



NEWS RELEASE

ADTRAN Mobilizes Software Defined Access

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Open and agile “x”haul solutions to drive availability, flexibility and choice in 5G services

BARCELONA, Spain--(BUSINESS WIRE)--Mar. 1, 2017-- **ADTRAN®**, Inc. (NASDAQ: ADTN), a leading provider of next-generation open networking solutions, today announced its ongoing commitment to ensuring that access networks are open, programmable and affordable as carriers look to lay the foundations for 5G.

5G promises network connectivity 10 to 100 times faster than 4G networks, with latency of less than 1msec, making real-time applications such as mixed reality and autonomous vehicles enabled by this 5th generation of mobile networks. To fully leverage the potential of 5G, several industry shifts must occur. First, service providers will need to deploy a large number of radios closer to the edge of the network to provide the performance levels necessary to seamlessly deliver bandwidth-intensive applications like mobile video and virtual or augmented reality. Second, the industry must also align on the need for more transport-friendly Ethernet backhaul. Third, the industry must extend the SDN/NFV initiatives to the 5G mobile network core across the access network in the form of software defined access (SD-Access). SD-Access for 5G incorporates point-to-point (P2P) and point-to-multipoint (P2MP) next-generation PON and will take a leading role in building the converged backhaul, fronthaul and crosshaul networks that will support high-bandwidth and low-latency connectivity.

ADTRAN has taken a leading role in aligning with this industry shift by being the first vendor to develop XGS-PON, 10G EPON and NGPON2 SD-Access solutions based on open reference architecture like CORD that will shape the future of how mobile and fixed access networks will be built. ADTRAN is focused on extending its leadership specifically into mobile access networks, embracing:



- Multi-wavelength NG-PON2 as the infrastructure technology of choice to deliver low latency multi-Gigabit services for fronthaul, backhaul and crosshaul 5G networks
- The industry's first, most open and scalable SD-Access architecture - ADTRAN Mosaic™ - with its disaggregated physical network access elements and open source SDN controller
- Fixed Access Network Sharing (FANS) capability, supporting access sharing between multiple operators

ADTRAN is well established as a leading innovator in NG-PON2 and Ethernet-based access and transport solutions and is pioneering SD-Access open, programmable and scalable CORD architectures. The company is driving this innovation and architecture as the underlying infrastructure to fully support and accelerate 5G mobile networks.

"As network operators prepare for the implementation of 5G, it's essential they can plan for, and rely on, the coming of age of open mobile access networks," said Erik Keith, principal analyst, Global Telecom Technology and Software at GlobalData. "In a 5G world, the industry simply cannot afford to remain shackled to the default, siloed, proprietary approaches of old."

As we drive toward open networks, we believe that FANS allows competing service providers to operate independently and securely on a shared, open access network. In previous generations of networks, operators have been forced to build competing access infrastructures because wholesale mechanisms such as VULA (Virtual Unbundled Local Access) have proved insufficient for their requirements. In the case of 5G networks, the adoption of FANS can serve to cost-reduce and accelerate deployment while simultaneously address the autonomy and privacy required by those operators using wholesale access to the network.

"5G densification is a watershed moment for network operators. They now have the opportunity to embrace a more open, programmable, scalable access network in order to achieve the network growth, performance and diversity demanded by end users and regulators alike," commented Ronan Kelly, CTO EMEA and APAC for ADTRAN. "In that context an SD-Access architecture provides the ideal foundation for scalable, sharable mobile access and x-haul, driving availability, flexibility and choice in 5G services, and is a pressing use case for next-generation fixed broadband technologies such as multi-wavelength NG-PON2."

ADTRAN's SD-Access solution flexibly combines NG-PON2, XGS-PON and 10G EPON – keystone next-generation access technologies - allowing network operators to cost-effectively support mobile, enterprise and residential use cases with a single, universal platform.

About ADTRAN

ADTRAN, Inc. is a leading global provider of networking and communications equipment. ADTRAN's products enable voice, data, video and Internet communications across a variety of network infrastructures. ADTRAN solutions are

currently in use by service providers, private enterprises, government organizations, and millions of individual users worldwide. For more information, please visit www.adtran.com.

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Source: ADTRAN, Inc.

Witz Communications for ADTRAN

Ashley Baster Schulte, 919-435-9112

ashley@witzcommunications.com

or

Cohesive for ADTRAN

Jon Bawden, +44 1291 637644

jonb@wearecohesive.com