

Features:

- **Fast Performance:**
Up to 10 Million Samples per Second
- **Accurate Measurements with Dynamic Range of:**
 - 65 dB for 6 GHz Model (Model 7002-002)
 - 55 dB for 18 GHz Model (Model 7002-004)
- **Low Measurement Uncertainty**



*ETS-Lindgren's EMPower Plug-in Card with
EMPower Power Meter*

ETS-LINDGREN'S EMPower POWER METERS make fast, accurate power measurements, even at low power levels.

The EMPower modular plug-in card occupies one slot in the EMCenter™, and includes four USB ports, accommodating any combination of up to four EMPower or EMPower Pulse™ sensors. Alternatively, an EMPower sensor can be connected directly to a PC using a standard USB port and included software.

Both power meters have an accuracy of 0.25 dB, making them suitable for measurements in accordance to automotive, military, telecom, and basic EMC standards.

EMPower is fully supported by TILE!™, EMQuest™, and other test automation software packages.

Please contact ETS-Lindgren for additional information.

FEATURES

Fast Performance

The EMPower Meters perform power measurements at a maximum sampling speed of 10 million samples per second. Both power meters are also capable of measuring CW.

Accurate Measurements

EMPower allows high precision RF measurements with high dynamic range of 65 dB for the 6 GHz model, and 55 dB for the 18 GHz model.

Low Measurement Uncertainty

Impedance mismatch is a main contributor to measurement uncertainty in RF power measurements. EMPower sensors have low VSWR to overcome this problem.

STANDARD CONFIGURATION

- EMPower Meter Plug-in Card
- EMPower RF Power Sensor (Please Specify Model)
- 2 m Shielded USB Cable
- Installation CD

OPTIONS

- EMCenter Modular RF Test Platform (Model 7000-001, Required for Operation)
- I/O Interface Plug-in Module (Model 7000-002)
- Additional RF Power Sensors
- ISO 17025 Accredited Calibration for EMPower (Model 7002-002)
- ISO 17025 Accredited Calibration for EMPower (Model 7002-004)

Physical Specifications

MODEL FEATURE	7002-001 (MODULAR PLUG-IN CARD)	7002-002 (SENSOR)	7002-004 (SENSOR)
Temperature Range (Use)	0° C to +40° C	0° C to +40° C	0° C to +40° C
Temperature Range (Storage)	-20° C to +85° C	-20° C to +85° C	-20° C to +85° C
Relative Humidity	10 to 90% (Non-condensing)	10 to 90% (Non-condensing)	10 to 90% (Non-condensing)
Connector to Plug-in Card or PC (Data)	n/a	USB-B	USB-B
USB Communication	n/a	USB 1.1	USB 1.1
USB Power Consumption	n/a	< 200 mA	< 200 mA
RF Input Connector	n/a	N-type Precision	N-type Precision

Performance Specifications (EMPower Sensors)

MODEL FEATURE	7002-002 (SENSOR)	7002-004 (SENSOR)
Detector Type	Diode	Diode
Measurement Function	RMS CW Power	RMS CW Power
Calibrated Frequency Range	9 kHz to 6 GHz	80 MHz to 18 GHz
Power Measuring Range	-55 dBm to +10 dBm	-45 dBm to +10 dBm
Input Damage Level	> 20 dBm	> 20 dBm
Resolution	0.01 dB	0.01 dB
VSWR	< 1.05 @ 9 kHz to 100 MHz < 1.15 @ 100 MHz to 2 GHz < 1.35 @ 2 GHz to 6 GHz	< 1.20 @ 10 MHz to 6 GHz < 1.35 @ 6 GHz to 18 GHz
Maximum Linearity Error (0 dBm ref)	0.05 dB / 10 dB	0.5 db / 10 dB
Measuring Speed (Per Second)	10 Million Samples	10 Million Samples
Accuracy (23° ± 2° C)	0.25 dB	0.25 dB (≤ 10 GHz) 0.50 dB (> 10 GHz)
Temperature Effect	< 0.15 dB Over Full Temperature Range	< 0.15 dB Over Full Temperature Range
Measurement Units	dBm	dBm

Sensor Filter Specifications

FILTERS	# OF AVERAGES (ms)
Filter 1	1
Filter 2	3
Filter 3	10
Filter 4	30
Filter 5	100
Filter 6	300
Filter 7	1000
Auto Mode	See Right

Sensor Filter Specifications (Auto Mode)

FILTERS	AUTO MODE
Filter 3	+10 dBm to 0 dBm
Filter 3	0 dBm to -10 dBm
Filter 3	-10 dBm to -20 dBm
Filter 4	-20 dBm to -30 dBm
Filter 5	-30 dBm to -40 dBm
Filter 6	-40 dBm to -50 dBm
Filter 7	≤ -50 dBm