



NEWS RELEASE

Adtran launches industry's first auto-tunable 50G C-band plug for 5G fronthaul

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News summary:

- 5G expansion and AI-driven edge applications are fueling demand for higher-capacity, cost-effective fronthaul solutions for mobile networks
- Adtran's AccessWave50™ is the first full C-band tunable SFP56 PAM4 transceiver for 50G transport, cutting power consumption below 3W
- Live demo at OFC 2025 will showcase seamless 50G integration with zero-touch provisioning and 15km transmission over SMF28 fiber

HUNTSVILLE, Ala.--(BUSINESS WIRE)-- Adtran today launched the industry's first full C-band tunable 50Gbit/s SFP56 DWDM PAM4 pluggable transceiver. The [AccessWave50™](#) is specifically designed to help mobile network operators expand 5G fronthaul capacity while reducing operational costs and energy consumption. By replacing two 25Gbit/s transceivers with a single 50Gbit/s unit, it enhances network efficiency, lowers power dissipation to less than 3W and simplifies deployment. The transceiver supports zero-touch provisioning, auto-tuning and smart tunable technology, ensuring plug-and-play efficiency without requiring manual wavelength configuration. At OFC 2025, Adtran will showcase the AccessWave50™ in a live demo, highlighting how it addresses growing bandwidth needs at the mobile network edge.

Adtran's AccessWave50™ will support mobile network operators as they expand 5G fronthaul capacity.

"5G networks must keep pace with rising data demands from AI applications, IoT expansion

and growing network densification. Meeting these challenges requires a new generation of more efficient, scalable and cost-effective fronthaul solutions," said Christoph Glingener, CTO of Adtran. "AccessWave50™ advances the proven capabilities of our AccessWave25™, doubling capacity while maintaining ultra-low power consumption. It simplifies the move to 50Gbit/s for mobile network operators by cutting hardware costs and optimizing fiber utilization. At OFC, we'll showcase how AccessWave50™ enables operators to scale their infrastructure efficiently and cost-effectively in response to soaring data demands."

AccessWave50™ features Adtran's patented distance optimization and signal shaping technology, ensuring robust performance over 15km on SMF28 fiber. Its full C-band tunability and smart tunable technology enable easy integration with existing mobile network operator (MNO) software platforms. In line with MOPA recommendations, it supports automatic wavelength selection, simplifying network operations while improving deployment efficiency. AccessWave50™ also incorporates G.metro technology, providing added flexibility for

operators looking to maximize spectral efficiency. Fully compliant with I-temp requirements for outside plant applications, it delivers reliable operation in harsh environmental conditions – a key requirement for 5G fronthaul deployments. With 50Gbit/s Ethernet and 50Gbit/s eCPRI transmission protocol compliance, the module supports 5G fronthaul while minimizing infrastructure costs. What’s more, its ultra-low power dissipation of under 3W makes AccessWave50™ a sustainable solution for MNOs seeking scalable, cost-effective upgrades.

“As mobile operators transition to 50Gbit/s transport, they need solutions that streamline deployments and maximize efficiency,” commented Ross Saunders, GM of optical engines at Adtran. “AccessWave50™ transforms fronthaul with unmatched scalability and significant power savings. Unlike fixed-wavelength solutions, its full C-band tunability reduces inventory complexity, simplifying operations and boosting spectral efficiency. Leveraging Adtran’s patented distance optimization and signal-shaping technology, it enhances network performance while minimizing power consumption. With industry-leading low-power dissipation and compliance with key 5G fronthaul protocols, AccessWave50™ offers a clear route to higher-capacity mobile transport.”

About Adtran

ADTRAN Holdings, Inc. (NASDAQ: ADTN and FSE: QH9) is the parent company of Adtran, Inc., a leading global provider of open, disaggregated networking and communications solutions that enable voice, data, video and internet communications across any network infrastructure. From the cloud edge to the subscriber edge, Adtran empowers communications service providers around the world to manage and scale services that connect people, places and things. Adtran solutions are used by service providers, private enterprises, government organizations and millions of individual users worldwide. ADTRAN Holdings, Inc. is also the majority shareholder of Adtran Networks SE, formerly ADVA Optical Networking SE. Find more at [Adtran](#), [LinkedIn](#) and [X](#).

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