

IQcell-5G

5G Signaling Test Solution

IQcell-5G is a 5G signaling test solution for RF parametric measurements (compliant with 3GPP spec 38.521), end-to-end throughput, MIMO, mobility, and user experience testing. The solution ensures complete user equipment (UE) validation ideal for end-of-line manufacturing, lab regression & stability testing.

Easy transition between SA & NSA mode

The IQcell-5G solution comprises of IQcore-5G, a network emulator, and IQFR1-5G, a sub-6GHz radio head for signaling and analysis over FR1 frequency bands. The flexible design allows easy transition from standalone (SA) to non-standalone (NSA) deployment mode by simply adding an optional LTE anchor – IQcell, which also supports legacy technologies WCDMA and GSM.

Modular architecture for FR1 and FR2 frequency support

To meet evolving test requirements, the IQcell-5G is built on a modular architecture. The solution can be expanded to support the mmWave (FR2) frequency bands by adding the IQgig-5GS radio head for signaling and analysis. As additional requirements develop the modular architecture can be upgraded in the future.

Fully integrated architecture with throughput & MIMO capability

Purpose built to provide simplicity, IQcore-5G is a highly integrated design with a built-in iPerf server eliminating the need for an external server PC and enabling up to 4x4 MIMO data throughput testing for 5G FR1 UE devices.

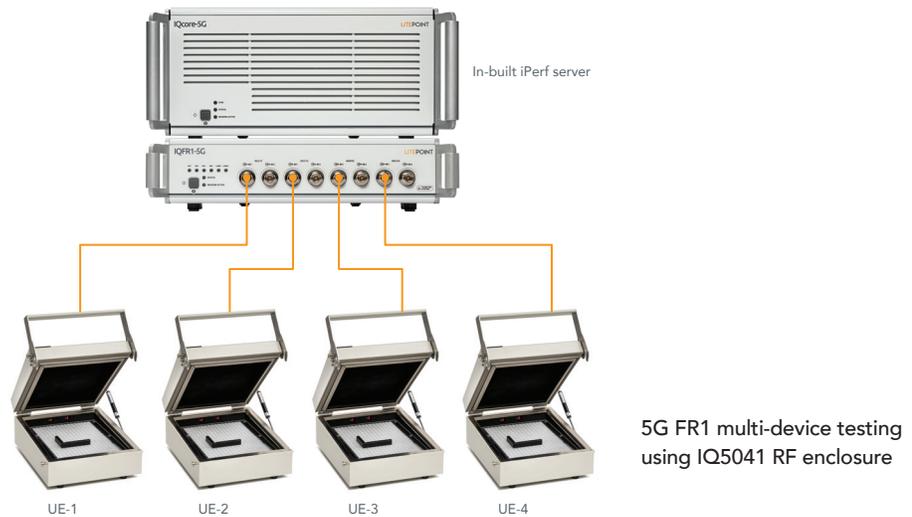


Easy transition from SA to NSA mode

Speed and economics with multi-cell, multi-DUT architecture

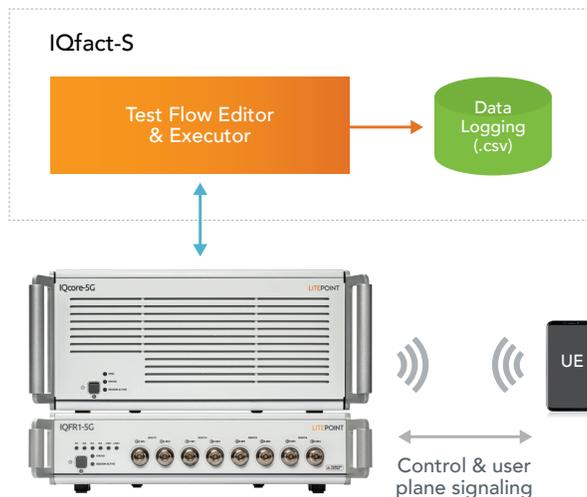
In manufacturing test, the intent is to maximize production throughput. The IQFR1-5G enables four completely independent cells providing four times the capacity of single-cell test equipment. With this, the tester can support concurrent testing of up to four FR1 UE's in conducted and up to 32 UE's in an Over-the-Air (OTA) test environment, significantly improving productivity and minimizing cost of test.

To enable 5G FR1 radiated testing in a controlled test environment, the IQFR1-5G can be connected with the IQ5041 RF enclosure. The test fixture is an optional accessory with an integrated antenna coupler and positioning grid to enable repeatable UE measurements in a shielded environment



Reduced test flow development time with IQfact-s

Before a product is released to volume manufacturing, several iterations of hardware and software changes are made to fine tune the device behavior. The IQfact-s software tool is purpose built to enable rapid end-of-line automation and lab regression test to minimize test execution time. The tool allows users to quickly develop test cases without having to develop custom software.



In the field, devices are used for more than just call registration and messaging

After the UE is assembled it is important to ensure there are no antenna tuning errors, SIM card functionality failures, software loading errors or in-device coexistence issues which could result into poor call quality and user experience. IQcell-5G verifies vital characteristics of the final packaged product such as basic call registration, antenna performance, RF verification and data throughput to identify product flaws sooner and minimize returns from the field.

Vital Checks	Basic Call Registration	Antenna & RF Performance	User Experience & Throughput Test
SIM card is functional and inserted	✓		✓
Antenna is appropriately installed	✓	✓	✓
Software & firmware are loaded correctly	✓		✓
Device is well calibrated		✓	✓

Order Codes

Code	Product
0100-5GSG-001	IQcore-5G Network Emulator
0100-5GSG-003	IQFR1-5G Sub-6GHz Radio Head
0100-IG5G-025	IQgig-5GS Model B mmWave Radio Head
0100-CELL-001	IQcell LTE Anchor
0150-5GSG-001	IQ5041 FR1 NSA/SA RF Chamber
0300 -5GSG-001	5G Non-Standalone Mode License
0300-5GSG-002	5G Standalone Mode License
0300-5GSG-005	5G 3GPP SW License
0300-5GSG-006	5G Multi-cell License
0300-5GSG-007	5G FR1 MIMO SW License