Combining the benefits of GSM/GPRS/EGPRS network emulation with Keysight’s global leadership in analysis technologies, the E5515C/E test set and the E6701K lab application provide mobile development engineers with a single desktop instrument – helping you get better devices to market sooner.
Develop, integrate, and validate high data rate EGPRS UE’s

With the E6701K/E6704A GSM/GPRS/EGPRS lab application, developers have the only instrument available providing a systematic approach to root-cause analysis of high throughput issues in the mobile protocol stack; from decoded L1 to IP.

Test all the critical RF parameters

The E6701K provides flexible measurements including:
- Transmit power (TxP)
- Power vs time (PvT)
- Phase and amplitude vs time (PAvT)
- RF output spectrum (ORFS)
- Error vector magnitude (EVM)
- Bad frame indicator (BFI)
- FACCH frame erasure rate (FER)
- All the connections types required to fully analyze and debug your mobile device RF characteristics

Quick-turn just about any design change

With support for voice, video, short message service (SMS), multimedia messaging service (MMS), cell broadcast SMS (CBSMS), circuit-switched data, packet data call connections, DTM, multiple and secondary PDP contexts, design changes in anything from RF to TCP can be quickly validated with a complete regression test of mobile functions right at your desk.
Helping You Get Your Job Done Faster

Fast and flexible signaling – with you in control of network operations

Our network emulation is designed to make connecting calls fast and simple – and give you choices. We have pulled some of the most commonly requested parameters up from the protocol stack, providing many different connection scenarios without requiring you to fully understand the 3GPP stack and a complex scripting language. The E6701K delivers the control you need to get your job done faster.

The world’s wireless applications brought right to your fingertips

The Keysight Technologies, Inc. lab applications bring testing and tuning end-user applications right to your desk – without limiting how far your device may search when looking for real content. With our industry-leading SMS/MMS/cell broadcast messaging capabilities, push-to-talk over cellular, and blazing fast packet connections to the Internet over RF, you have the capability to test most mobile applications fully without leaving your office.

Developing more than just GSM/GPRS/EGPRS devices?
Just hook it up and go!

If your development needs go beyond GSM/GPRS/EGPRS, with additional firmware that same box on your desk can connect calls from AMPS to HSPA+ and everything in between. What’s more, Keysight leads the industry in support of 2G and 3G solutions for 1xEV-DO and W-CDMA/HSPA. Contact your Keysight sales engineer to learn how the E5515C/E test set gives you the flexibility to adapt quickly to emerging standards and technologies.

Together with the new Keysight test platform, the E7515A UXM, InterRAT tests between LTE and GSM/GPRS, such as cell selection/re-selection, connected data handover, CSFB, and RRC release with redirection are supported.

Get started with the GSM/GPRS/EGPRS lab applications today at:
www.Keysight.com/find/8960manuals
Find Design Issues Earlier, Resolve Them Faster

Functional test analysis

Reduce development and verification cycle time by systematically engaging mobile device layers “up the stack” to find design problems early—before they are found by your customers.

Validate a phone’s data throughput capability while using SMS, MMS, data transfer, video, PoC, WAP, email, or other services.

Drive down defect resolution cost by finding complex hardware, protocol, and application related issues that are specific to how the phone will function on the network, early in the design cycle.

All this for a price that is significantly less than traditional script-based test equipment.

Base station emulation

From basic network settings like country code and cell ID, lab application variables for network emulation extend into such things as network operating mode, TMSI assignment, authentication, neighbor list management, and PDP context rejection, giving you the flexibility you need.

The pulse of mobile/network interactions

Wireless protocol advisor software gives you all messages for the mobile and network from MAC layer all the way to IP. Triggering and filtering functionality lets you set up troublesome scenarios, such as intermittent failures. That means you can begin the scenario on Friday and come back Monday morning to a bounded and focused protocol log of exactly what happened surrounding the particular issue.
E6701K Family of Lab Applications

E6701K is our latest application release for the industry leading call box and the right choice for R&D engineers needing world-class functionality in a single instrument. The E6701K added several new capabilities including LTE/2G interRAT handover.

This application also supports baseband fading with the N5106A PXB baseband generator and channel emulator. This functionality requires hardware options E5515E-004, or E5515C-003 and 004.


Technical Specifications

These specifications apply to an E5515 mainframe with Option 002 installed when used with the latest shipping version of the E6701K lab application.

The above application also includes functionality described within the latest shipping version of E1968A GSM/GPRS/EGPRS test application with firmware. Please refer to the E1968A data sheet for details and specifications for all functionality covered within the E1968A at: http://www.keysight.com/find/E1968A

Specifications describe the test set’s warranted performance and are valid for the unit’s operation within the stated environmental ranges unless otherwise noted.

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”. All units shipped form the factory meet these typical numbers at +25 °C ambient temperature without including measurement uncertainty.
**General Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>(H x W x D): 8.75 x 16.75 x 24.63 inches (222 x 426 x 625 mm), 7 rack spaces high</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>66 lbs (30 kg)</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>10.5 inches (26.7 cm), active matrix, color, liquid crystal</td>
</tr>
<tr>
<td><strong>Manual user interface</strong></td>
<td>Traditional front panel type or remote computer driven with graphical UI</td>
</tr>
<tr>
<td><strong>LAN (local area network) port</strong></td>
<td>LAN 1 port (for firmware upgrades only): RJ-45 connector, 100 Mbps</td>
</tr>
<tr>
<td></td>
<td>LAN 2 port (for high data throughput): RJ-45 connector, 100 Mbps (for E5515C) or 1000 Mbps (for E5515E)</td>
</tr>
<tr>
<td></td>
<td>LAN 3 port (for future use): RJ-45 connector, 1000 Mbps</td>
</tr>
<tr>
<td><strong>Operating conditions</strong></td>
<td>0 to +55 °C, 30 g/m³ absolute humidity (95%/+32 °C, 28%/+55 °C relative humidity)</td>
</tr>
<tr>
<td><strong>Storage conditions</strong></td>
<td>-20 to +70 °C, 50 g/m³ absolute humidity, non-condensing (90%/+65 °C relative humidity)</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>88 to 135 Vac, 193 to 269 Vac, 50 to 60 Hz, typically 550 VA maximum</td>
</tr>
<tr>
<td><strong>Calibration interval</strong></td>
<td>2 years</td>
</tr>
<tr>
<td><strong>Electrical safety</strong></td>
<td>Complies with CAN/CSA 22.2 No. 61010-1-04, UL Std. 61010-1 (2nd Edition), and IEC 61010-1 (2nd Edition)</td>
</tr>
<tr>
<td><strong>EMI</strong></td>
<td>Conducted and radiated interference meets CISPR-11, susceptibility meets IEC 1000-4-2, 1000-4-3, and 1000-4-4</td>
</tr>
<tr>
<td><strong>Radiated leakage due to RF generator</strong></td>
<td>Typically &lt; 2.5 µV 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</td>
</tr>
<tr>
<td><strong>Spurious leakage</strong></td>
<td>Typically &lt; 5 µV induced in a resonant dipole antenna one inch from any surface except the underside and rear panel at frequencies other than the RF generator output frequency and output level of -40 dBm</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>Typically 400 to 450 W continuous</td>
</tr>
</tbody>
</table>
Evolving Since 1939

Our unique combination of hardware, software, services, and people can help you reach your next breakthrough. We are unlocking the future of technology. From Hewlett-Packard to Agilent to Keysight.

myKeysight
www.keysight.com/find/mykeysight
A personalized view into the information most relevant to you.

www.keysight.com/find/emt_product_registration
Register your products to get up-to-date product information and find warranty information.

Keysight Services
www.keysight.com/find/service
Keysight Services can help from acquisition to renewal across your instrument’s lifecycle. Our comprehensive service offerings—one-stop calibration, repair, asset management, technology refresh, consulting, training and more—helps you improve product quality and lower costs.

Keysight Assurance Plans
www.keysight.com/find/AssurancePlans
Up to ten years of protection and no budgetary surprises to ensure your instruments are operating to specification, so you can rely on accurate measurements.

Keysight Channel Partners
www.keysight.com/find/channelpartners
Get the best of both worlds: Keysight’s measurement expertise and product breadth, combined with channel partner convenience.

www.keysight.com/find/e6701k
www.keysight.com/find/e6704a

For more information on Keysight Technologies’ products, applications or services, please contact your local Keysight office. The complete list is available at:
www.keysight.com/find/contactus

Americas
Canada (877) 894 4414
Brazil 55 11 3351 7010
Mexico 001 800 254 2440
United States (800) 829 4444

Asia Pacific
Australia 1 800 629 485
China 800 810 0189
Hong Kong 800 938 693
India 1 800 11 2826
Japan 0120 (421) 345
Korea 080 769 0800
Malaysia 1 800 888 848
Singapore 1 800 375 8100
Taiwan 0800 047 866
Other AP Countries (65) 6375 8100

Europe & Middle East
Austria 0800 001122
Belgium 0800 58580
Finland 0800 523252
France 0805 980333
Germany 0800 6270999
Ireland 1800 832700
Israel 1 809 343051
Italy 800 599100
Luxembourg +32 800 58580
Netherlands 0800 0233200
Russia 8800 5093286
Spain 800 003154
Sweden 0200 892255
Switzerland 0800 805363
Opt. 1 (DE)
Opt. 2 (FR)
Opt. 3 (IT)
United Kingdom 0800 0260637

For other unlisted countries:
www.keysight.com/find/contactus
(BP-9-7-17)

DEKRA Certified
ISO 9001:2015
Quality Management System

www.keysight.com/go/quality
Keysight Technologies, Inc.
DEKRA Certified ISO 9001:2015
Quality Management System

This information is subject to change without notice.
© Keysight Technologies, 2017
Published in USA, December 1, 2017
5990-4519EN
www.keysight.com