IP Wave for 5G Transport

ribbon

Optimised IP Optical Transport Solutions for Delivering Advanced 5G Services

Accelerating Network Transformation

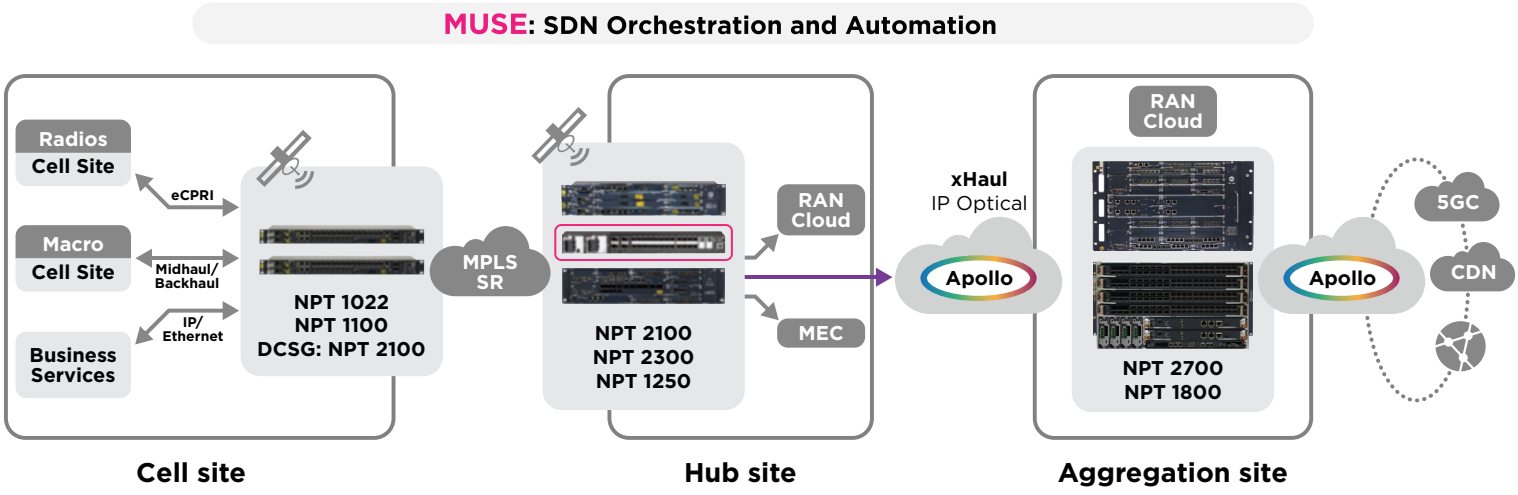
Harvesting the Value of 5G

5G is already being successfully rolled out across the world, providing consumers with increased network speeds. However, the aim of 5G was to provide far more than just a capacity uplift, it promised to move cellular from being a platform for delivering mobile broadband to being a ubiquitous service delivery platform able to support a vast array of services, each with its own service specific service delivery performance characteristics. A new 5G transport network is required to allow 5G to deliver this new service portfolio, moving from the simple mobile backhaul network of previous 2G, 3G and 4G mobile generations to the dynamic, deterministic network required for 5G xHaul.

Ribbon's IP Wave for 5G Transport, provides a fully automated, open IP Optical transport solution optimized to meet the 5G xHaul needs of both Mobile Network Operators (MNOs) and wholesalers providing the MNOs with transport solutions for their radio assets. The IP Wave for 5G transport solution is flexible enough to cost effectively support any service mix and agile enough to evolve as business and operational needs change.

With state-of-the art automation and orchestration, the IP Wave for 5G Transport solution is able to use the right IP Optical technology, features, capabilities and network design to cost effectively support any service type while guaranteeing service delivery parameters on a service-by-service basis. Advanced telemetry and analytics ensure the network is always cost-effectively meeting the service delivery guarantees.

Optimized IP Optical Transport | **Automated Operations** | **Secured Connectivity** | **Open Interoperability**



Your Challenges	IP Wave for 5G Transport
Optimized IP Optical Transport	Fully integrated IP Optical 5G xHaul solution programmable to meet the service performance parameters for each 5G service, on a service-by-service basis. Highly compact hardware with multiple form-factors, including a Disaggregated Cellsite Gateway (DCSG). Ribbon's IP Wave for 5G transport is optimized to meet the needs of mobile network operators and wholesalers offering MNOs 5G transport, providing key 5G features such as: • **5G specific interfaces** - 5G, 25G, and 100G interfaces. • **Advanced timing and synchronization** - with support for ITU-T Classes C and D Precision Timing Protocol (PTP) standards. • **Transport Network slicing** - Gives operators the flexibility to choose the right combination of hard and soft slicing technologies to guarantee that the transport network meets the policies and parameters defined for the delivery of each different service type: - FlexE and OTN technologies are used to provide hard slicing, required to guarantee low latency, high reliability, and full isolation between services. - Segment Routing, Enhanced VPN, FlexAlgo and Multi-instance routing protocols provide the service infrastructure for both hard and soft slicing. • **Evolution of brownfield networks** - Next generation 5G network provides converged support for 2G, 3G, 4G, and 5G mobile networks, as well as legacy fixed networks. • **Scalable and future proof** - Allows the transport network to evolve flexibly as the 5G radio network grows, while expanding and supporting new service types.
Automated Operations	Ribbon's IP Wave for 5G solution provides intuitive operations with the Muse™ SDN controller: • **Automation** - Provides the dynamic control of the IP Optical network to meet all the service delivery needs. • **Advanced Multilayer Optimization (MLO)** - Ensures the network is kept at an optimal level of utilization. • **Network telemetry** - Provides advanced assurance capabilities to ensure services are transported to meet the SLAs defined by their policies and parameters. • **Full lifecycle management** - To operate and maintain the IP Optical transport network and the slices configured across it in a simple way
Secured Connectivity	Ribbon's IP Wave for 5G solution provides functionality to maintain service integrity across the 5G xHaul network: • **Secured slices:** Allows operators to select the level of isolation between service types. • **Secured network:** Providing both data encryption and platform security required to meet the newly emerging security needs for 5G networks. • **Operational isolation:** Allows operators to give their customers the ability to manage their "own" slices and services, while guaranteeing complete operational isolation between each operator/enterprise.
Open Interoperability	Supporting open, modular architectures: • **Open ecosystem integration** - Standards-based, field-proven interfaces allow seamless interoperation in the wider 5G, OSS, and BSS ecosystems. • **Disaggregated hardware architectures** - Open, modular hardware allows the hardware capabilities to be disaggregated, as required. • **Cloud native software architectures and CI/CD** - Allow easy integration with other microservices and 3rd party software modules.

Contact Us Contact us to find out how to Transform your Network with IP Wave

About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical networking solutions to service providers, enterprises and critical infrastructure sectors globally. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge software-centric solutions, cloud-native offers, leading-edge security and analytics tools, along with IP and optical networking solutions for 5G. We maintain a keen focus on our commitments to Environmental, Social and Governance (ESG) matters, offering an annual Sustainability Report to our stakeholders. To learn more about Ribbon visit rbbn.com.