

# E7000A Series Cable & Antenna Analyzer

## Key Benefits

- Handheld, lightweight, field-proven design withstands harsh environments and lighting conditions
- Easily set up measurements with over 100 preset wireless frequency bands and cable types
- Reduce test time with dual measurement display to make two measurements simultaneously
- Detect signal degradation and system performance over time with trace overlay
- Instant Pass/Fail status
- Manage your measurement data and test setups with Measurement Center Software



Verify cell site RF transmission settings, cable feedline and antenna systems.

The proliferation of wireless networks has placed increased demands on carriers, wireless professionals and contractors, who install, maintain and troubleshoot wireless communication networks. The majority of problems in wireless network installation and performance often occur within the base station infrastructure consisting of the cable and antenna system and associated RF connectors. Compounding the problem, often times cell sites are located in rural or difficult to access locations.

Designed specifically for carriers, wireless professionals and contractors who install, maintain and troubleshoot wireless communications networks, the E7000 Series of Cable & Antenna Analyzers provide all necessary measurement functions and performance to accurately diagnose and verify the site's cable and antenna system and RF connectors, including signal reflections (return loss or VSWR), fault location (distance-to-fault), cable loss and RF transmission power in a lightweight, field-proven, handheld instrument.

## Measurements

- Reflection - Return Loss or VSWR
- Fault Location - DTF/RL or DTF/VSWR
- Cable-loss
- 1-Port Phase
- Smith Chart

## Optional Measurements Modes

- High Precision Power Meter (DML-015)

**Performance Specifications**

Frequency	
Frequency Range (E7000A)	1 MHz – 4.4 GHz
Frequency Range (E7100A)	1 MHz – 6.0 GHz
Resolution	1 kHz
Measurement Speed	
Reflection	< 1.0 mS/point
DTF	< 1.25 mS/point
Data Points	130, 259, 517, 1033, 2065
Measurement Accuracy	
Corrected Directivity	42 dB (typical, after standard OSL calibration) 38 dB (typical, after eCAL calibration)
Output Power	
0 dBm (Nominal)	
Interference Immunity	
On-channel	+20 dBm @ >1 MHz of carrier frequency
Off-channel	+13 dBm within ± 10 kHz of carrier frequency
Measurements	
Return Loss	0 to 60dB
VSWR	1:1 to 65:1
DTF Range (Distance)	1500 meters (4921 feet)
Connectors (Reflection/RF Out)	
RF Out	Type N, female, 50Ω
RF Out Damage Level	25 dBm, ± 50 VDC
Connectivity	
USB host	USB 2.0 Type A
USB client	5-pin mini-B (connect to PC for data transfer)
LAN	RJ45 10M/100M LAN Ethernet Port
Display	
Type / Size	TFT LCD / 6.5" (640 x 480)
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	> 6.0 hours, continuous; 8.0 hrs, idle
Environmenta	
Operating Temperature	-10°C to + 55 °C
Storage Temperature	-20 °C to + 75°C
Maximum Humidity	95% RH (non-condensing) @ 40 °C
Shock	Mil-PRF-28800F Class
Altitude	4600 meters, operating and non-operating
EMC	
European EMC	IEC/EN 61326-1:2006
AC Power	
AC Adapter Output	15-19 VDC
AC Adapter Input	100 – 240 VAC, 50-60 Hz
Size & Weight	
Size	258 mm x 173 mm x 74 mm (10.2 in x 6.8 in x 2.9 in)
Weight	2.2 kg (4.85 lbs)

**Standard Accessories**

Rechargeable Li-Ion battery	E8000-0300
AC-DC adapter	FSP065-RAB
Vehicle Plug-in lighter adapter	E7000-0400
1.5m RF Test Port Cable, N(m), 6GHz	E7000-0702
Calibration Combo Open/Short/Load, N(m), 6GHz	E7000-0700
Soft carry case	E7000-0600
Measurement Center Software CD-ROM with Users-Manual	E7000-0200

**Optional Accessories**

Precision "Y" Open/Short/Load Calibration Combination, N(m), DC-6GHz, 50Ω	E7000-700
Calibration Combo "Y" Open/Short/Load, N(f), DC-6GHz, 50Ω	E7000-709
Calibration Combo "T" Open/Short/Load, 7/16 DIN(m), DC-6GHz, 50Ω	DCAL-6DM-C
Calibration Combo "T" Open/Short/Load Calibration Combination, 7/16 DIN(f), DC-6GHz, 50Ω	DCAL-6DF-C
RF Test Port Cable, Armored, phase stable, 1.5m, N(m) to N(f), 18GHz, 50Ω	DTC-18NMNF-1.5
RF Test Port Cable, Armored, phase stable, 1.5m, N(m) to 7/16 DIN(f), 18GHz, 50Ω	DTC-18NMDF-1.5
RF Test Port Cable, Armored, phase stable, 1.5m, N(m) to 7/16 DIN(m), 18GHz, 50Ω	DTC-18NMDM-1.5
RF Test Port Cable, Armored, phase stable, 3.0m, N(m) to N(f), 18GHz, 50Ω	DTC-18NMNF-3.0
RF Test Port Cable, Armored, phase stable, 3.0m, N(m) to 7/16 DIN(f), 18GHz, 50Ω	DTC-18NMDF-3.0
RF Test Port Cable, Armored, phase stable, 3.0m, N(m) to 7/16 DIN(m), 18GHz, 50Ω	DTC-18NMDM-3.0
RF Test Port Extension Cable, phase stable, 1.5m, N(f) to N(f), 18GHz, 50Ω	DTC-18NFNF-1.5
Precision Adapter Kit, 50Ω (PNFNF, PNFD, PNFDF, PNTE)	DPAK-1000
Precision Adapter, N(m) to N(m), DC to 18GHz, 50Ω	DPA-NMNM
Precision Adapter, N(f) to N(m), DC to 18GHz, 50Ω	DPA-NFNM
Precision Adapter, N(f) to N(f), DC to 18GHz, 50Ω	DPA-NFNF
Precision Adapter, N(f) to 7/16 DIN N(m), DC to 6GHz, 50Ω	DPA-NFDM
Precision Adapter, N(f) to 7/16 DIN N(f), DC to 6GHz, 50Ω	DPA-NFDF
Precision Adapter, N(f) to SMA(f), DC to 6GHz, 50Ω	DPA-NFSF