Product Highlights

RT-2508

- 50Gbps Encrypted/58Gbps Throughput
- 4 x 10GE SFP+
- 4 x 2.5G RJ45 with PoE++
- 8 x 1G RJ45 with PoE+
- 2 x NVME Expansion Slots

RT-2700

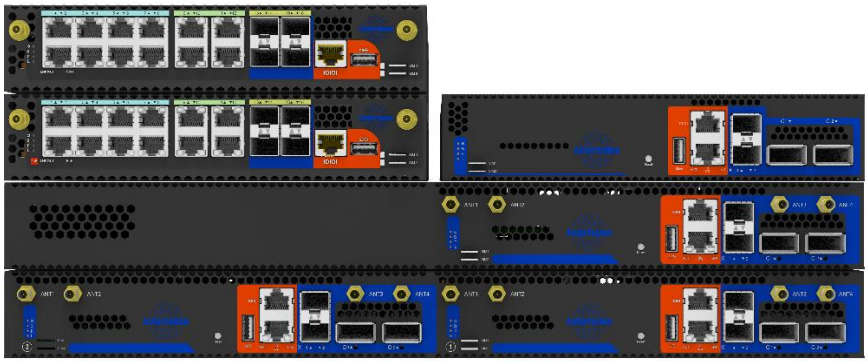
- 100Gbps Encrypted/100Gbps Throughput
- 2 x 100GE QSFP28
- 2 x 10GE SFP+
- 1 x NVME Expansion Slots

RT-3608/3616

- Up to 2 x 100Gbps Encrypted/ 2 x 100Gbps Throughput
- Up to 2 x [2 x 100GE QSFP28]
- Up to 2 x [2 x 10GE SFP+]
- Up to 2 x NVME Expansion Slots
- N + 1 Redundant PSU/Fan

Routing Highlights

- Layer 3 routing
- Multi-WAN routing
- IPsec/WireGuard VPN Hardware offload
- GeoSite/GeoIP ACL
- CGNAT
- PPPoE Server
- HQoS
- Netflow and IPFIX



Overview

The Asterfusion RT series is a routing platform designed for enterprise WAN edge and service provider broadband access deployments. Built on the Marvell OCTEON CN102/CN103 DPU, this platform runs AsterNOS-VPP operating system, featuring a SONiC-based control plane and DPDK-accelerated VPP forwarding plane for high-performance Layer 3 routing and network services.

RT series supports 1GbE, 2.5GbE, 10GbE, and 100GbE interfaces in a compact 1RU and energy efficient form factor, delivering up to 58/100 Gbps Layer 3 forwarding and up to 50/100 Gbps hardware-accelerated IPsec encryption/decryption, depending on the model.

For enterprise WAN edge deployments, RT series delivers high-resilience routing by combining IPv4/IPv6 and multi-WAN routing, with secure IPsec and WireGuard VPN. It simplifies complex multi-site networking through EVPN VxLAN and optimizes application steering via GeoSite/GeoIP-based policy routing.

For broadband access networks, RT series functions as BNG capabilities by supporting PPP subscriber termination, hierarchical QoS (HQoS), CGNAT, and subscriber management. It interacts with external RADIUS servers to enable centralized AAA, and policy control for broadband services.

The RT series platform is managed via Klish CLI while supporting multiple open programmable APIs—including REST API, gNMI and NETCONF to enable integration with automation frameworks.

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AsterNOS-VPP

AsterNOS is the common NOS across Asterfusion switching and routing platforms. AsterNOS-VPP is the router edition, combining SONiC's routing protocols and management framework with packet processing capabilities of VPP. It replaces the standard libsai.so with libsaivpp.so, translating SAI API calls into VPP operations and enabling VPP-based forwarding to provide Layer 3 routing, firewall, VPN, NAT, and other network services. For details of the latest AsterNOS-VPP version for routing platform, visit: https://asternos.com/community/space/asternos-vpp/home

Wire-speed Encryption with IPsec and MACsec

The RT series platform delivers secure connectivity by supporting both IPsec and WireGuard VPN. Powered by Marvell OCTEON 10 DPU's true inline crypto engine, the platform offloads encryption and decryption processes from the CPU to achieve wire-speed throughput. Supported security suites include AES-GCM-256, AES-CBC-256, AES-CTR-256, and HMAC-SHA2-512. Furthermore, the platform extends its cryptographic defense to the link layer by supporting MACsec, providing point-to-point Layer 2 encryption.

High-precision Time Synchronization (IEEE 1588 and SyncE)

The RT series platform provides full support for IEEE 1588v2 Precision Time Protocol (PTP) with sub-microsecond timing accuracy, enabling precise time synchronization for time-sensitive networking applications. The platform supports multiple industry-standard PTP profiles, including IEEE 1588v2, G.8275.1, G.8275.2, SMPTE 2059-2, and AES67. Flexible clock roles are supported, including Boundary Clock (BC), Ordinary Clock (OC).

Prometheus Exporter and Grafana Monitoring Solution

As a containerized operating system based on the Linux kernel, AsterNOS is well compatible with open-source operation, maintenance and management solutions. We provide AsterNOS Exporter, which runs as a container in the OS. It can collect the operating status of the platform in real time and send the collected metrics to the Prometheus server, and the standard Grafana dashboard will display it on the front end.

Asterfusion Optics and Cables

Asterfusion switching and routing platforms support a wide range of 10G, 25G, 100G, 200G, 400G and 800G ports.

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Feature List

Interface

- Port Speed
- PoE Interface
- Interface Statistics
- Jumbo Frame
- Digital Optical Monitoring
- LAN/WAN Interface
- Cellular Interface
- Wi-Fi Interface
- Virtual Interface

Layer 2 Features

- MAC
- VLAN
- QinQ
- LAG
- STP/MSTP
- LLDP
- MVRP
- Port Isolation

Layer 3 Features

- Static routing
- VRF
- Policy Based Routing
- BGP/MP-BGP
- OSPF v2/v3
- RIP v1/v2
- Routing policy
- ECMP/UCMP

IP Service

- ARP/NDP
- DHCP Server& Relay (IPv4/v6)
- DNS
- NAT
- CGNAT
- MAP-E/MAP-T

IP Multicast

- IPv4/v6 Multicast Routing
- IGMP Snooping & Querier
- PIM-SSM & ASM
- PIM over PHY/VLAN/LAG

MPLS

- Static LSP
- MPLS LDP
- VPWS
- VPLS
- L3VPN

Tunnel

- GRE
- Static/Dynamic VXLAN
- L2TPv3
- IPsec VPN
- Wireguard VPN
- PPPoE (Client & Server)

Security

- ACL for IPv4/v6
- Ingress/Egress ACL
- Stateless/Stateful ACL
- GeoIP/GeoSite ACL
- Storm Suppression
- 802.1x Authentication
- Portal Authentication
- DHCP v4/v6 Snooping
- ND Snooping
- ND policy
- Dynamic ARP Inspection (DAI)
- IPSG v4/v6
- Stateful Packet Inspection (SPI)
- uRPF

Quality of Service (QoS)

- 8 Queues per Port
- 802.1p Based Classification
- DSCP Based Classification
- Strict Priority/DWRR Queue Scheduling
- Policing/Shaping
- Rate Limiting
- HQoS (Subscriber/User/User-group, Service-Level)

High Availability

- MC-LAG
- VRRP v2/v3
- VRRP Sync Group
- BFD
- Monitor Link
- SLA
- Routing Track
- Hash

Monitoring & Management

- SPAN/ERSPAN
- SNMP v1/v2/v3
- Netflow/IPFIX
- Prometheus Exporter
- Console, SSH, Telnet
- RestAPI, uCentral
- Industry Standard CLI (Klish)
- ZTP
- FTP/TFTP
- Syslog

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Specifications

Product Model		RT2508-4S4M8	RT2700-2P2S
Network Interface	100GE (QSFP28)	-	2
	10GE (SFP+)	4	2
	2.5GE (RJ45)	4	-
	1GE (RJ45)	8	-
	PoE	2.5GE ports POE++, 1GE ports POE+	-
	Wi-Fi (Optional)	WiFi6E/7, M.2 E key	-
	5G/LTE (Optional)	2 SIM cards, M.2 B key	2 SIM cards, M.2 B key
Management Interface	USB	1 x USB3.0	1 x USB3.0
	Console	1 x Console RJ45	1 x Console RJ45
	MGMT	-	1 x MGMT GE RJ45
Processor	DPU model	1 x Marvell CN102 8-core ARM64 2.5GHz	1 x Marvell CN103 8-core ARM64 2.5GHz
	Cache capacity	L2 8MB, L3 16MB	
Memory & Storage	Memory	16GB DDR5, maximum 48GB	16GB DDR5, maximum 48GB
	eMMC	64GB eMMC 5.1	64GB eMMC 5.1
	SSD (Optional)	1 x M.2 NVME	1 x M.2 NVME
Network Performance	Switching capacity	58Gbps	220Gbps
	Routing capacity	50Gbps	100Gbps
	Enc/Dec capacity	50Gbps	100Gbps
Electrical Characteristics	Fan module	2	
	Power module	1	
	Input voltage	100~240VAC	

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	Maximum power consumption	60W (FULL configuration and workload)	85W (FULL configuration and workload)
Dimensions	Height	1U	
	Dimensions (W x H x D, mm)	220 x 44 x 310	220 x 44 x 310
Operating Conditions	Operating temperature	0 - 45 °C	
	Relative humidity	5% - 95%(non-condensing)	

Product Model		RT3608-2P2S	RT3616-4P4S
Network Interface	100GE (QSFP28)	2	2 x 2
	10GE (SFP+)	2	2 x 2
	5G/LTE (Optional)	2 SIM cards, M.2 B key	2x 2 SIM cards, M.2 B key
Management Interface	USB	1 x USB3.0	2 x USB3.0
	Console	1 x Console RJ45	2 x Console RJ45
	MGMT	1 x MGMT GE RJ45	2 x MGMT GE RJ45
Processor	DPU model	1 x Marvell CN103 8-core ARM64 2.5GHz	2 x Marvell CN103 8-core ARM64 2.5GHz
	Cache capacity	L2 8MB, L3 16MB	
Memory & Storage	Memory	16GB DDR5, maximum 48GB	2 x 16GB DDR5, maximum 2 x 48GB
	eMMC	64GB eMMC 5.1	64GB eMMC 5.1
	SSD (Optional)	1 x M.2 NVME	2 x M.2 NVME
Network Performance	Switching capacity	220Gbps	2 x 220Gbps
	Routing capacity	100Gbps	2 x 100Gbps
	Enc/Dec capacity	100Gbps	2 x 100Gbps
Electrical Characteristics	Fan module	1 + 1	2 + 1
	Power module	1 + 1	
	Input voltage	100~240VAC	

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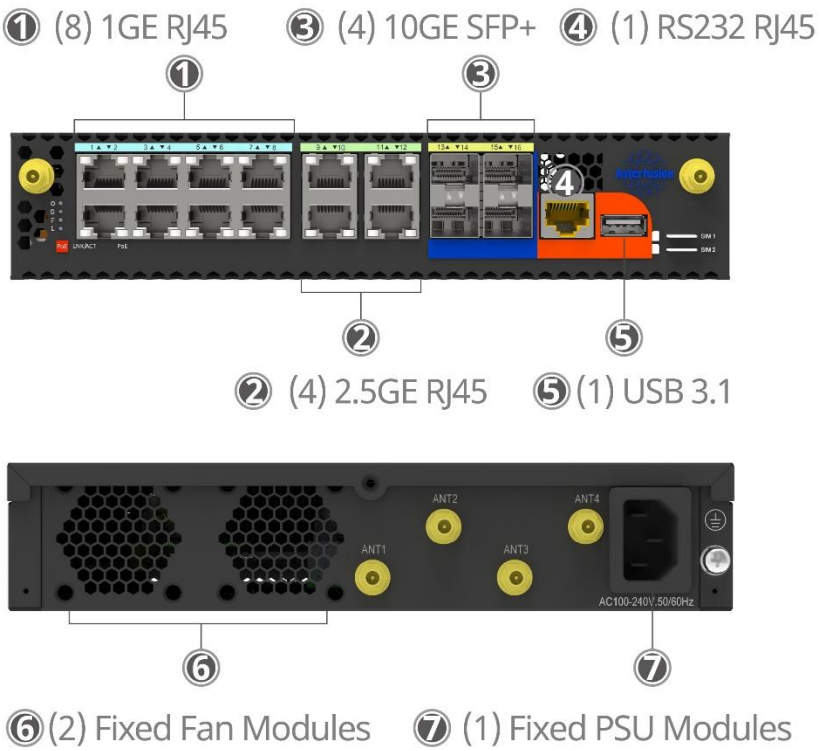
	Maximum power consumption	100W (FULL configuration and workload)	200W (FULL configuration and workload)
Dimensions	Height	1U	
	Dimensions (W x H x D, mm)	440 x 44 x 470	
Operating Conditions	Operating temperature	0 - 45 °C	
	Relative humidity	5% - 95%(non-condensing)	

System Scalability

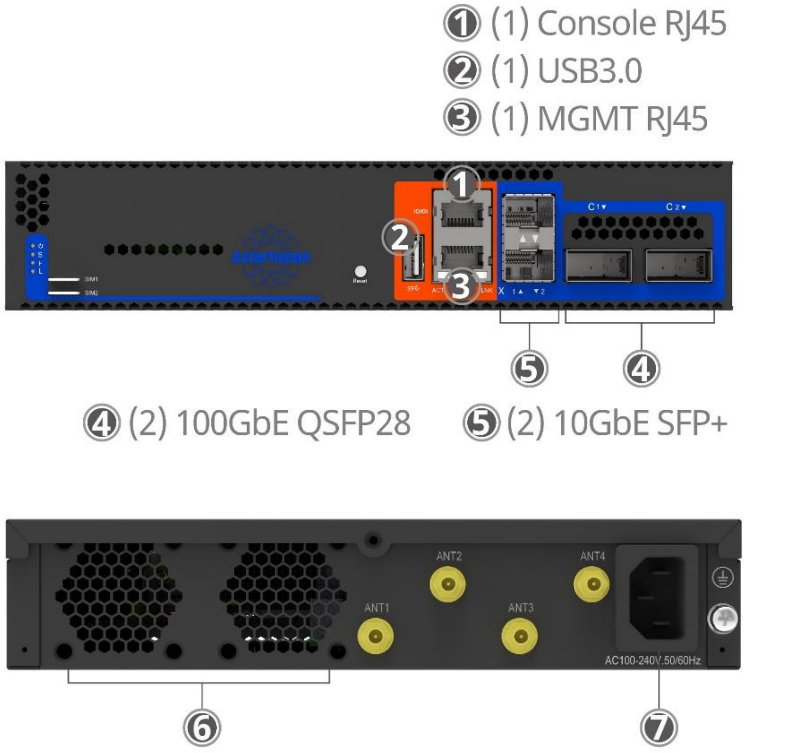
Router Model	**RT2508/2700/3608/3616 Series**	
Profile	**16GB Memory**	**32GB Memory**
MAC Addresses	256k	256k
IPv4 Neighbors	Static: 3k Dynamic: 128k	Static: 3k Dynamic: 256k
IPv6 Neighbors	Static: 3k Dynamic: 128k	Static: 3k Dynamic: 256k
IPv4 Host Routes	1200k	4000k
IPv4 Prefix Routes	1200k	4000k
IPv6 Host Routes	1000k	4000k
IPv6 Prefix Routes	1000k	4000k
Ingress User ACL Entries	2k tables / 1000k rules	2k tables / 1000k rules
Egress User ACL Entries	2k tables / 1000k rules	2k tables / 1000k rules
ECMP	256-way	256-way
IPsec	2k	2k
WireGuard	10k	10k

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Panel Illustration

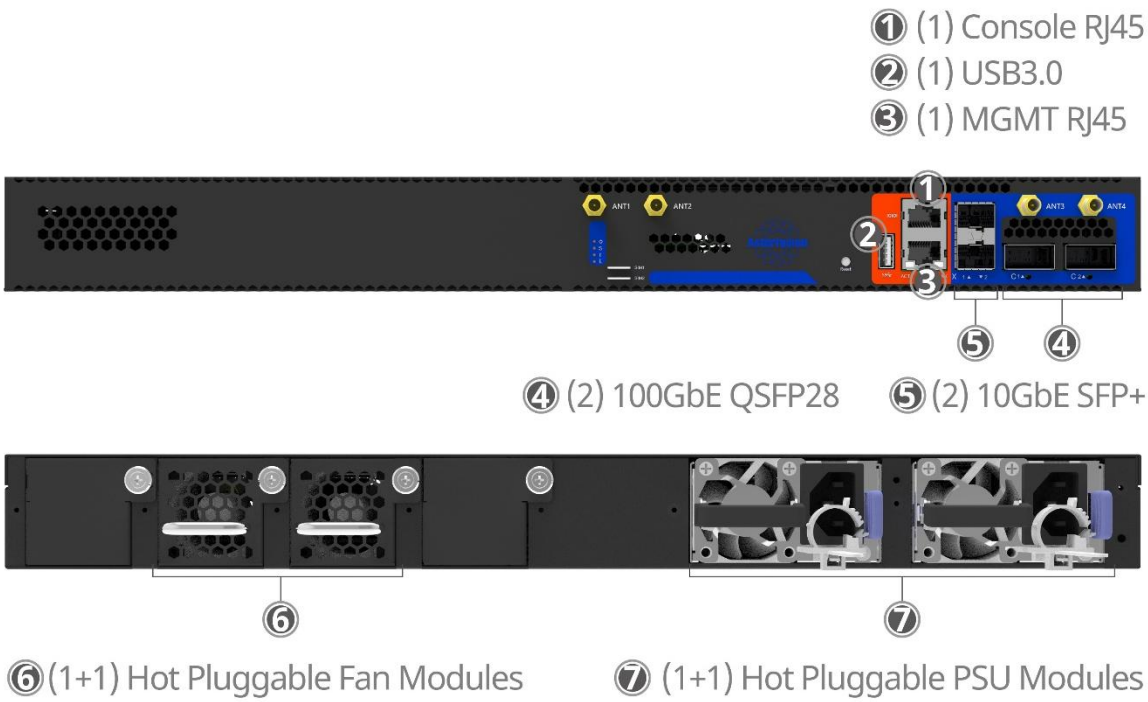


RT2508-4S4M8

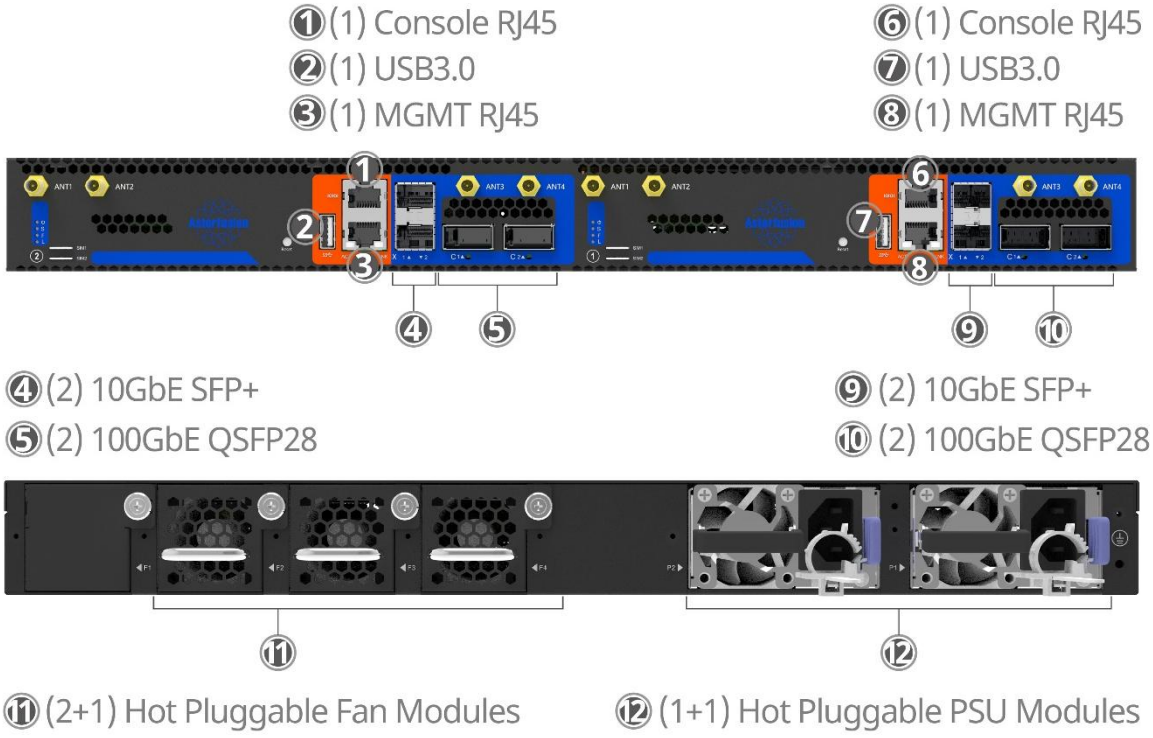


RT2700-2P2S

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RT3608-2P2S



RT3616-4P4S

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Ordering Information

Part Number	Description
RT2508-4S4M8	Enterprise routing system, 58Gbps throughput, 16GB DDR5, 64GB eMMC, 4 x 10GE + 4 x 2.5GE + 8 x 1GE, 150W Power
RT2508-4S4M8-SWP	Enterprise routing system, 58Gbps throughput, 16GB DDR5, 64GB eMMC, 4 x 10GE + 4 x 2.5GE + 8 x 1GE, 4 x PoE@150W on 2.5GE/1GE ports, 270W Power
RT2700-2P2S	Enterprise routing system, 100Gbps throughput, 16GB DDR5, 64GB eMMC, 2 x 100GE + 2 x 10GE, 100W Power
RT3608-2P2S	Enterprise routing system, 100Gbps throughput, 16GB DDR5, 64GB eMMC, 2 x 100GE + 2 x 10GE, 100W Power
RT3616-4P4S	Enterprise routing system, 2 x 100Gbps throughput, 2 x 8 x ARM64 N2 CPU, 2 x 16GB DDR5, 2 x 64GB eMMC, 2 x 2 x 100GE + 2 x 2 x 10GE, 200W Power

Optional Components	
SSD-M2-NVME-1TB	SSD,1TB, NVME, M.2 M Key 2280, PCIe3 x4
SSD-M2-NVME-2TB	SSD,2TB, NVME, M.2 M Key 2280, PCIe3 x4
SSD-M2-NVME-4TB	SSD,4TB, NVME, M.2 M Key 2280, PCIe3 x4
5G-M2-5Gbps	5G Module, PCIe 3x1, M.2 B key, 5G NR, LTE, GNSS, 5.0Gbps (DL) / 650Mbps (UL)
WiFi7-M2-9Gbps	WiFi6E/7 Module, PCIe 3x1, M.2 E key, Tri-Band 802.11be/ax, Bluetooth 5.3, 6-Stream 9.3Gbps
SVC-Basic-1Y-RT	Basic H/W Service and Warranty

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