

NITRO Wireless

Capability Leadership (3GPP, O-RAN, etc.)

A TM500 Network Tester Application

Network Equipment Vendor Challenge

Engineering departments need to maximize returns on CAPEX by utilizing test equipment to support multiple projects and teams. And with evolving 3GPP standards and new features, customers want to ensure that the same test equipment evolves in parallel to prolong useful life.

The VIAVI Solution

In use with all leading base station vendors, the TM500 Family is the de facto standard for eNB/gNB development. VIAVI development team delivers scalable software and functionality that addresses multiple advanced 3GPP technologies for 4G, 5G, Open RAN, IoT, Non-Terrestrial Networks (NTN) and Private 5G. TM500's scalability also means that whether customers need low or high capacity it can be relied on for use across multiple projects and teams for functionality and performance testing.

Existing TM500 customers can purchase software upgrades to cover the latest 3GPP capabilities extending the useability of their TM500 investments.

Business Impact

Upgrading existing test systems provides an improved return on existing test investments and a lower cost path to allow engineering teams to meet evolving customer deliverables. It also enables moving into new business verticals such as NTN.



Key 3GPP Features

Key Rel-16 Features:

Improved UE Coverage – TK5150: Provides improvements in the uplink with a new modulation scheme to allow UEs to be located further from the cell.

Mobility Improvements for URLLC: TK5122 – Handover where the source cell is only released when access to a target cell has been established. This mitigates discontinuity of service.

Improved Power Savings – TK5149: Reduces the need for a UE to periodically wake up to monitor downlink control channels, helping to extend battery life.

Latency Improvements – TK5160: Improved random access to a cell with a 2-step process in favor of 4. This is useful for low latency applications.

Key Rel-17 Features:

Non-Terrestrial Networks – TK5168: Enable higher data rates compared to LTE.

Low Complexity UEs, e.g. RedCap: TK5171, TK5185, TK5186: Type of UEs important for IoT type devices, e.g., wearables, industrial automation and video surveillance.

VIAVI Benefits

- ✓ **Meet Demanding Customer Deliverables:** High VIAVI engineering investment ensures that new functionality is delivered when customers need it, enabling them to commit to demanding time schedules from their customers.
- ✓ **Common Software Base:** Leverage existing staff knowledge and scripts to minimize training and accelerate project ramp up as well as eliminate risk of uncorrelated test results between different teams.



Get started with VIAVI TM500 Family Test Solutions

Visit: viavisolutions.com/products/tm500-network-tester



Contact Us **+1 844 GO VIAVI**
(+1 844 468 4284)

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visit viavisolutions.com/contact

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