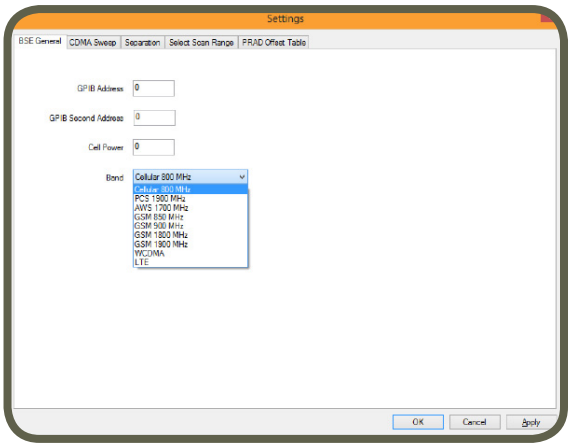
Base Station Emulator Option

RFxpert™

BSE: RFxpert Software Drivers for Base Station Emulators

This software option enables power and pattern measurements of an active device operating in the cellular band such as a cellular phone at a single frequency or a series of frequencies over a span through the remote control of the following Base Station Emulators (please verify the supported hardware and software configuration of the BSE in the specification list on the back of this page).



GSM/CDMA/WCDMA

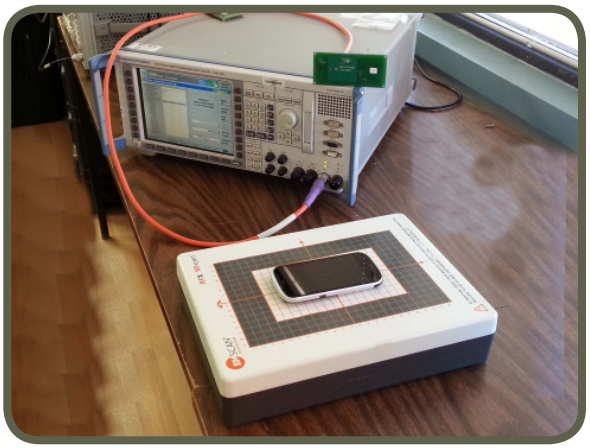
- Agilent 8960
- Rohde & Schwarz CMU200

LTE

- Rohde & Schwarz CMW500

When testing a DUT with a base station emulator (BSE) please follow these steps.

- Be sure to use a phone that can be recognized by the BSE. A SIM card compatible with the BSE will be required.
- It is advised to use network settings that are different from live networks in your area. When using an “over the air” connection to the DUT, it will not be able to differentiate between the BSE and a real network if they have the same ID settings.
- Turn on the DUT and place it in the middle of the scanner.
- Connect an external antenna to the RF port of the base station emulator and place it so that the DUT has reception. Do not place the antenna too close the RFxpert as it can impact the results. A direct connection of the BSE to the DUT is also an alternative approach.
- Follow the best setup practices for the antenna placement. It is a good idea to do a manual call to the DUT to ensure all settings are correct. After a call has been established terminate the cal. The RFxpert software can now be used to automatically sweep the DUT through various frequencies and power levels using the BSE.



EMSCAN real-time results

BSE (Base Station Emulator) Features

Part number	3000-0300
Features	Programmable remote control of a Base Station Emulator to enable power and pattern measurements at a single frequency or series of frequencies at a set interval
Measurement time	<1 sec to display patterns on screen
Frequency limits	700 MHz to 6 GHz
Software requirement	RFxpert 3.4 and above

BSE (Base Station Emulator) Specifications

Agilent 8960 – Series 10 Main Frame Model E5515C	FIRMWARE: A.18.28 LA MODEL OPTIONS: E6785T - Revision: T.01.12 E6702T - Revision: T.04.04 TA MODEL OPTIONS: 1962B (CDMA/IS-95/AMPS Support) - Revision: B.17.08 and B.16.12 1963A (WCMDA Support) - Revision: A.16.08 and A.15.12 1968A (GSM/GPRS Support) - Revision: A.12.08, A.11.12 CONNECTION: GPIB
Rohde & Schwarz CMU200	FIRMWARE: v4.30 OPTIONS: CMU-K21:GSM900-MS V4.30 CMU-K22:GSM1800-MS V4.30 CMU-K23:GSM1900-MS V4.30 CMU-K24:GSM850-MS V4.30 CMU-K84:CDMA2000(Cellular) CMU-K85:CDMA2000(PCS) CMU-K86:CDMA2000(IMT-2000) CMU-K-- : WCDMA(Bands 1-11) CONNECTION: GPIB
Rohde & Schwarz CMW500	FIRMWARE: CMW Base: 3.0.11.15 CMW LTE: 3.0.20.8 OPTIONS: KS500 - LTE FDD R8 SIG BASIC CONNECTION: GPIB

RFxpert Scanner Specifications

Broadband frequency coverage	300 MHz to 6 GHz
Antenna array	RFX 384 (24 x 16) H-field probes RFX2 1,600 (40 x 40) H-field probes
Measurement sensitivity	0 dBm source power for a reasonably efficient antenna
Measurement accuracy	

Band 1: 300 MHz - 1GHz			Band 2: 1 GHz - 3 GHz			Band 3: 3 GHz - 6 GHz		
σ	2σ	N	σ	2σ	N	σ	2σ	N
1.54	3.08	195	0.81	1.62	517	0.94	1.88	247

Measurement repeatability	+/- 0.2 dB
Far-field resolution	1.8° for theta and 3.6° for phi
Maximum radiator size	RFX L 16 cm x W 10 cm (L 6.30" x W 3.94") RFX2 L 32 cm x W 32 cm (L 12.60" x W 12.60") RFX2 with MCP Option: L 2.32 m x W 1.12 m (L 91.34" x 44.09")

EMSCAN real-time results
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