

## Open Aggregation Router

### Unifying Cloud & Carrier Networks

UfiSpace provides end-to-end 5G networking solutions for telecommunication companies, cloud service providers and data centers. Our passion and dedication towards customer service and engineering excellence has brought UfiSpace to the forefront of 5G technology innovation. We make it our mission to provide our customers with technologically enhanced solutions boost the development of their 5G services.



Flexible Services



Optimized Performance



Ensure Quality of Service



Converged Access

# UfiSpace Open Aggregation Routers

With a new generation of services enabled by 5G, the complexity of the metro access and aggregation networks are escalated by new technologies, traffic types and timing requirements. As broadband and mobile service providers begin their transformation to a converged network, there will be a need for more flexibility and versatility within their network infrastructure.

UfiSpace's S9600 Series of Open Aggregation Routers enable service providers to deploy an open network using a multi-function white box platform. It helps rapidly scale existing services for a multitude of applications while lowering capital and operational costs. With the S9600 Series, service providers will be able to address the changing needs of the aggregation network as we transition from legacy technologies towards a next generation network.

## Add Value to Your Network



### Converged Access

Enable open fronthaul and mobile backhaul aggregation deployments with our open aggregation routers. The S9600 series supports timing protocols for legacy and next gen. such as IEEE 1588v2 (PTP), SyncE and Time Sensitive Networking (TSN).



### Flexible Applications

Deploy as a standalone or build up a spine and leaf network, the multi-functioning S9600 series enables applications such as edge BNG, aggregation BNG or provider edge. Powered by the Qumran2c silicon, the S9600 series offers a complete portfolio of high density 25G or 100G interfaces and up to 4.8Tbps switching capacity.



### Ensure Quality of Service

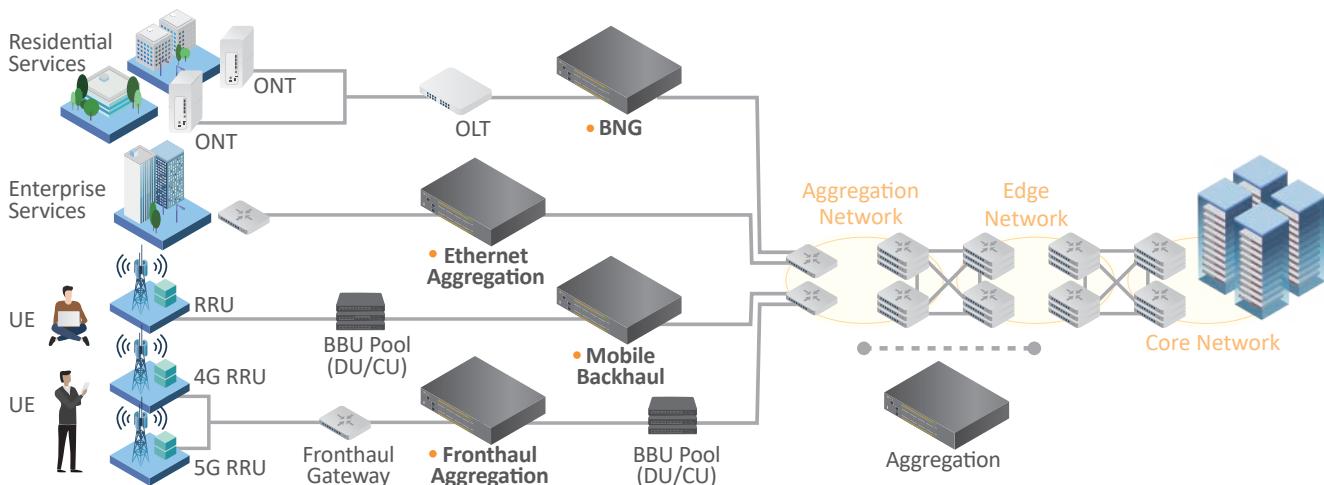
Boost service capacity with a large routing table size supporting 100K+ queues. Provide high quality services with faster statistical analysis and accounting supported by the S9600's large on-chip shared counter and meter engine pool.



### Optimized Performance

Maximize network utilization to meet the explosive demand for data. The low powered S9600 series is reconfigurable with a flexible packet processing engine to enable forwarding optimization and support new features. Even in a congested network, it prevents packet loss using its high performance HBM (High Bandwidth Memory).

## Mobile and Broadband Network Aggregation



### Fronthaul Aggregation

Specializing in 5G Time Sensitive Networking (TSN) applications, the S9600 Series complies to the IEEE 802.1CM and can act as an Edge Grand Master (GM) clock. Furthermore, it provides Class C timing accuracy using UfiSpace's in-house designed 5G timing module.

### Mobile Backhaul Aggregation

The S9600 Series enables mobile backhaul aggregation with support for IEEE802.11 and SyncE, in addition to multiple timing interfaces such as GNSS, ToD, 1PPS and 10MHz.

### Broadband Network Gateway (BNG)

Utilizing the Qumran2c silicon, the S9600 Series provides high capacity routing, better power efficiencies, and more buffering to enable fast sessions for a high rate of subscribers. The versatility and flexibility of the S9600 Series makes it ideal for meeting the requirements put forth by the Telecom Infra Project for their Open BNG scenarios.

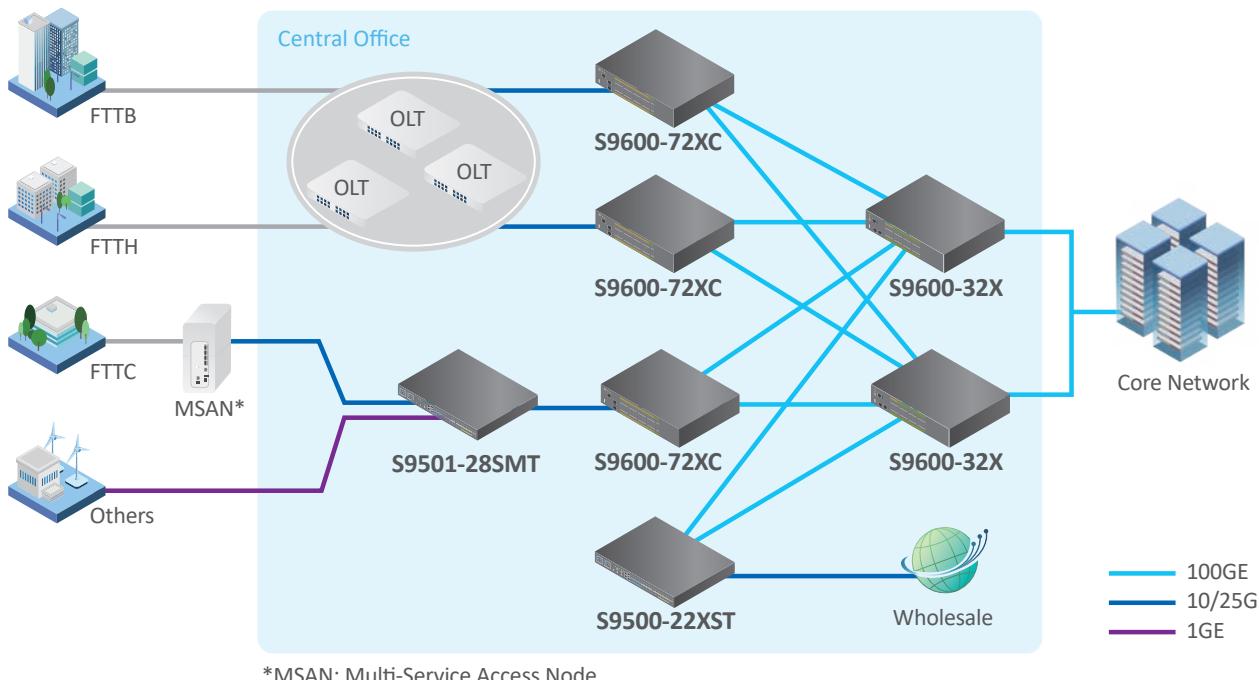
### Ethernet Aggregation

With multiple 10G/25G/100G service ports, the S9600 Series is capable of a multitude of ethernet aggregation for the residential and enterprise services.

## S9600 Series Use Case

# Part of a Next Generation Aggregation Network

In order to transform their infrastructure into a software-defined network, a tier-one service provider in Europe selected UfiSpace's disaggregated open routers as the pillars of their next generation aggregation network. Utilizing our S9600-32X and S9600-72XC in a spine and leaf architecture, their network is now capable of implementing new services at speeds and scalability never perceived before. Additionally UfiSpace's disaggregated cell site gateways were used as a part of the access aggregation as well. The service provider was able to achieve faster time to market with their services, optimize their network and unlock new opportunities for future expansions.



\*MSAN: Multi-Service Access Node

## Time to Market

Roll out new services faster than ever before with software defined networking capabilities and a disaggregated infrastructure.

## Unlocking Opportunities

Easily scale the aggregation network to accommodate future expansions and new services by using a spine-leaf architecture. Expand solution provider ecosystem by adopting an open network architecture.

## Network Optimization

Reduce operational and maintenance costs by adopting microservice features across a versatile hardware platform.



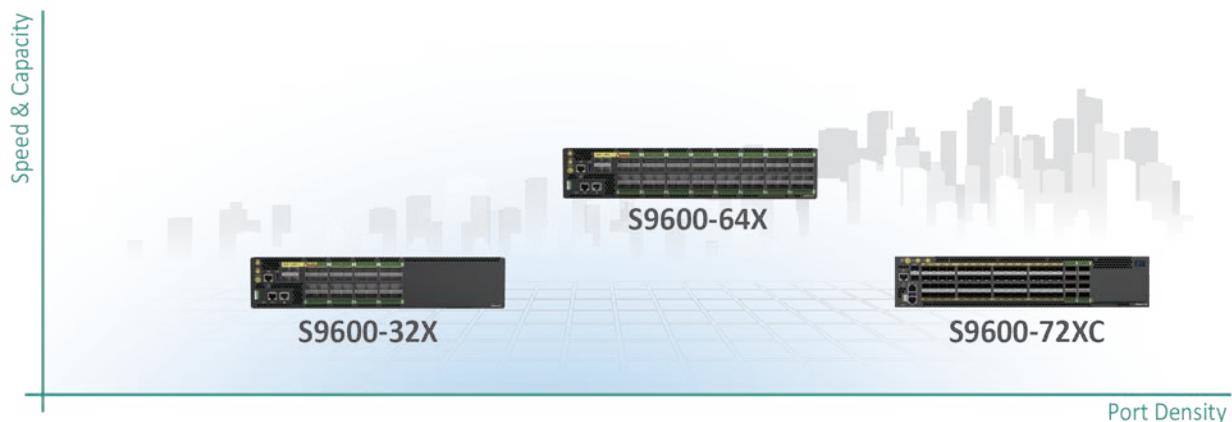
# More Open Network Solutions by UfiSpace

The benefits of open disaggregation can go far beyond the aggregation network. UfiSpace has been an integral part of the telecom industry's move towards open networking adoption starting from disaggregating the cell site gateway all the way to the IP/MPLS core. Now more than ever, you have the multiple entry points to deploy a 5G-ready network infrastructure while reducing

your total cost of ownership. Whether it's a disaggregated fronthaul gateway, open BNG, or a pay-as-you-grow core network using a distributed disaggregated chassis design, UfiSpace's strong focus on R&D incorporates technological innovations from the RAN to the Core.



# S9600 Series Selection Guide



## S9600 Series Specifications

Specs.\ Model	S9600-32X	S9600-64X	S9600-72XC
<b>ASIC</b>	BCM88820 (Qumran2c)	BCM88820 (Qumran2c)	BCM88820 (Qumran2c)
<b>Switching Capacity</b>	2.4Tbps	4.8Tbps	2.4Tbps
<b>TCAM</b>	x	x	Optional
<b>CPU Subsystem</b>			
<b>CPU</b>	Intel Skylake-D D-2145NT 8-Core, 1.9GHz	Intel Skylake-D D-2145NT 8-Core, 1.9GHz	Intel Skylake-D D-2145NT 8-Core, 1.9GHz
<b>RAM</b>	32GB	32GB	32GB
<b>Boot Flash</b>	2 x 32MB	2 x 32MB	2x 32MB
<b>SSD/eMMC</b>	128GB (SSD)	128GB (SSD)	128GB (SSD)
<b>Port Configuration</b>			
<b>100G QSFP28</b>	32	64	8
<b>25G SFP28</b>	4, shared with port 0	4, shared with port 0	64
<b>10G SFP+</b>	0	0	0
<b>TPM</b>	v	v	v
<b>BMC</b>	v	v	v
<b>Timing</b>			
<b>IEEE 1588</b>	T-GM	T-GM	T-GM
	T-BC	T-BC	T-BC
	T-TC	T-TC	T-TC
	T-TSC	T-TSC	T-TSC
<b>SyncE</b>	Yes	Yes	Yes
<b>1PPS</b>	input/output	input/output	input/output
<b>10MHz</b>	input/output	input/output	input/output
<b>GNSS</b>	input	input	input
<b>TOD</b>	Input	Input	input/output
<b>Power and Physical</b>			
<b>Typical Power Consumption</b>	218W	273W	229W
<b>Power Supply</b>	1+1, 1600W	1+1, 1600W	1+1, 1300W
<b>Fan Module</b>	3+1	3+1	3+1
<b>Dimension (W x D x H)</b>	436.0 x 762.0 x 87.7 mm 17.17 x 30 x 3.45 in.		436.0 x 609.6 x 87.7 mm 17.17 x 24 x 3.45 in.
<b>Weight</b>	18.9 kg (41.67 lbs.)		21.1 kg (46.5 lbs.)
<b>Temperature</b>	0°C to 45 °C (32°F to 113°F)		

