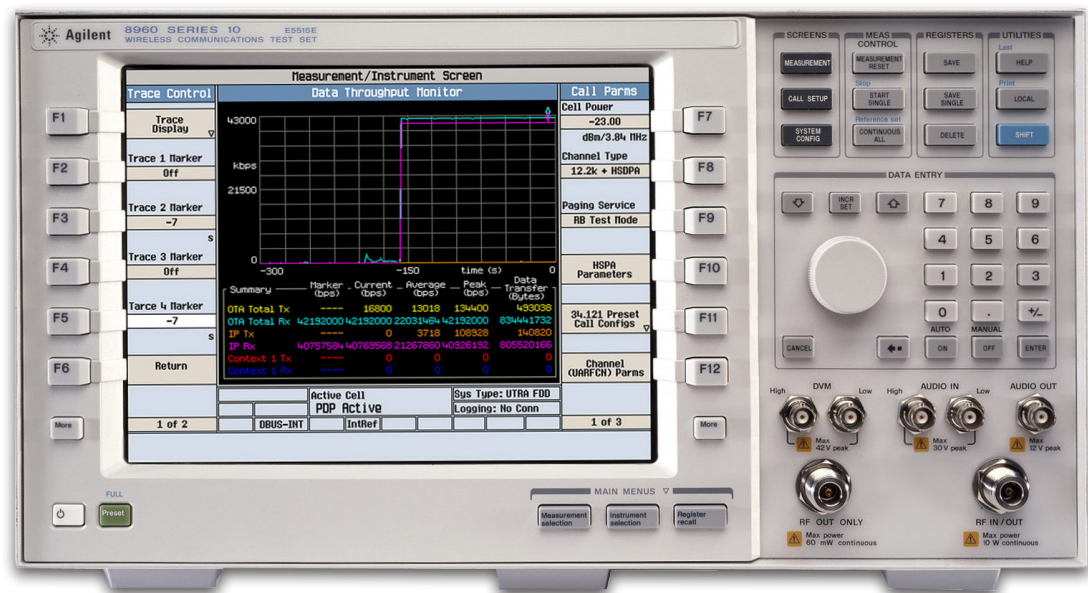




# E5515C/E (8960) Wireless Communications Test Set

High performance hardware platform for the  
8960 Series of mobile device design and  
manufacturing test solutions

## Technical Overview



*The only test set with robust and accurate RF measurements, flexible network emulation and high data rate performance that allows you to achieve complete wireless device testing across the development lifecycle.*



The E5515C hardware platform for the 8960 wireless communications test set is the world's most trusted solution for wireless device manufacturing, and RF design and verification. The E5515E, designed for high performance, has improved high data rate hardware, multiple signaling and RF paths, and increased headroom to support today's cutting edge 3.5G technologies, such as 42 Mbps DC-HSDPA and MIMO. Combining the E5515C/E with the 8960 family of embedded software applications creates a cellular network emulator for testing mobile device RF, baseband and IP data traffic flows. Testing can be done via call processing or test mode control and provides:

- Industry's most accurate, repeatable, standards-compliant RF and baseband measurements
- Stable performance for end-to-end high speed IP data throughput testing
- Industry leading accuracy, reliability and measurement speed

Test performance specifications are documented in the software applications. Refer to [www.agilent.com/find/8960](http://www.agilent.com/find/8960) for available software applications.

## Flexible Configuration and Easy to Order

The 8960 can be configured to either the E5515C or E5515E hardware platform, depending on the application.

The E5515C platform has three hardware functionality options:

- **Option 002** – Second RF source for GSM, GPRS and EGPRS technologies
- **Option 003** – Flexible CDMA base station emulator for today's CDMA-based technologies such as cdma2000®, 1xEV-DO, W-CDMA, HSPA and HSPA+. Also needed for some GSM, GPRS and EGPRS features
- **Option 004** – Digital bus for fading test solutions used with Agilent N5106A PXB baseband generator and channel emulator

The E5515E platform includes a second RF source and flexible CDMA base station emulator. E5515E has one functionality option:

- **Option 004** – Digital bus for fading test solutions used with the Agilent N5106A PXB baseband generator and channel emulator

The E5515C is upgradable to E5515E with the following upgrade path:

- **E5515CU-80E** – Hardware upgrade set for E5515C

## Technical Specifications

These specifications apply to any E5515E or E5515C with serial number US40410101, GB4041010, MY46010000 or higher.

Specifications describe the test set's warranted performance and are valid for the unit's operation within the stated environmental range unless otherwise noted. All specifications are valid after a 30-minute warm-up period of continuous operation.

Supplemental characteristics are intended to provide typical, but non-warranted, performance parameters that may be useful in applying the instrument. These characteristics are shown in italics and labeled as "typical", or "supplemental." All units shipped from the factory meet these typical numbers at 25 °C ambient temperature without including measurement uncertainty.

These are general specifications that apply to an E5515C or E5515E mainframe over the 25 °C  $\pm$  5 °C ambient temperature range. Specific test and lab application specifications can be found in the library on the 8960 Web site:

[www.agilent.com/find/8960](http://www.agilent.com/find/8960)

| Remote programming                          |                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GPIB                                        | IEEE Standard 488.2                                                                                                                                                                                                                                                                                  |
| GPIB help                                   | Pressing the front panel Help key and then any other key will cause the test set to display the GPIB syntax for that command at the bottom of the front panel display; pressing the Help key again exits this mode of operation                                                                      |
| Remote front panel lockout                  | Allows remote user to disable the front panel display to improve GPIB measurement speed                                                                                                                                                                                                              |
| Implemented functions                       | T6, TE0, L4, LE0, SH1, AH1, RL1, SR1, PP0, DC1, DT0, C0, and E2                                                                                                                                                                                                                                      |
| General specifications                      |                                                                                                                                                                                                                                                                                                      |
| Dimensions (H x W x D)                      | 235 mm x 425 mm x 629 mm                                                                                                                                                                                                                                                                             |
| Weight                                      | 31.8 kg                                                                                                                                                                                                                                                                                              |
| Display                                     | 26.7 cm, active matrix, color, liquid crystal                                                                                                                                                                                                                                                        |
| <b>LAN (local area network) port</b>        |                                                                                                                                                                                                                                                                                                      |
| LAN port (for firmware upgrades only)       | RJ-45 connector, 100 Mbps                                                                                                                                                                                                                                                                            |
| LAN 2 port (for high data throughput)       | RJ-45 connector, 100 Mbps (for E5515C) or 1000 Mbps (for E5515E)                                                                                                                                                                                                                                     |
| LAN 3 port (for future use)                 | RJ-45 connector, 1000 Mbps                                                                                                                                                                                                                                                                           |
| Operating temperature                       | 0 to +55 °C                                                                                                                                                                                                                                                                                          |
| Storage temperature                         | –20 to +70 °C                                                                                                                                                                                                                                                                                        |
| Power                                       | 88 to 135 Vac, 193 to 269 Vac, 50 to 60 Hz, typically 550 VA maximum                                                                                                                                                                                                                                 |
| Calibration interval                        | Two years                                                                                                                                                                                                                                                                                            |
| EMC                                         | Complies with European EMC Directive 2004/108/EC<br>IEC/EN 61326-1<br>CISPR Pub 11 Group 1, class A<br>AS/NZS CISPR 11<br>ICES/NMB-001<br>This ISM device complies with Canadian ICES-001.<br>Cet appareil ISM est conforme a la norme NMB-001 du Canada.                                            |
| Electrical safety                           | Complies with CAN/CSA 22.2 No. 61010-1-04, UL Std. 61010-1 (2nd Edition), and IEC 61010-1 (2nd Edition)                                                                                                                                                                                              |
| <i>Radiated leakage due to RF generator</i> | <i>Typically &lt; 1 <math>\mu</math>V induced in a resonant dipole antenna one inch from any surface except the underside and rear panel at set RF generator output frequency and output level of –40 dBm</i>                                                                                        |
| <i>Spurious leakage</i>                     | <i>Typically &lt; 5 <math>\mu</math>V induced in a resonant dipole antenna one inch from any surface on the front half of all sides of the instrument at frequencies other than the RF generator output frequency and output level of –40 dBm with no cable connected to the rear-panel LAN port</i> |
| <i>Power consumption</i>                    | <i>Typically 400 to 450 W continuous</i>                                                                                                                                                                                                                                                             |



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|                | *0.125 €/minute      |
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Product specifications and descriptions in this document subject to change without notice.

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