



NEWSLETTER

# VIAVI Wireless Express

Expert Insights to Optimize Your Network

## What the 6G is going on?

### Back from MWC Barcelona with Groundbreaking News: 6G is Moving from Concept to Reality.

MWC 2025 offered another glimpse into the future, and while many showcased conceptual roadmaps, VIAVI was already driving real-world 6G breakthroughs. We didn't just highlight key insights and ideas; we brought the 6G vision to life.

### The State of 6G

AI-driven networks, digital twins, and ultra-efficient processing have moved beyond theoretical discussions into practical implementation. Governments, telecom leaders, and research alliances are tackling infrastructure and spectrum challenges, with the first standards expected by 2029.

At [MWC](#), we showed breakthrough demonstrations:

- [AI/ML-Optimized Higher-Order Modulations](#) – Our exclusive demo with Samsung and NVIDIA through the AI-RAN Alliance showcased unique performance gains that set a new benchmark in the industry.
- [Goal-Oriented Semantic Communications for XR](#) – VIAVI, King's College London, and Nokia Bell Labs delivered the first-ever practical application of semantic communications for extended reality.
- [AI/ML-Based Beam Management for FR3 cmWave](#) – Our joint development with A\*STAR I2R demonstrated unprecedented efficiency in spectrum utilization.
- [Network Digital Twin Testing](#) – Our breakthrough work with Qualcomm showing how real-time digital twin can provide accurate measurements to enhance perception performance for beam selection.
- [Real-Time Raytracing for ISAC Testing](#) – Testing Integrated Sensing and Communication Algorithms at the Base Station, using VIAVI's ray tracing technology..

This isn't just research anymore. While others discuss the future, VIAVI is already bringing it to life.

**See how in our new 6G Forward video!**



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## Top Stories



## Research

A new ETSI working group, [ETSI ISG MAT](#) was launched with Stephen Wang (VIAVI) elected co-vice chair alongside Prof. Bruno Clerckx (Imperial College London), chaired by Dr. David Vargas (BBC).

The group focuses on downlink multiple access techniques for the 3GPP radio interface, shaping 6G standardization.

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## Innovation

VIAVI Marconi Labs® advances telecommunications through cutting-edge research, collaboration, and knowledge sharing.

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## Standardization

At the 3GPP 6G Workshop in Incheon, South Korea, VIAVI presented views on technologies to be considered for the Release 20 6G study track.

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## Integration

VIAVI Validates Nokia Massive MIMO Radio in Upper 6 GHz Band for 5G-Advanced & 6G. Using existing test and verification solutions and integrating new technology.

- [TM500 Network Tester](#), the flagship platform used globally by network equipment manufacturers for early functional, system integration, capacity, performance, and regression testing of base stations.

- [OneAdvisor 800](#) spectrum and signal analyzer, to verify signals transmitted in the downlink for conformance testing, and analysis of the 5G channels, including RF characterization, beamforming, timing and, synchronization over the air and overall radio base station transmission performance.

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## Collaboration

- **At the NVIDIA GTC Conference**, VIAVI announced it is expanding its TeraVM AI RAN Scenario Generator ([AI RSG](#)) product by integrating it with the [NVIDIA Aerial Omniverse Digital Twin](#) (AODT). The integration enables realistic and detailed radio access network (RAN) simulations, supporting network equipment manufacturers to leverage network data and AI/ML to optimize network operations.

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- **6G SNS** - VIAVI is involved in two projects:

- o [6G-TWIN](#), which explores the digital twin lifecycle and its intersection with testing
- o [6G-DALI](#), which defines and builds data platforms for 6G research and testing, integrating MLOps, DataOps, digital twins, and data spaces. VIAVI is part of the project combining physical testbeds and digital twins, providing a powerful research platform to advanced 6G technologies.

- **Paul Harris at VIAVI Solutions** has been elected as Vice Chair of 6G SNS trials group.

## Want some extra 6G reading?

- White Paper: [6G Development through Collaboration, Research, and Dynamic, Adaptive Testing](#)

- Brochure: [Academic Research - Accelerate Advanced 5G and 6G Research and Development Projects](#)

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