



Spirent **8100™ 5G Mobile Device Test System**

Automated 5G UE Testing for Location, Video and Voice

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5G brings unprecedented challenges to UE testing, as devices are being called upon to deliver new levels of performance in location accuracy, low latency, and high data rates.

New use cases abound, with smartphones now playing a central role as video consumption devices, and with new verticals using 5G for telemedicine, factory automation, and smart cities.

The Next Gen of Device Test

The 8100 5G Mobile Device Test System combines Spirent's industry-leading automation and ease of use, 4G LTE, A-GNSS and indoor location technologies with 5G network emulation to support 5G-NR in Non Standalone and Standalone configurations. The system leverages state-of-the-art software defined radio technology to evolve as 5G evolves, to serve in mmWave and Sub 6GHz to realize Massive MIMO and beam management scenarios.


Fast, comprehensive performance testing of mobile smartphone and IoT devices for voice, data, video and location technologies with fully automated, customizable turn-key solutions for carrier acceptance, standards-based testing and R&D.

The Spirent 8100 system offers configurations for 5G positioning performance, voice call and audio performance, and streaming video performance.

These configurations are tailored for the needs of 5G device manufacturers and chipset vendors who are developing devices such as eMBB 5G smartphones, "puck" data modems, fixed-wireless premises equipment, and IoT devices.

The 8100 5G system provides R&D testing capabilities, specialized automated test suites for E911 positioning conformance, and carrier acceptance test suites for voice, video, data and location services.

Existing Spirent 8100 customers enjoy a seamless upgrade path from their 3G/4G systems into the 5G domain. Spirent's TestManager and TestDrive automation suites, with their world-renowned ease of use, provide familiar environments for test case development and execution.



**Spirent's 8100 5G
System supports
your needs today
and prepares your
lab for tomorrow**

5G Positioning Performance

5G promises to bring new positioning technologies over and above what GNSS and 4G-LTE can provide. 5G-NR enables increased OTDOA accuracy, and when coupled with beamforming gNodeB antennas and beam-tracking UE designs, 5G provides z-axis position data.

Today's 4G Assisted-GNSS (A-GNSS) devices will also be impacted by 5G radio as they become exposed to interference from new 5G bands. Spirent provides test solutions that help ensure the 4G location performance accuracy of the devices with 5G radio impact, as well as performance of 5G devices with 5G location technologies.

Spirent's 8100 5G system for Location testing meets today's needs and provides a seamless path to maintain alignment with upcoming 3GPP extensions for 5G's new location technologies. The system includes state of the art GNSS simulation, as well as Spirent's exclusive Indoor Location Simulator. These components are combined into a system that provides industry-leading automated location performance and conformance testing.

Key Capabilities:

- Easy-to-use graphical UI provides simple test execution and results analysis
- Test case configurability enables performance testing beyond 3GPP conformance
- Hybrid A-GNSS plus OTDOA (observed time difference of arrival) with performance evaluation
- Indoor Location testing using Wi-Fi, Barometric pressure and Bluetooth* beacons (*roadmap capability)
- GNSS, Wi-Fi and LTE Record and Playback
- Type approval and conformance certification (GCF/PTCRB) for A-GNSS, OTDOA minimum performance and protocol conformance; OMA SUPL protocol conformance
- Conducted and Over-the-Air radiated testing for CTIA v3.7 requirements, in pre-integrated configurations with leading anechoic test chambers.



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About Spirent Communications

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics and security, serving developers, service providers, and enterprise networks.

We help bring clarity to increasingly complex technological and business challenges.

Spirent's customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled.

For more information, visit:
www.spirent.com

5G Voice Call Performance, Audio Performance, and Video Performance

As 5G becomes increasingly widespread over the next few years, today's smartphone use cases will migrate to 5G. Voice call quality and call performance become the new standard, and users will expect ultra-high data performance and long battery life while consuming over-the-top video content in ultra-high-resolution 4K and 8K video.

Key Features:

- Evaluate 5G impact on LTE voice calling performance (5G-NSA mode)
- Perceptual voice quality measurement (MOS)
- Perceptual video quality measurement (VMOS) for any over-the-top streaming service, embedded operator services, and video-chat services
- Evaluate mobile device application data performance
- Conducted mode connection to UE
- Available desktop isolation chamber for OTA connection to the UE
- Frequency bands up to 6GHz supported
- Supports devices up to 4 channel M-MIMO



Contact Us

For more information, call your Spirent sales representative or visit us on the web at www.spirent.com/ContactSpirent.

www.spirent.com

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