

# E8400B Spectrum Analyzer

9kHz ~ 4.0 GHz

## Key Benefits

- Handheld, lightweight, rugged design that withstands harsh environments and lighting conditions
- Intuitive menu structure enables ease of use and quick measurements
- Quickly identifies, locates and maps signal interference
- Performs comprehensive signal analysis for complete site profile and monitoring of signal environment
- Occupied Bandwidth, Channel Power and ACPR
- Dual spectrum and spectrogram measurements
- Verify RF transmission



Verify RF Transmission. Identify and locate signal interference. Confirm coverage.

Today's wireless spectrum is shared among different communications systems and services including mobile communications, mobile radios, paging, wireless local-area networks and digital video broadcasting. In addition to licensed systems, the spectrum is also shared with unlicensed transmitters and signal impairments such as reflections and fading. The combination of all these signals creates a very complex environment which must be first cleared and routinely monitored in order to maximize service performance.

Designed specifically for wireless communications field engineers and technicians, the E8400B Spectrum Analyzer provides all necessary measurement functions and performance to accurately characterize the signal environment in addition to clearing, detecting, identifying and locating signal interference in a lightweight, handheld instrument.

## Measurements

- Spectrum Analysis
- Channel Power
- Occupied Bandwidth (OBW)
- Adjacent Channel Leakage Ratio (ACLR)
- Field Strength
- FM/AM

## Optional Measurement Modes

- Interference Analyzer (DML-110)
- Coverage Mapping (DML-120)
- High Precision Power Meter (DML-015)
- Tracking Generator (DML-035)
- GPS (DML-999)
- LTE FDD Analyzer (DML-803)
- LTE FDD Air Interface Test (DML-804)
- LTE TDD Analyzer (DML-805)
- LTE TDD Air Interface Test (DML-806)

**Specifications**

Frequency	
Frequency Range	9 kHz - 4.0 GHz
Resolution	1 Hz
Aging	<± 1.0ppm/yr
Frequency Span	1 kHz to 4 GHz in 1-2-5 sequence (automode), and 0 Hz (zero span)
Bandwidth	
Resolution Bandwidth (RBW)	1 Hz to 3 MHz in 1-3 sequence (auto or manually selectable)
Video Bandwidth (VBW)	1 Hz to 3 MHz in 1-3 sequence (auto or manually selectable)
Spectral Purity (Phase Noise)	
@ 1 kHz Offset from carrier	-90 dBc/Hz
@ 10 kHz Offset from carrier	-100 dBc/Hz
@ 100 kHz Offset from carrier	-105 dBc/Hz
Amplitude	
Dynamic Range	>100 dB
Measurement Range	DANL to maximum safe input level
Maximum Safe Input	+30dBm (peak power, input attenuation > 15dB), 50VDC
Amplitude Accuracy	≤ ± 1.0 dB
Attenuator Range	0 dB to 55 dB in 1 dB steps
Displayed Average Noise Level (DANL)	
(Input terminated, RBW = 1 Hz, Attn = 0 dBm, Avg Detector)	
Preamp Off	≤ -144 dBm, typical (1MHz - 1GHz) ≤ -138 dBm, typical (1GHz - 4GHz)
Preamp On	≤ -158 dBm, typical (1MHz - 1GHz) ≤ -154 dBm, typical (1GHz - 4GHz)
Connectors	
RF In	Type N, female, 50Ω
RF In Damage	+30dBm, ± 50 VDC.
Connectivity	
USB host	Type A, 1-Port (connect flash drive for data transfer)
USB client	5-pin mini-B (connect to PC for data transfer)
LAN	10M/100M LAN
Display	
Type / Size	TFT LCD / 8.4" (800 x 600)
Data Storage	
Internal	1 GB, > 2000 saved measurement files
External	Limited by size of USB flash drive
Battery	
Type	Li-Ion, 11.1V, 5.2AH
Operation	> 4 hours, continuous; 8 hrs, idle
Environmental	
Operating Temperature	-10°C to + 55 °C
Storage Temperature	-40 °C to + 80 °C
Shock	Mil-PRF-28800F Class 2
EMC	
European EMC	IEC/EN 61326-1:2006
AC Power	
AC Adapter Output	19V / 3.42Ah
AC Adapter Input	100 - 240 VAC, 50-60 Hz
Size & Weight	
Size	278 mm x 217 mm x 87 mm (10.94 in x 8.54 in x 3.42 in)
Weight	3 kg (6.6 lbs)

**Standard Accessories**

Rechargeable Li-Ion battery: 11.1V, 5.2Ah	6190.0100.05
AC-DC adapter: 19V, 3.42Ah	FSP065-RAB
Vehicle Plug-in lighter adapter	E8000-0400
Soft carry case	E7000-0600
Measurement Center Software CD-ROM with Users-Manual	E8000-0200

**Optional Accessories**

RF Test Port Cable, Armored, 1.5m, N(m) to N(f), 6GHz, 50Ω	DTC-6PNMNF-1.5
RF Test Port Cable, Armored, 1.5m, N(m) to 7/16 DIN(f), 6GHz, 50Ω	DTC-6PNMDF-1.5
RF Test Port Cable, Armored, 1.5m, N(m) to 7/16 DIN(m), 6GHz, 50Ω	DTC-6PNMDM-1.5
RF Test Port Cable, Armored, 3.0m, N(m) to 7/16 DIN(f), 6GHz, 50Ω	DTC-6PNMDF-3.0
RF Test Port Cable, Armored, 3.0m, N(m) to 7/16 DIN(m), 6GHz, 50Ω	DTC-6PNMDM-3.0

**Precision Adapters**

Precision Adapter Kit(PNMDM, PNFD, PNMF, PNDF, PDFDF, PDFDM 90°), 6GHz, 50Ω	DPK-6G100
Precision Adapter, N(m) to N(m), DC to 18GHz, 50Ω	DPA-18NMNM
Precision Adapter, N(f) to N(f), DC to 18GHz, 50Ω	DPA-18NFNF
Precision Adapter, N(f) to 7/16 DIN(m), DC to 6GHz, 50Ω	DPA-6NFDM
Precision Adapter, N(f) to 7/16 DIN(f), DC to 6GHz, 50Ω	DPA-6NFDF
Precision Adapter, N(f) to SMA(f), DC to 6GHz, 50Ω	DPA-6NFSF

**Attenuators**

10W, 6dB, DC-6GHz, N(f) to N(m)	DATT-6NFNM-10-6
50W, 30dB, DC-6GHz, N(f) to N(m)	DATT-6NFNM-50-30
100W, 40dB, Bi-Directional, DC-18GHz, N(f) to N(m)	DATT-6NFNM-100-40

**Directional Antennas**

806-960 MHz, N(f), 10 dBi, Yagi	ET0806D
822-900 MHz, N(f), 10 dBi, Yagi	ET0850D
824-960 MHz, N(f), 10 dBi, Yagi	ET0824D
885-970 MHz, N(f), 10 dBi, Yagi	ET0900D
1710-1880 MHz, N(f), 10 dBi, Yagi	ET1800D
1850-1990 MHz, N(f), 10 dBi, Yagi	ET1900D
1920-2170 MHz, N(f), 10 dB, Yagi	ET2100D
2400-2500 MHz, N(f), 10 dBi, Yagi	ET2400D
9 kHz to 20 MHz, log periodic	ET0020L
20 MHz to 200 MHz, log periodic	ET0200L
200 MHz to 500 MHz, log periodic	ET0500L
500 MHz to 3 GHz, log periodic	ET3000L

**Portable Antennas**

470-860 MHz, SMA(m), 50 Ω	ET0470P
806-866 MHz, SMA(m), 50 Ω	ET0850P
870-960 MHz, SMA(m), 50 Ω	ET0900P
1710 to 1880 MHz, SMA(m), 50 Ω	ET1800P
1850 to 1990 MHz, SMA(m), 50 Ω	ET1900P
1920 to 2170 MHz, SMA(m), 50 Ω	ET2100P
2400 to 2500 MHz, SMA(m), 50 Ω	ET2400P
5725 to 5875 MHz, SMA(m), 50 Ω	ET5800

**Power Sensors**

In-line Bi-Directional High Power Sensor, 300 MHz to 4GHz, 2mW to 150W, N(f) 50Ω	E7000A-050
Terminal Power Sensor	DPS-6TNM

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