Two-way Active Measurement Protocol (TWAMP)
	  – TWAMP - One Way Measurement
	  – TWAMP - Link level Delay and Loss Measurement
	  – TWAMP over MPLS transport
	  – TWAMP - Reflector/Server
	  – TWAMP Client
	• Role based CLI management and access
	• CLI access via console, telnet and SSH
	• CLI commit rollback
	• Authentication using TACAS+/RADIUS Client
	• Extended ping and traceroute
	• SNMP v1, v2, and v3

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SOFTWARE FEATURE	SPECIFICATION

Management (cont'd)	• DHCP client
	• DHCP relay
	• DHCP group (IPv4 and IPv6)
	• DHCP Option 82 (IPv4) NTP Client
	• NTP Server
	• Syslog
	• File Upload/Download using FTP/TFTP/SFTP/SCP
	• Management VRF
	• Ansible
	• Upgrade Mechanism from ONIE prompt using onie nos install and from OcNOS shell using sys-update
	• Zero Touch Provisioning (ZTP) (with IPv4)
	• Zero Touch Provisioning (ZTP) (with IPv6)
	• ACL Support over Management, VTY and Loopback
	• sFlow
	• Debounce Timer
	• DHCPv6 Prefix Delegation
	• DNS Relay (v4 and v6)
	• Storing Multiple images on Platform
	• DHCP Relay over L3VPN
	• Fault Management System
	• DHCP Relay across VRFs
	• Infrastructure for pluggable OLT modules
	• DHCP Server (IPv4 and IPv6)
	• Network Configuration Protocol (NETCONF)
	  – YANG 1.0 Data Modeling Language
	  – YANG 1.1 Data Modeling Language
	  – NETCONF Protocol
	  – NETCONF Protocol over Secure Shell (SSH)
	  – NETCONF Event Notifications
	  – YANG Module for NETCONF Monitoring
	  – NETCONF Base Notifications
	  – NETCONF Access Control Model
	  – Multiple simultaneous config session for CLI
	  – Transaction based CLI
	  – Netconf Call Home
	  – NetConf OpenConfig
	• Streaming Telemetry
	  – gNMI Subscribe
	• Configurable Password Policy

Security	• Secure interface login and password
	• Control Plane Policing (CoPP)
	• Storm control
	• Flow control
	• DHCP Snooping
	• IP Source Guard
	• Dynamic ARP Inspection
	• Access Control Lists (ACLs) based on
	  – IP/Port/IP-ProtocolType/MAC/Ethertype
	  – TCP Flags, Protocol type, IP fragment flags, DSCP, CoS, IP Precedence, VLAN
	  – Rule Prioritization and re-sequence
	  – On-Fly modification
	  – Timed ACL

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SOFTWARE FEATURE	SPECIFICATION

Hardware Monitoring Features	• Switched port analyzer (SPAN)
	• Remote switched port analyzer (RSPAN)
	• Load Balancing
	• PHY/MAC level interface loopback
	• TCAM space monitoring
	• Hardware watchdog timer
	• Chassis Monitoring
	  – Temperature monitor
	  – Fan control
	  – CPU load monitoring
	  – Board information (EEPROM)
	  – Fan and PSU FRU information
	  – 100G Port Breakout
	  – 400G Port Breakout EDFA
	  – QSFP-DD ZR/ZR+
	• Digital Diagnostics Monitoring
	  – Temperature monitor
	• Power Monitoring (Power, Current, Voltage)

Timing and Synchronization	• Timing characteristics of a synchronous equipment slave clock (SyncE) – G.8262 • Distribution of timing information through packet networks (ESMC) – G.8264 • PTP Telecom profile for phase/time synchronization with full timing support from the network (T-BC) – G.8275.1 (T-BC) • Timing characteristics of telecom boundary clocks for use with full timing support from the network (T-BC) – G.8273.2 (T-BC) • PTP Telecom profile for phase/time synchronization with full timing support from the network (T-GM with Antenna Compensation) – G.8275.1 (T-GM) • PTP TP for time/phase synchronization with partial timing support from the network (T-BC-P, T-BC-A) - G.8275.2 (T-BC-P, T-BC-A) ; ITU-T G.8273.4 • PTP TP for time/phase synchronization with partial timing support from the network (T-GM with Antenna Compensation) - G 8275.2 (T-GM) • Default profile (T-BC) - IEEE-1588 (Annex J) • Default profile (T-GM) - IEEE-1588 (Annex J) • PTP Telecom Profile for frequency synchronization (T-GM) - G.8265.1 (T-GM) • PTP Telecom Profile for frequency synchronization (T-TSC) - G.8265.1 (T-TSC) • E2E Transparent clock (TC) - IEEE-1588 ; ITU-T G.8273.3 [Works with both G8275.1, G8275.2, default profile] • IWF (Interworking function)
Sub-interface	• Support for L2 Sub-Interface • Support for L3 Sub-Interface
MPLS with EVPN	• EVPN MPLS - ELINE and ELAN • EVPN MPLS Multihoming (ELINE & ELAN) • EVPN MPLS - QoS (ELINE & ELAN) • EVPN MPLS – ETREE • EVPN over Segment-Routing (LSP/Policy) • EVPN MPLS SR Active-Standby • EVPN MPLS Service Mapping via local Tunnel Policy • Support EVPN MPLS with RSVP-ECMP • EVPN MPLS - L2CP on EVPN Access

SOFTWARE FEATURE	SPECIFICATION
MPLS with EVPN (cont'd)	• EVPN MPLS - SR + TI-LFA • EVPN MPLS - BGP-LU • EVPN MPLS - LU/SR service-update Support • EVPN MPLS - MAC hold timer • Support EVPN MPLS with LDP-ECMP • Inter AS option A and C • RSVP/LDP GR support with EVPN service • Integrated Routing and Bridging in Ethernet VPN (EVPN MPLS with IRB) • OSPF and ISIS support on an IRB Interface (SH)
Segment Routing	• OSPF extensions for Segment-Routing • User Defined Adjacency SID (OPSFv2) • ISIS extensions for Segment-Routing • LDP and SR interworking • SR Mapping server • Segment-Routing Policy (Traffic Engineering) • Segment-routing OAM (LSP Ping/Traceroute) for MPLS dataplane • Segment-routing BFD • Topology Independent Fast Reroute using Segment Routing • Service mapping using tunnel policy over SR policy • Entropy label support for SR MPLS (ISIS)
PCEP (Path Computation Element Protocol)	• Support for Path Computation Element Protocol • Support for Stateful PCE • PCEP Extensions for Segment Routing
Segment Routing IPv6	• Support of Segment routing IPv6 generic base infrastructure. • OSPF Extension to Support Segment Routing over IPv6 Dataplane • IS-IS Extension to Support Segment Routing over IPv6 Dataplane • BGP based L3VPN (VPNv4) over SRv6 core • BGP-LS support for Segment routing IPv6 (OSPF) • EVPN MPLS (SH/MH) - SRv6 • EVPN ELINE (SH/MH) for SRv6 • SRv6 OAM

3.2 OcNOS Aggregation Router Software SKUs

SKU NAME	DESCRIPTION
OCNOS-CSR-32/64/ 120/300/800	OCNOS CSR image for Cell Site Routing and Fixed Wireless, Microwave Integrated Backhaul with L2/L3 switching/Routing Support for (OSPF, IS-IS, BGP), IP/MPLS support, Ring/Linear Protection Switching,ITU/IETF/IEEE OAM & Timing,with perpetual use license (1 license). Please refer Data Sheet for detailed feature set descriptions.
OCNOS-SP- IPBASE-120/300/800/ 2400/4800/14400	Open Compute Network Operating System IPBASE image for Service Providers with support for L2 switching, L3 Routing v4/v6 (OSPF, IS-IS, BGP), VxLAN-EVPN, IETF OAM and NETCONF with perpetual use license (1 license). Applicable for Service Provider customers with carrier aggregation switching platforms with ports speeds between 120 Gbps to 4800 Gbps.

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SKU NAME	DESCRIPTION
OCNOS-SP-MPLS-120/800/2400/4800/14400	Open Compute Network Operating System MPLS image with support for L2 switching, L3 Routing v4/v6 (OSPF, IS-IS, BGP), MPLS, SR-MPLS, VxLAN/MPLS-EVPN, Ring/Linear Protection Switching, Carrier Ethernet, ITU/IETF/IEEE OAM and Openconfig/NETCONF with perpetual use license (1 license). Applicable for Service Provider customers with White Box switching platforms with ports speeds between 120 Gbps to 14400 Gbps.
OcNOS-SP-PLUS-300/800/2400/4800/14400	Open Compute Network Operating System image with support for L2 switching, L3 Routing v4/v6 (OSPF, IS-IS, BGP), MPLS, SR-MPLS, SRv6, VxLAN-MPLS-EVPN, Openconfig/NETCONF, CE 3.0, 1588v2/SynchE, Ring/Linear Protection Switching, ITU/IETF/IEEE OAM with perpetual use license (1 license). Applicable for Service Provider Customers with High Density carrier aggregation switching platforms with ports speeds between 300-14400 Gbps. Please refer to the Data Sheet for detailed feature set descriptions.

4.0 Solution Ordering Guide

4.1 OcNOS Aggregation Router Supported Hardware Platforms

The following hardware platforms are supported.

PLATFORM	CHIPSET	SWITCHING SPEED	SPEED/INTERFACE	CPU	OCNOS-SP SKU
Edgecore AS5912-54X	Qumran-MX	800 Gbps	48 x 10GE ports, 6 x 100GE ports	Intel C2xxx Rangeley	OCNOS-SP-IPBASE-800, OCNOS-SP-MPLS-800
Edgecore AS5915-18X	Qumran-UX	64 Gbps	8 x 1GE ports, 6 x 10GE ports, 4 x 100/1000 Base-T RJ-45 ports	Intel® Denverton C3308 2 core	OCNOS-SP-CSR-64, OCNOS-SP-IPBASE-64, OCNOS-SP-MPLS-64
Edgecore AS5916-54XKS	Qumran-MX + External TCAM	800 Gbps	48 x 10GE ports, 6 x 100GE ports	Intel® Xeon® D-1548 processor 8 cores 2.0 GHz	OCNOS-SP-CSR-800, OCNOS-SP-IPBASE-800, OCNOS-SP-MPLS-800
Edgecore AS5916-54XKS-OT	Qumran-MX	800 Gbps	48 x 10GE ports, 6 x 100GE ports	Intel Xeon D-1518	OCNOS-SP-IPBASE-800, OCNOS-SP-MPLS-800, OCNOS-SP-IPADV-CE-AGGR-800
Edgecore AS7315-27X	Qumran-MX + External TCAM+TPM	800 Gbps	48 x 10GE ports, 6 x 100GE ports	Intel® Xeon® D-1548 processor 8 cores 2.0 GHz	OCNOS-SP-CSR-300, OCNOS-SP-IPBASE-300, OCNOS-SP-MPLS-300
Edgecore AS7315-30X	Qumran-AX	300 Gbps	4 x 1GE ports, 16 x 10GE ports, 8 x 25GE ports, 2 x 100GE ports	Intel ATOM C3508	OCNOS-SP-CSR-300, OCNOS-SP-IPBASE-300, OCNOS-SP-MPLS-300
Edgecore AS7316-26XB	Qumran-AX	300 Gbps	16 x 10GE ports, 8 x 25GE ports, 2 x 100GE ports	Intel Broadwell-DE D-1519 1.5G 4C	OCNOS-SP-CSR-300, OCNOS-SP-IPBASE-300, OCNOS-SP-MPLS-300

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PLATFORM	CHIPSET	SWITCHING SPEED	SPEED/INTERFACE	CPU	OCNOS-SP SKU
Edgecore AS7535-28XB	Qumran-2A	800 Gbps	24 x 25GE ports, 2 x 100GE ports, 2 x 400 GE ports	Intel Broadwell-DE D-1539 1.6GHz 8-Core	OCNOS-SP-IPBASE-800, OCNOS-SP-MPLS-800, OCNOS-SP-PLUS-800
Edgecore AS7946-30XB	Qumran-2C	2.4 Tbps	4 x 10G/25G SFP28 ports, 18 x 100G QSFP28 ports, 4 x 100G QSFP-DD ports, 4 x 400G QSFP-DD ports	Intel® D1548 8C	OCNOS-SP-IPBASE-2400, OCNOS-SP-MPLS-2400, OCNOS-SP-PLUS-2400
Edgecore AS7946-74XKSB	Qumran-2C	2.4 Tbps	10x 100GE QSFP28 64x 10G/25G SFP28 2 x 100G QSFP-DD	Intel® D-1548 8C	OCNOS-SP-IPBASE-2400, OCNOS-SP-MPLS-2400, OCNOS-SP-PLUS-2400
UfiSpace S9500-22XST	Qumran-AX	300 Gbps	2 x 100GE ports, 8 x 25GE ports, 8 x 10GE ports, 4 x 1GE RJ45 ports	Intel Broadwell-DE D-1519 1.5GHz 4-Core	OCNOS-SP-CSR-300, OCNOS-SP-IPBASE-300, OCNOS-SP-MPLS-300
UfiSpace S9500-30XS	Qumran-AX	300 Gbps	2 x 100GE ports, 8 x 25GE ports, 20 x 10GE ports	Intel Broadwell-DE D-1519 1.5GHz 4-Core	OCNOS-SP-CSR-300, OCNOS-SP-IPBASE-300, OCNOS-SP-MPLS-300
UfiSpace S9501-18SMT	Qumran-UX	64 Gbps	6 x 10GE ports, 8 x 1GE ports, 4 x 1GE Base-T RJ45 ports	Intel Denverton- NS C3508 4 Cores @1.6GHz	OCNOS-SP-CSR-64, OCNOS-SP-IPBASE-64, OCNOS-SP-MPLS-64
UfiSpace S9501-28SMT	Qumran-UX	120 Gbps	8 x 10GE ports, 16 x 1GE ports, 4 x 1GE Base-T RJ45 ports	Intel Denverton- NS C3508 4 Cores @1.6GHz	OCNOS-SP-CSR-120, OCNOS-SP-IPBASE-120, OCNOS-SP-MPLS-120
UfiSpace S9502-12SM	Qumran-UX	32 Gbps	4 x 1/10GE ports, 8 x 1GE ports, 1 x 1000 Base-T RJ45 ports	Intel Denverton-NS C3308 Dual Core @1.6GHz	OCNOS-SP-CSR-32, OCNOS-SP-IPBASE-32, OCNOS-SP-MPLS-32
UfiSpace S9502-16SMT	Qumran-UX	32 Gbps	4 x 10GE ports, 8 x 1GE ports, 4 x 100/1000 Base-T RJ45 ports	Intel Denverton-NS C3308 Dual Core @1.6GHz	OCNOS-SP-CSR-32, OCNOS-SP-IPBASE-32, OCNOS-SP-MPLS-32
UfiSpace S9510-28DC	Qumran-2A	800 Gbps	24 x 10/25GE ports, 2 x 40/100GE ports, 2 x 100/400GE ports	Intel Denverton-NS C3508 4 Core	OCNOS-SP-IPBASE-800, OCNOS-SP-MPLS-800, OCNOS-SP-PLUS-800
UfiSpace S9510-30XC	Qumran-2U	360 Gbps	28 x 1/10/25GE SFP28 ports, 2 x 40/100GE QSFP28 ports with FlexE support	Intel Denverton-NS C3508 4 Core @1.6GHz	OCNOS-SP-IPBASE-300, OCNOS-SP-MPLS-300, OCNOS-SP-PLUS-300
UfiSpace S9600-32X	Qumran-2C	2.4 Tbps	32 x 100GE ports, 4 x 25GE ports	Intel Skylake-D D-2145NT 8 Core, 1.9GHz	OCNOS-SP-IPBASE-2400, OCNOS-SP-MPLS-2400, OCNOS-SP-PLUS-2400
UfiSpace S9600-56DX	Qumran-2C	4.8 Tbps	48X 100GE QSFP28 8X 400GE QSFP-DD	Intel Icelake-D 8-Core @ 2.1GHz	OCNOS-SP-IPBASE-4800, OCNOS-SP-MPLS-4800, OCNOS-SP-PLUS-4800

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PLATFORM	CHIPSET	SWITCHING SPEED	SPEED/INTERFACE	CPU	OCNOS-SP SKU
UfiSpace S9600-28DX	Qumran-2C	2.4Tbps	4 x 400GE ports, 24 x 100GE ports	Intel Icelake-D 8-Core @ 2.1GHz	OCNOS-SP-IPBASE-2400, OCNOS-SP-MPLS-2400, OCNOS-SP-PLUS-2400
UfiSpace S9600-64X	Qumran-2C	4.8 Tbps	64 x 100GE ports, 4 x 25GE ports	Intel Skylake-D D-2145NT 8 Core, 1.9GHz	OCNOS-SP-IPBASE-4800, OCNOS-SP-MPLS-4800, OCNOS-SP-PLUS-4800
UfiSpace S9600-72XC	Qumran-2C	2.4 Tbps	8 x 100GE ports, 64 x 25GE ports, 2 x 10GE ports	Intel Skylake-D D-2145NT 8 Core, 1.9GHz	OCNOS-SP-IPBASE-2400, OCNOS-SP-MPLS-2400, OCNOS-SP-PLUS-2400
UfiSpace S9610-36D	Jericho 2C+	14.4 Tbps	36x 40/100/400G QSFP-DD ports	Intel Skylane-D 8-Core, 1.9 Ghz	OCNOS-SP-IPBASE-14400, OCNOS-SP-MPLS-14400, OCNOS-SP-PLUS-14400

4.3 Maintenance & Support

SKU	MAINTENANCE & SUPPORT
OCNOS-MS-1Y	1 Year Maintenance & Support with Upgrades – Includes Technical support resources, software updates & upgrades, email and phone support, access to Support web site including case management system. Access to technical support team 24 x 7 for Severity 1 issues, normal business hours for all other issues. "Upgrade" means a version change for the licensed software with substantial improvements, enhancements and bug fixes.
OCNOS-MS-3Y	3 Year Maintenance & Support with Upgrades – Includes Technical support resources, software updates & upgrades, email and phone support, access to Support web site including case management system. Access to technical support team 24 x 7 for Severity 1 issues, normal business hours for all other issues. "Upgrade" means a version change for the licensed software with substantial improvements, enhancements and bug fixes.
OCNOS-MS-5Y	5 Year Maintenance & Support with Upgrades – Includes Technical support resources, software updates & upgrades, email and phone support, access to Support web site including case management system. Access to technical support team 24 x 7 for Severity 1 issues, normal business hours for all other issues. "Upgrade" means a version change for the licensed software with substantial improvements, enhancements and bug fixes.
OCNOS-MS-1Y-Premium	1 Year Maintenance & Support with Upgrades – Includes Technical support resources, software updates & upgrades, email and phone support, access to Support web site including case management system. Access to technical support team 24 x 7 for all issues. "Upgrade" means a version change for the licensed software with substantial improvements, enhancements and bug fixes.
OCNOS-MS-3Y-Premium	3 Year Maintenance & Support with Upgrades – Includes Technical support resources, software updates & upgrades, email and phone support, access to Support web site including case management system. Access to technical support team 24 x 7 for all issues. "Upgrade" means a version change for the licensed software with substantial improvements, enhancements and bug fixes.
OCNOS-MS-5Y-Premium	3 Year Maintenance & Support with Upgrades – Includes Technical support resources, software updates & upgrades, email and phone support, access to Support web site including case management system. Access to technical support team 24 x 7 for all issues. "Upgrade" means a version change for the licensed software with substantial improvements, enhancements and bug fixes.

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5.0 Relevant Links

Additional information about the following documents is available on the IP Infusion website (https://www.ipinfusion.com/products/ocnos/#aggregation-router)

- Feature Matrix
- Hardware Compatibility List
- Supported Optical Transceivers & Cables
- NETCONF Support

For details and ordering contact ASBIS Experts vad@asbis.com

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