



# Agilent 8960 Wireless Communications Test Set

HSPA Applications Including HSPA+, HSUPA, and HSDPA

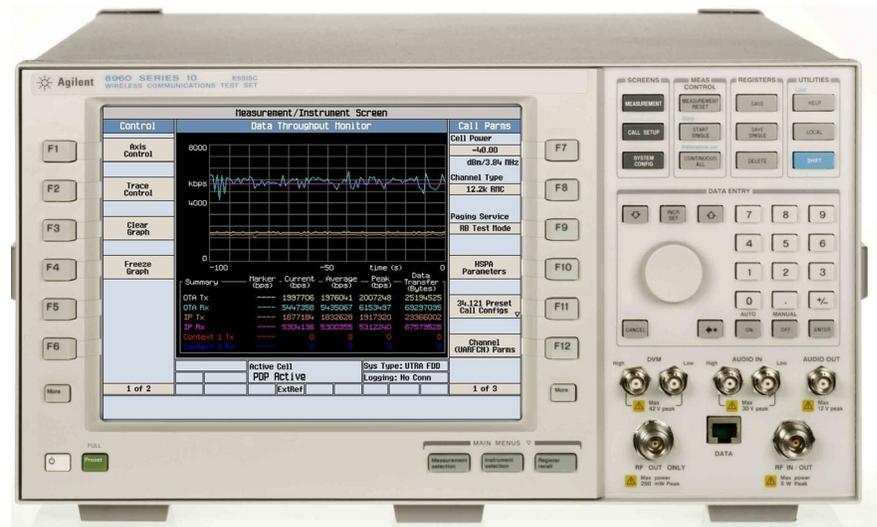
## 8960 HSPA applications:

### For wireless device R&D:

E16703G 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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