Design, Test, Optimize and Operate Non-Terrestrial Networks

ONE NTN PORTFOLIO, FROM LAB TO LAUNCH

Ensure seamless, reliable, and high-performance NTN connectivity with VIAVI's comprehensive solutions — designed to assess, validate, and optimize every stage, from lab to deployment.
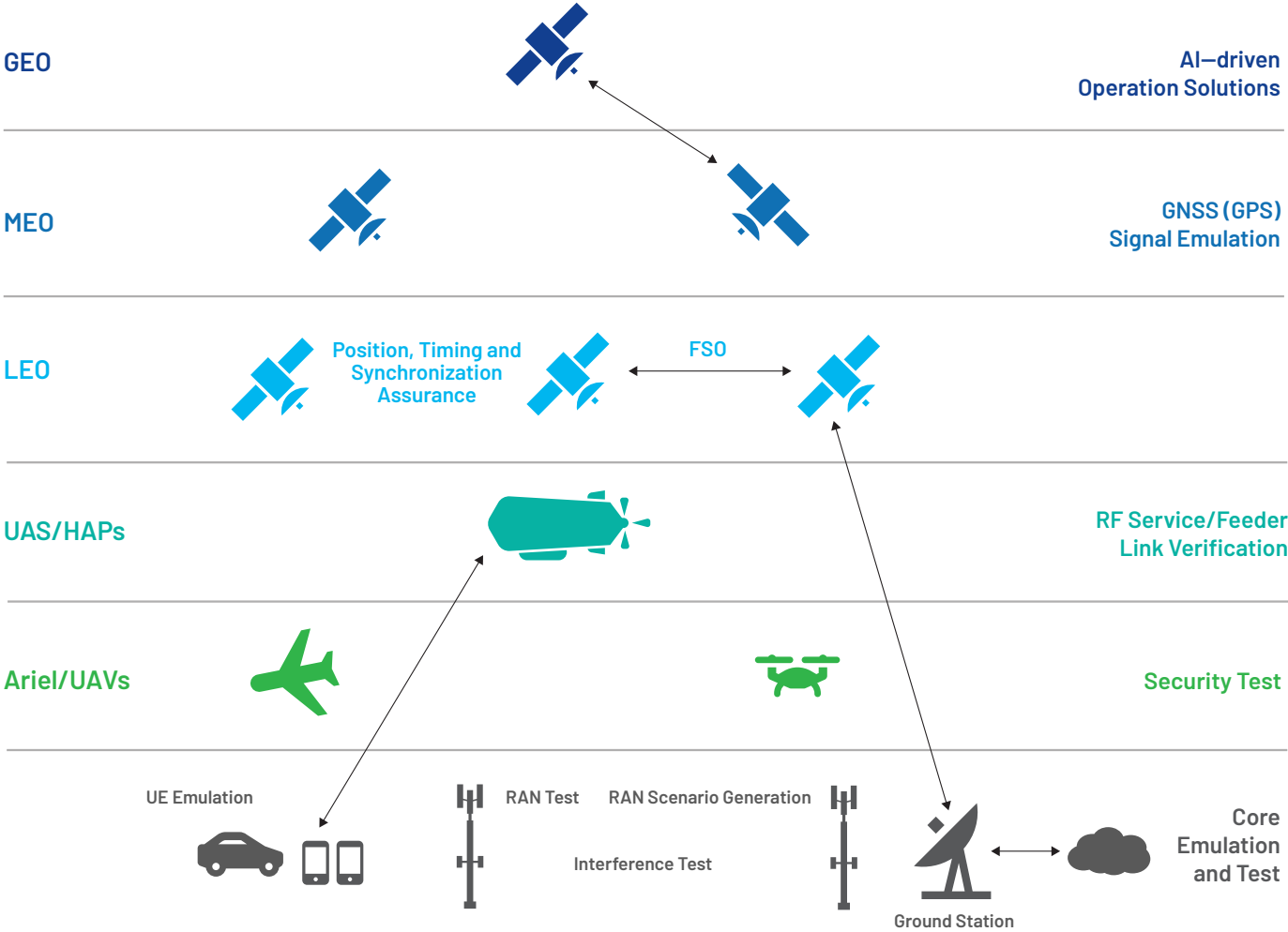
Why VIAVI

VIAVI delivers end-to-end NTN solutions that power secure, precise, and resilient non-terrestrial networks (NTNs). When GPS timing and synchronization fall short, our technology ensures accuracy and reliability. We replicate live satellite conditions in the lab for thorough testing, reducing risk and cost before launch. With advanced security, automation, and performance optimization, VIAVI helps you deploy NTNs with confidence.

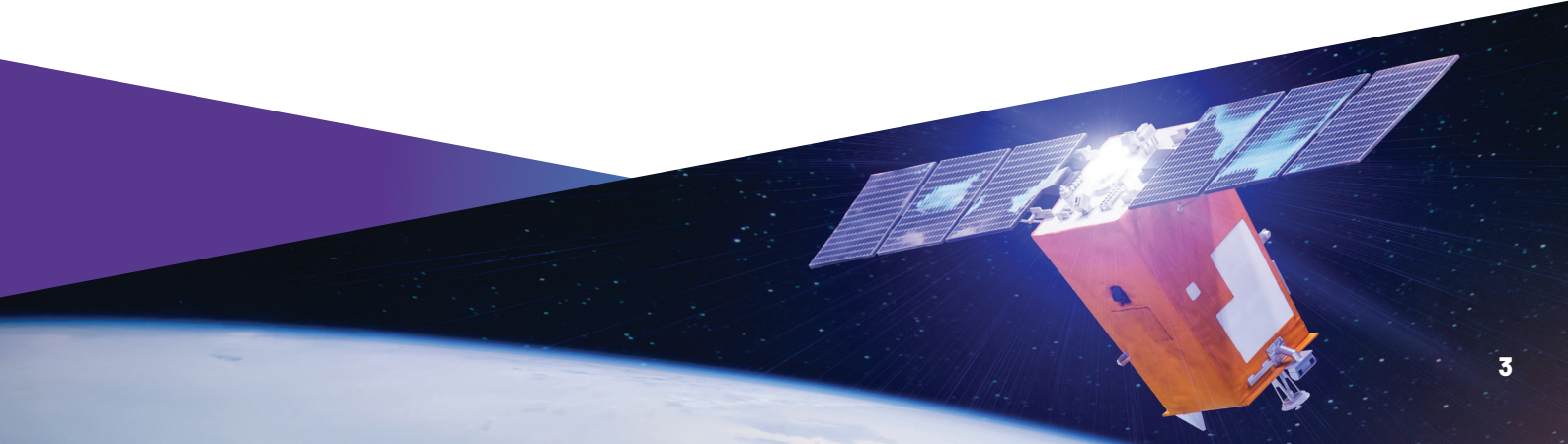| Category	Key Features
Test, Train and Optimize	• Comprehensive testing for RAN, satellite, and core networks • End-to-end network performance evaluation • Realistic lab scenarios: RAN scenario generation, UE emulation, core emulation, automation, orchestration, and security testing • Field testing: PIM detection, over-the-air sync and timing, interference analysis
Positioning, Timing and Navigation	• Precise and resilient timing sources • GPS signal quality assessment • System clock synchronization
3D Positional Simulation	• GPS/Galileo-enabled device performance testing • Accurate location data sent to the lab for validation
Free Space Optics	• High-performance filters for secure, wireless optical data transmission via free-space light propagation
Security	• Post-quantum security testing solutions: validation of NIST approved, PQC algorithms to protect against "harvest now, decrypt later" security threats • Compliance with O-RAN and 3GPP security standards • Cyber threat testing for security devices without performance impact
Network Operation	• Cloud-native inventory management • AI/ML-driven service assurance • Customer and service analytics • End-to-end network automation solutions

Our complete portfolio covers all critical areas for designing, testing, optimizing and operating non-terrestrial networks.

Solutions to Design, Test, Optimize and Operate NTN Networks

GEO		**AI—driven Operation Solutions**
MEO		**GNSS (GPS) Signal Emulation**
LEO	Position, Timing and Synchronization Assurance — FSO	**RF Service/Feeder Link Verification**
UAS/HAPs		
Ariel/UAVs		**Security Test**

UE Emulation

RAN Test   RAN Scenario Generation

Interference Test

Ground Station

Core Emulation and Test

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