

# Broadband Electromagnetic Field Meter EM9N/EM9D

## Key Benefits

- Double efficiency in monitoring EMF than traditional methods
- Built-in GPS/GSNN receiver, electronics compass, temperature & humidity sensors
- Scenic and surrounding view with built-in HD camera
- Operation procedure and log with geographical information
- Optional 4G SIM card to capture base station ID
- Auto-generation of drive test data
- User-defined measurement templates
- Bluetooth, Wi-Fi and USB-C communication interface
- Screen capture and measurement recording for public/environment safetylaw enforcement
- 4GB RAM and 16GB ROM internal memory
- Cloud sever upload and integration

## Applications

- Public / Environmental
- 5G base station / cell tower
- TV and radio broadcasting tower
- Public safety regulation compliance
- Aviation, marine and railway system

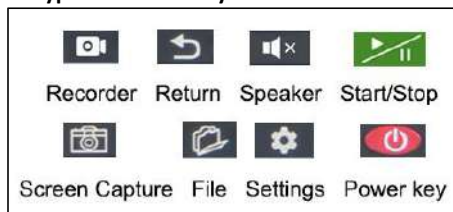
## Interface

### 1. Front Panel

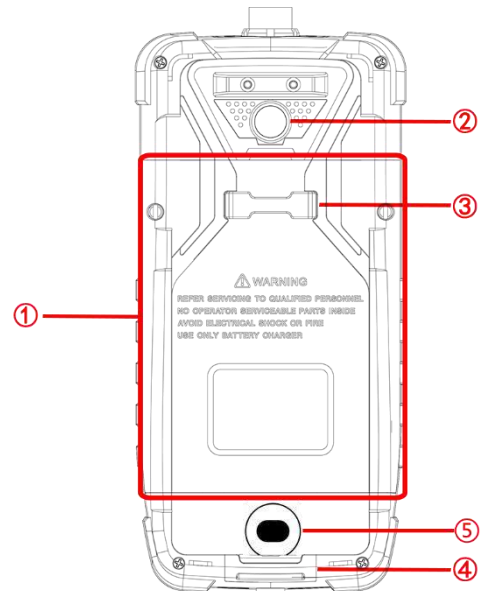


1	RF Input (from probe)
2	5.5" touch screen LCD
3	Keypad function keys
4	Menu buttons
5	Power (LED) indicator
6	Temperature and humidity sensor
7	Speaker

### Keypad Function Keys



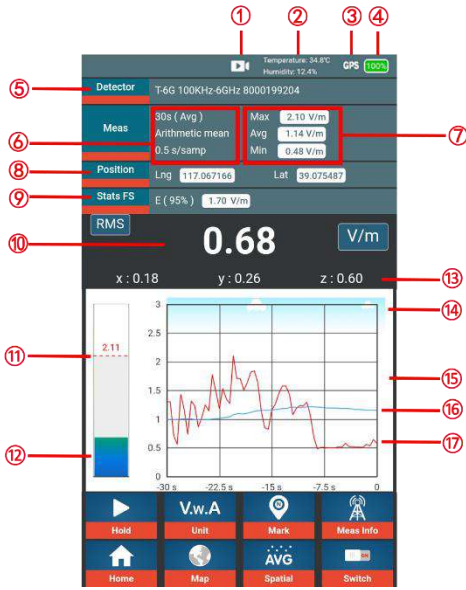
### 2. Back Panel



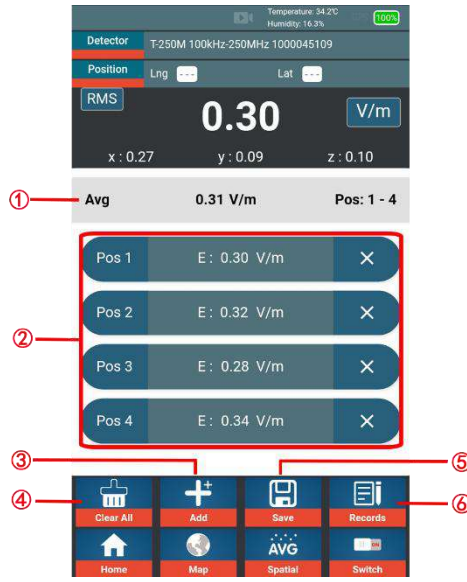
	Battery compartment, built-in SIM/TF card slot (SIM/TF not included)
1	<b>Note:</b> When removing the battery, screws on both sides of the compartment need to be unscrewed to uncover the compartment for battery replacement.
2	Rear camera
3	Top hand strap fixture
4	Bottom hand strap fixture
5	Laser for height measurement to the ground

# Features

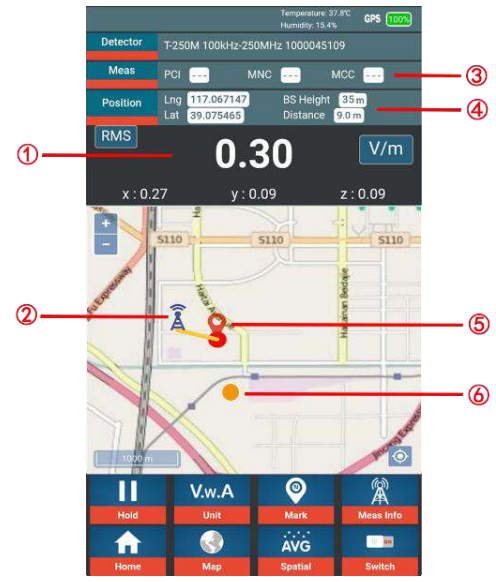
## 1. Time-Average Field Strength Measurement



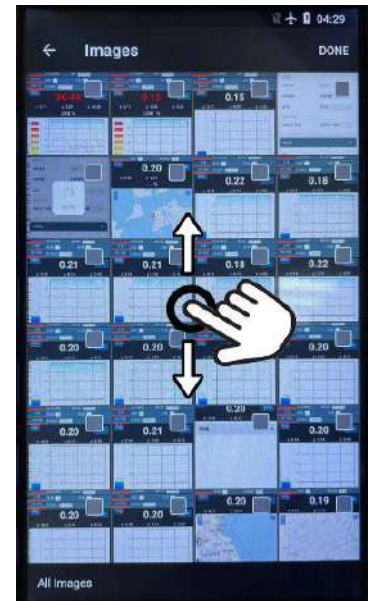
## 2. Spatial-Average Field Strength



## 3. Base Station Monitoring



## 4. Multi-Touch Gesture



# Specifications

## Meter Specifications

EM9N (single channel) / EM9D (dual channel)	
Frequency Range	DC to 40GHz (probe dependent)
Measurement Mode	Broadband (DC) sampling or FFT Spectrum analysis (dual channel)
Display Range	0.001 to 999
Measurement Unit	Electric Field - kV/m, V/m, mV/m, W/m <sup>2</sup> , mW/cm <sup>2</sup> , μW/cm <sup>2</sup> Magnetic Field – T, mT, μT, nT, pT, fT, A/m, mA/m, μA/m, nA/m, G, mG, μG, nG
Interface	12-pin aviation socket, USB-C, AC/DC power adapter
Built-in Sensor	GPS/Beidou, Wi-Fi, Bluetooth, electronic compass, temperature, humidity, and laser height measurer
Memory	4G RAM/16G ROM up to thousands of pictures and video clips
Power Supply	DC 12V/2A adapter Li-Ion battery 7.4V/5A (37W)
Operating Hours	>10 hours
Operating Temperature	-10°C to +50°C

T-400KHz Low Frequency Electromagnetic Field Probe (For EM9D Only)		
Frequency Range	10Hz to 400kHz	
Probe	Electric field E	Magnetic field H
Measurement Range	1V/m to 100kV/m	100nT to 20mT (50Hz)
Frequency Response	±1dB	±1dB
Linearity Error	±0.5dB (>200V/m)	±0.5dB (>2uT)
Isotropic	±1dB	±1dB
Maximum Measurement	200 kV/m	40mT (50Hz)
FFT Frequency Selective Analysis	Bandwidth 400Hz, 4kHz, 40kHz, 400kHz	
Oscilloscope	Time-Domain diagram, RMS/Peak trigger	
Calibration Cycle	24 months	

## Probe Specifications

T-6G Broadband Probe (Electric Field)	
Frequency Range	100kHz to 6000MHz
Measurement Range	0.2V/m to 650V/m (CW), 0.2V/m to 20V/m (RMS)
Frequency Response	±1.5dB (900MHz to 3GHz) ±2.5dB (< 900MHz, >3GHz)
Probe	Electric field, X/Y/Z 3-axis, omni-directional
Probe Sensor	Diode Dipole
Linearity Error	±0.5dB (@1GHz)
Isotropic	<±1dB (@1GHz)
Calibration Frequency (MHz)	0.1/0.15/0.2/0.3/1/3/10/27/30/50/100/200/300/400/500/600/700/750/790/910/1000/1800/2450/2700/3000/4000/5000/6000
Calibration Cycle	24 months

T-8G Broadband Probe (Electric Field)	
Frequency Range	100kHz to 8000MHz
Measurement Range	0.2V/m to 650V/m (CW), 0.2V/m to 20V/m (RMS)
Frequency Response	±1.5dB (900MHz to 3GHz) ±2.5dB (< 900MHz, >3GHz)
Probe	Electric field, X/Y/Z 3-axis, omni-directional
Probe Sensor	Diode Dipole
Linearity Error	±0.5dB (@1GHz)
Isotropic	<±1dB (@1GHz)
Calibration Frequency (MHz)	0.1/0.15/0.2/0.3/1/3/10/27/30/50/100/200/300/400/500/600/700/750/790/910/1000/1800/2450/2700/3000/4000/5000/6000/8000
Calibration Cycle	24 months

T-40G Broadband Microwave Probe (Electric Field)	
Frequency Range	10MHz to 40GHz
Measurement Range	1V/m to 1000V/m (CW), 0.2V/m to 20V/m (RMS)
Frequency Response	±2dB (10MHz to 18GHz) ±3dB (18GHz to 40GHz)
Probe	Electric field, X/Y/Z 3-axis, omni-directional
Probe Sensor	Diode Dipole
Linearity Error	±1dB (@1GHz)
Isotropic	<±1dB (20MHz to 10GHz) <±2dB (10GHz to 40GHz)
Maximum Measurement	1500V/m
Calibration Cycle	24 months

## Ordering information

### Standard Configuration and Accessories (included with instrument)

Description	Part No.	Order No.
Broadband Electromagnetic Field Meter EM9N Base Unit	EM9N	0110.0009.01
Broadband Electromagnetic Field Meter EM9D Base Unit	EM9D	
Rechargeable Li-ion Battery (7.4V/5000mAh)	JQ050-02L	6270.0100.02
Power Supply DC Vehicle Adapter(12V/5A)	12V/5A	6120.0700.04
External GPS Module	GPS	6120.0400.03
Hand Strap for EM9 Base Unit	EM9N.4.621	6110.0300.01
Lenovo USB-C DOCK F1-C09		
Handheld Tripod	MT-22	6110.0900.06
Power Adapter(12V/2A, 24W)	12V2A	6250.0700.03
Power Adaptor Plug Cord (Europe)	EU	6250.0700.06
Power Adaptor Plug Cord (Unite States)	AE1000-010	6250.0700.02
Hard Case (for EM9 Base unit, 1 Probe and EM20 Calibrator)	2838H	6120.0600.67
Shoulder Belt for hard Case	EM9N-007	6120.0600.66
Field Strength Calibrator EM20	EM20	2110.0020.00
User manual (English)	EM9N-001	6120.0600.65

### Optional Accessories

Broadband Probe T-6G (100KHz-6GHz)	T-6G	6110.0900.01
Calibration Certificate EM9-T-6G	EM9-009	6120.0600.63
Broadband Probe T-8G (100kHz-8GHz)	T-8G	2120.0009.00
Calibration Certificate EM9-T-8G	EM9-010	6120.0600.64
Low Frequency Electromagnetic Field Probe T-400K (Only EM9D)	T-400K	
Calibration Certificate T-400K		
Broadband Probe T-40G (10MHz-40GHz)	T-40G	
Calibration Certificate T-40G		
1.5m probe extension cable	1.5m	6120.0500.47
Beacon Generator MD001	MD001	2110.0020.00
Ground tripod		



EM9D with T-400K probe    Beacon Generator MD001    Field Strength Calibrator EM20