

SPIRENT 8100 MOBILE DEVICE TEST SYSTEM

LTE Multi-Mode System Selection

Delivers an automated solution for comprehensive testing of system selection performance in LTE multi-mode devices.

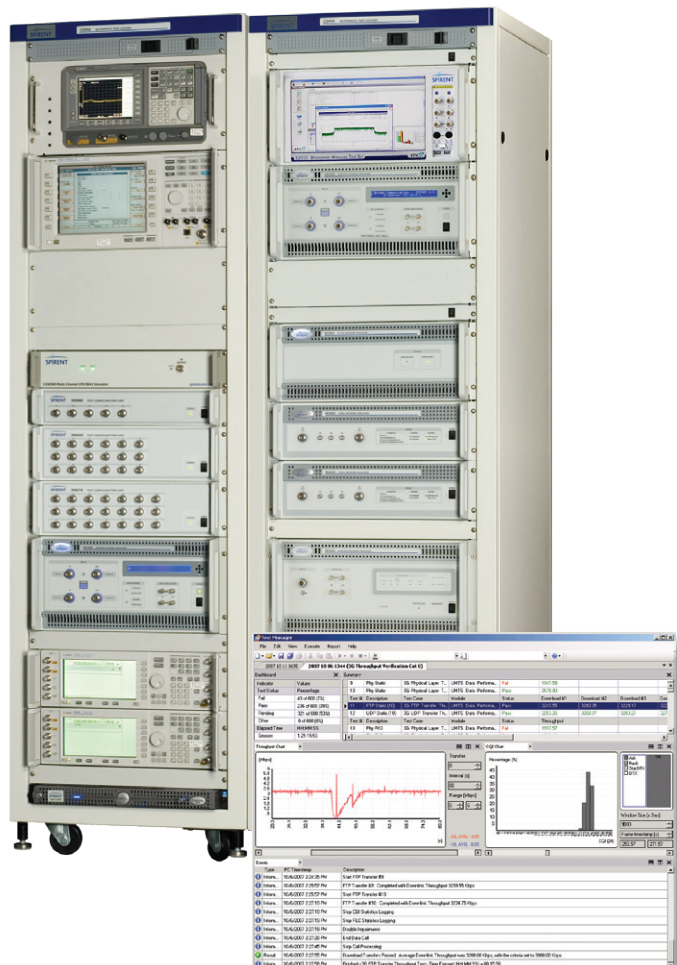
APPLICATIONS

Manufacturers:

- Research & Development
- Design verification
- Performance analysis
- Benchmarking
- Regression test

Operators:

- Pre-launch evaluation
- Acceptance test
- Software regression test
- End user and network KPI analysis



System Selection is one of the first tasks a device must perform upon power-on; its implementation impacts how long an end user must wait before being able to make a voice call or a data transfer. Correct selection also minimizes operators' revenue losses that result from higher roaming agreement fees.

The 8100 LTE Multi-Mode System Selection solution automates system selection testing of multi-mode LTE/CDMA devices, as well as LTE devices that support UMTS/GSM. The solution's powerful, highly-configurable Spirent E2011 Network Emulator integrates with Spirent's CDMA/EV-DO and UMTS network emulation to seamlessly reproduce real-world system and network scenarios, yielding consistent and repeatable test results.

As a key component of Spirent's 8100 Mobile Device Test System, the LTE Multi-Mode System Selection solution offers an open, scalable multi-purpose test system that is expandable beyond initial testing needs.

An upgrade path for Spirent's industry-leading automated performance test systems for CDMA2000/EV-DO and UMTS devices enables existing users to maximize the value of their current investments.

BENEFITS

- *Reduce time to market* – run more tests on a single, automated platform
- *Reduce device returns and customer churn through improved device quality* – identify system selection issues under repeatable multi-network conditions
- *Address the entire lifecycle of testing needs with a single solution* – R&D, DVT, Benchmarking/Evaluation, Operator Acceptance, Applications, Regression
- *Purchase only the capability you need, when you need it* – offered with turnkey and user-customizable test cases and scenarios; upgradeable to RF Minimum Performance, Data Throughput, Inter-RAT, LBS and more

KEY FEATURES

- Automated system selection testing of LTE and multi-mode devices under real-world conditions
- Protects existing investment in Spirent CDMA and UMTS solutions with a cost-effective upgrade path
- Sophisticated, configurable, integrated LTE, CDMA2000/ EV-DO and UMTS network emulation from Spirent enables generation of multi-system, multi-RAT scenarios
- Timing measurements assess the efficiency of the device's system selection algorithm implementation
- Key counters and message logs throughout the protocol stack aid in troubleshooting when issues occur
- System selection test packs include a wide range of test cases for network operator acceptance and device manufacturers
- Powerful device automation and monitoring during testing
- Configurable parameters enable rapid generation of custom test cases

PROVIDES HIGHLY CONFIGURABLE SYSTEM AND NETWORK SCENARIOS

System selection procedures for LTE devices in idle mode are described in 3GPP TS 36.304. The specification calls out the device behavior during Public Land Mobile Network (PLMN) and RAT selection, initial cell selection and cell reselection, cell reservations and access restrictions, reception of broadcast information and paging.

Additional, operator-specific system selection requirements for devices are also being defined. A complete system selection test plan should fully exercise the device's algorithms across the complete range of use cases, as defined by industry standards and individual operator criteria.

The LTE Multi-Mode System Selection solution provides a fully-configurable, controllable environment. Its highly-capable components include a Spirent E2011 Network Emulator, which integrates with Spirent CDMA/EV-DO and UMTS network emulators to enable complex multi-system, multi-RAT, multi-cell scenarios.

ANSWERS KEY PERFORMANCE QUESTIONS

- At power-on, does a device successfully recognize the country it is in?
- Does a device select the most preferred system in a given geographic region?
- What happens if the device cannot find a preferred network?
- Does a device reject forbidden or negative systems, except in emergency call scenarios?
- How long does it take a device to acquire a system after power on?
- When a more preferred system becomes available, does the device move to it within a specified time?

ORDERING INFORMATION

Due to the modularity and wide range of available 8100 Mobile Device Test System configurations, please contact your regional Spirent sales representative for detailed ordering information.

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