



Infinera Paves the Way to 5G with New Open Mobile Transport Solutions

Sunnyvale, Calif., – February 14, 2017, 8:00 a.m. EST – Infinera, a provider of [Intelligent Transport Networks](#), has expanded its Mobile Fronthaul and Mobile Backhaul Solutions to support mobile operators as their networks evolve to become 5G-ready. Infinera introduced a new range of flexponders for mobile fronthaul and a new EMXP Access Unit for mobile backhaul to extend the capabilities of XTM Series-based solutions, providing investment protection and meeting stringent performance requirements for mobile operators as networks scale to 5G.

5G mobile networks bring the promise of enabling the Internet of Things, high-speed mobile broadband, and ultra-reliable services – all of which are driving the need for dramatically higher capacity and significantly lower-latency mobile transport. As 5G radio access networks (RAN) are expected to be fully standardized and ready for deployment by 2020, mobile operators need fronthaul and backhaul solutions today in order to have wireline infrastructure in place to fully support 5G deployments.

The ability to evolve to future 5G requirements is a key factor in Infinera's Mobile Fronthaul and Backhaul Solutions announced today. As 5G standards evolve, multiple future fronthaul scenarios exist that could lead to network investment dead-ends if deployed fronthaul solutions are not able to adapt. There are a number of critical attributes of a solution that can support 4G today and evolve smoothly to 5G in the future:

- **Low latency and highly accurate synchronization.** Advanced 5G applications, such as autonomous vehicles, require extremely low latency and high-performance network synchronization in both fronthaul and backhaul networks.
- **Configuration Flexibility.** The solution must be reconfigurable in software to support anticipated fronthaul protocol changes and must include hardened and non-hardened platform options to support different deployment environments.
- **Openness.** The solution must be fully programmable via software-defined network (SDN) controllers and orchestrators, and able to support any 5G radio solution.

To address these challenges, Infinera has introduced fully open and flexible solutions to extend mobile transport evolution to 5G:

- **Infinera 5G-ready Mobile Fronthaul Solution.** Adding a new range of flexponders for mobile fronthaul provides mobile operators with deployment flexibility via rack-mounted unit, hardened access unit and hardened clamshell options. Mobile operators also benefit from functional flexibility in which all units are fully reconfigurable to operate as transponders, as muxponders, or in hybrid mode, a level of flexibility that Infinera believes is unique to the industry. The flexponders enable service flexibility with support for Common Public Radio Interface (CPRI) and Open Base Station Architecture Initiative (OBSAI) mobile fronthaul protocols and Ethernet in both 4G and 5G environments. The flexponder features are coupled with the high-performance capabilities required for mobile fronthaul, such as low latency, superior synchronization and new fronthaul-specific capabilities including real-time delay compensation that enables better support for RAN in fiber protection scenarios.



- **Infinera Packet-Optical Mobile Backhaul Solution.** Infinera's Mobile Backhaul Solution now includes a new EMXP Access Unit that extends Infinera's range of packet-optical transport switches to hardened environments such as street and cell site cabinets. The new unit supports a common software and feature set with the rest of the EMXP range, which includes Metro Ethernet Forum (MEF) services, low latency, superior Synchronous Ethernet and 1588v2 synchronization and sophisticated network resilience options.
- **Infinera Open Architecture.** Infinera's Mobile Fronthaul and Backhaul Solutions are designed to be fully open to support SDN control by any orchestrator and offer the ability to transport any radio vendor's equipment. For mobile backhaul, the full range of Infinera's EMXP units now also supports a direct Openflow interface, controlled by Infinera's Xceed Software Suite. This provides a multi-layer SDN control platform and SDN applications.

"Mobile operators are increasingly looking to deploy Cloud RAN commercially for LTE Advanced Pro and expect the technology to play a key role in 5G," says Gabriel Brown, Principal Analyst, Mobile Networks and 5G at Heavy Reading. "Among the challenges operators face are diverse implementation options and uncertainty about the functional split in the 5G RAN, making it critical that high-performance fronthaul transport solutions are sufficiently flexible that they can be upgraded, in software, to meet future requirements."

"The mobile industry is on the cusp of a step change to 5G. While the radio network needs to radically transform to the new 5G infrastructure and services, the underlying transport network requires a seamless evolution that protects operator investments now," said Sten Nordell, CTO Metro Business Group at Infinera. "One key aspect to this is the ability to support future 5G mid-haul and cross-haul architectures in a truly open transport environment without lock-in to the radio vendor. We are already working with key players in the industry to allow pre-5G networks to be tested against high-performance transport networks and will demonstrate this at Mobile World Congress."

The hardened clamshell and EMXP Access Unit are scheduled for availability in the second quarter of this year; the rest of the products and features listed above are shipping and available today.

Additional Resources

- White paper: [The Evolution of Mobile Fronthaul to Support RAN Architecture Migration to 5G](#)
- Application Note: [Enabling Cloud-RAN with Mobile Fronthaul](#)
- Application Note: [Evolving Mobile Backhaul to Support LTE-A and Beyond](#)





Contacts:

<i>Media:</i> Anna Vue Tel. +1 (916) 595-8157 avue@infinera.com	<i>Investors:</i> Jeff Hustis Tel: + 1 (408) 213-7150 jhustis@infinera.com
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About Infinera

Infinera (NASDAQ: INFN) provides Intelligent Transport Networks, enabling carriers, cloud operators, governments and enterprises to scale network bandwidth, accelerate service innovation and automate optical network operations. Infinera's end-to-end packet-optical portfolio is designed for long-haul, subsea, data center interconnect and metro applications. Infinera's unique large scale photonic integrated circuits enable innovative optical networking solutions for the most demanding networks. To learn more about Infinera visit www.infinera.com, follow us on Twitter @Infinera and read our latest blog posts at www.infinera.com/blog.

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