

LitePoint IQcell

IQcell is the first cellular signaling test solution that supports multi-device concurrent testing, ideal for factory end-of-line verification and high volume service centers.

With IQcell, you can be confident that your device has been accurately calibrated, the antenna is properly connected, the SIM card is functional, and the correct software is loaded.



Exceptional product quality without sacrificing productivity

Time is a crucial resource on factory production lines. Yet signaling testing often requires considerable time, since the entire protocol stack is run. To maintain productivity targets, limited signaling testing is often run on a small sample of devices. However, limited testing can negatively affect product quality, as many assembly issues are only detected by running end-of-line signaling tests. LitePoint solves this challenge by enabling concurrent testing of up to four devices.

Maximum test density

IQcell is designed from the ground up to provide the highest test density of any signaling-capable tester. With four completely independent cells, each capable of FDD-LTE, TDD-LTE, WCDMA, and GSM, IQcell provides four times the capacity of single-cell test solutions. In addition to signaling capabilities, each cell has VSG/VSA for high-speed, high-accuracy, technology-specific parametric measurements.

Simultaneous data throughput testing

The IQcell 8-port configuration uniquely provides the capability of simultaneously running 2x2 MIMO throughput testing on all 4 DUTs. The integrated iPerf server enables single-input single-output (SISO) or multiple-input multiple-output (MIMO) throughput testing.

Optimal space efficiency

Signaling testers are typically designed for lab environments, where space is not an issue. Conversely, space is often limited on the factory floor. By packing four cellular testers into one compact 2U rack-height design, IQcell offers the most space-efficient tester on the market.

Minimum setup time and operator training

IQcell's turnkey solution minimizes setup and operator training time. Using the IQflowRunner software solution, users can set up test cases without developing test scripts, and configure and execute test scenarios without writing a single line of code.

Features

- **Cellular signaling device control:** Includes support for LTE FDD, LTE TDD, WCDMA/HSPA and GSM. Architecture supports future 3GPP enhancements.
- **Technology and frequency handovers:** Supports intra-band, inter-band, and inter-RAT handover and redirection.
- **Multi-cell technology:** Four independently-active cells provide the highest test throughput in the manufacturing environment.
- **Compact size:** Industry's highest density cellular signaling platform in 2U rack-height form factor.
- **Advanced signaling features:** Options for mobile-to-mobile calling and packet data throughput.

Key Specifications

Technology	Parameter	Specification
GSM	Voice Calls	MO/MT calls with audio loopback
	Loopback	Voice BER: Test Mode C
	Handover	Intra-Band & Inter-Band handover Inter-RAT redirection (WCDMA to GSM)
WCDMA HSPA	Voice Calls	MO/MT calls with audio loopback Mobile to Mobile Voice Calls
	Data Sessions	R99 data up to 384 Kbps UL/DL HSDPA (rel 14) data up to 21 Mbps HSUPA (rel 6) data up to 5.76 Mbps
	Loopback	UE test loop mode 1
	Handover	Intra-Band, Inter-Band, Inter-RAT Redirection to LTE FDD & LTE TDD, Inter-RAT Handover (WCDMA to GSM)
LTE FDD & TDD	Voice Calls (VoLTE)	MO/MT calls with audio loopback Mobile to Mobile Voice Calls
	Bandwidths	5, 10, 15 & 20 MHz
	Modulation Schemes	Uplink: QPSK, 16-QAM Downlink: QPSK, 16-QAM, 64-QAM
	Data Session	FDD & TDD: SISO & 2x2 MIMO Data up to LTE UE Category 6 Max Uplink Throughput: 51 Mbps Max Downlink Throughput: 150 Mbps (2x2 MIMO)
	Loopback	Type A Downlink Packet Error Rate (PER)
	Handover	Intra-Band, Inter-Band, Inter-RAT Redirection to WCDMA & GSM



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