Keysight Technologies
8960 Wireless Communications Test Set

HSPA Applications Including HSPA+, HSUPA, and HSDP

8960 HSPA Applications

For wireless device R&D:
E6703G W-CDMA/HSPA lab application

For manufacturing:
E1963A W-CDMA mobile test application, HSPA Options 403, 405, 413, 423

HSPA RF Parametric and Functional Test Solution
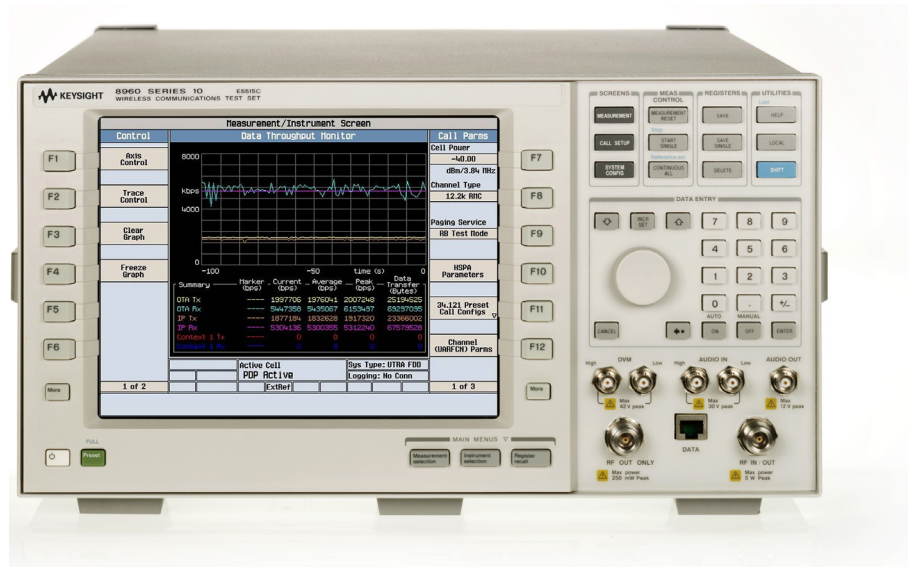
Resolve phone design problems earlier
– Test beyond typical network conditions with simultaneous Tx/Rx at the highest data rates
– Perform real world stress test to functionally verify SMS, MMS, data throughput, video, inter-RAT handovers, and other services in the presence of realistic network impairments

Ensure high-quality introductions of new phones
– Test with the fastest, most complete, and stable 3GPP-compliant TS 34.121-1 Tx/Rx measurements in an integrated UMTS/HSPA manufacturing test solution

Limited development test equipment budget?
– Get the most for your money with the largest collection of RF-to-IP test tools in a one-box tester

Key Features

Network behaviors (Lab application only)
– 21 Mbps DL and 11.5 Mbps UL HSPA+, 14.4 Mbps HSDPA, 5.7 Mbps HSUPA – keep up with the latest planned HSPA deployment
– One-box simultaneous services – provides simultaneous voice and data
– HSPA+ continuous packet connectivity (CPC) – allows a much faster reactivation for temporarily inactive users of packet data
– HSDPA active CQI response – realistic network behavior by responding to UE requests for channel quality changes
– Digital audio interface and vocoders – provides real-time end-to-end audio capability and audio codec verification
– Multiple PDP contexts - supports two primary PDP contexts for simultaneous PS services active on one UE

Analysis tools (Lab application only)
– Interactive functional test software (N5970A) – powerful software to automate and simplify functional test of HSPA mobile devices
– RF to IP layer logging via WPA software – logs protocol messages to help troubleshoot protocol problems
– Data throughput monitor – sustained 21 Mbps HSPA+, 14.4 Mbps HSDPA, and 5.7 Mbps HSUPA

Handovers (Lab application only except where noted)
– UMTS inter-RAT – 2-cell handovers and cell reselection between 2G/3G systems including voice, data, or voice + data together
Note: 2-cell voice handover between 2G/3G systems available in test application
– 3G UMA – provides connectivity and handover to/from 3G/UMA with both voice and IP data

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Network services (Lab and test applications)
- Video loopback – functional video call transmit/receipt with one test set
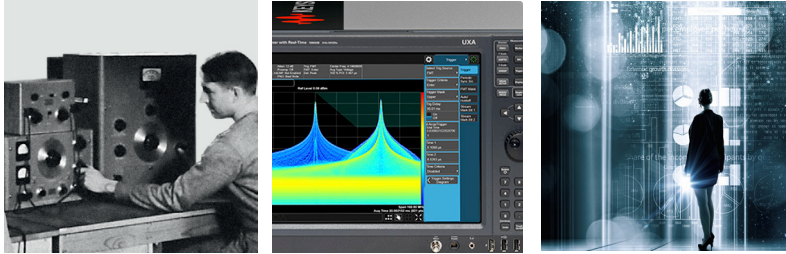- End-to-end video, messaging – check functionality between two UEs

RF parametric (Lab and test applications)
- Test modes – Both signaling test mode using test control (TC) protocol and non-signaling test mode are available for HSPA+, HSUPA, and HSDPA; support of 21 Mbps DL and 11.5 Mbps UL HSPA+, 14.4 Mbps HSDPA, and 5.7 Mbps HSUPA
- Tx/Rx measurements – complete suite of HSPA RF measurements for testing all categories of HSPA/W-CDMA devices (HS-DSCH Categories 1-14 and E-DCH Categories 1-7) to meet 3GPP TS 34.121-1 test standards
- All bands support – support of all 3GPP frequency bands (I to XIV, XIX, XX, and XXI) gives flexibility to test devices built for any region
- Fast calibration – with the Fast Device Tune measurement
- Convergence testing – with the FM source, GPS source simulation

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