

5G Device Function Tests

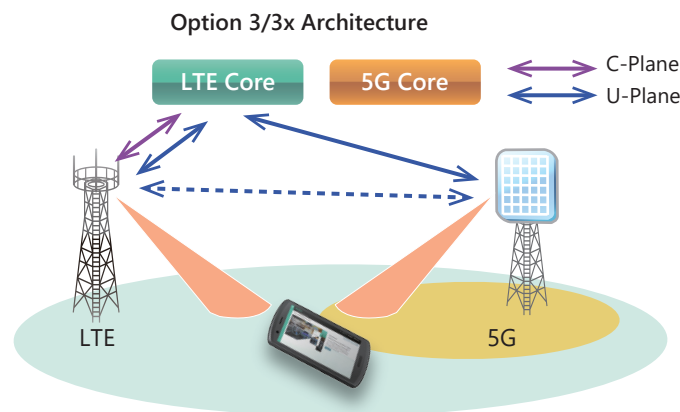
SmartStudio NR	MX800070A
Radio Communication Test Station	MT8000A
Signalling Tester	MD8475B

World-First 5G Device Function Tests using State Machine GUI

Japan is deploying the first 5G mobile services in early 2020 following the start in S. Korea and N. America in April 2019; full commercial service in Japan's metropolitan districts and prefectures is expected by spring 2021. As a result, development of 5G devices are growing rapidly not only for smartphones but also for game consoles, medical applications, augmented and virtual reality (AR/VR) equipment, self-driving vehicles, and other industrial fields.

Evaluation methods of 5G networks using new communications technologies, such as novel frequency bands, bandwidths, bit rates, MIMO, beamforming, etc., are much more difficult than previously. It starts with investigation of 3GPP standards, formulation of test specifications, development and maintenance of a test environment, field testing, etc., to establish a robust, efficient, and scalable test environment for troubleshooting future issues.

SmartStudio NR MX800070A is a GUI-based state machine for simulating 5G/LTE base stations and core networks. In addition to test-scenario development, this comprehensive test environment supports highly reproducible communications conditions between 5G networks and user equipment (UE) as well as presumed functions, application operations, and software regression testing.

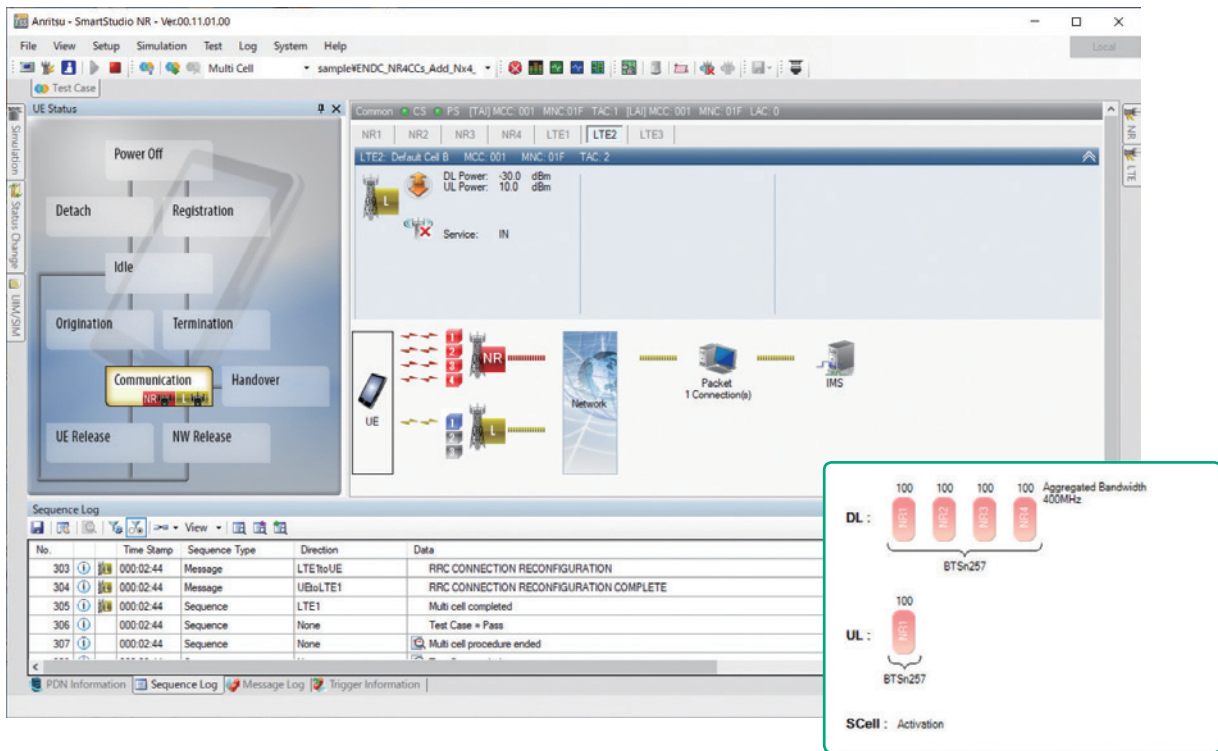


5G Device Function Test Examples

- Network Interconnectivity and Carrier Aggregation Tests
- Power Consumption and Temperature Tests
- IP Throughput Performance Tests
- IMS Tests
- Application Tests via Internet to Actual and Test Servers

New Family, SmartStudio NR

In addition to covering 2G, 3G, and 4G testing using existing SmartStudio, new SmartStudio NR MX800070A extends test support to 5G. Combining the SmartStudio Family with Anritsu's Radio Communication Test Station MT8000A and Signalling Tester MD8475B supports simulation of every wireless access technology in service and development worldwide.



NR Band for EN-DC

SmartStudio NR Functions

- Sub-6 GHz (FR1) RF cable and Over The Air (OTA) connections
- mmWave (FR2) OTA connection in combination with original-design, compact shield box
- GUI-based cell parameter setting and protocol monitoring (PHY/MAC/RLC/PDCP/L3)
- Built-in SMS, PWS Center, and IMS Server
- Quasi-normal/abnormal status simulation using Network Trigger

Shield Box
MA8161A



Radio Communication Test Station
MT8000A



Signalling Tester
MD8475B

