

# EFcube

## BROADBAND ELECTROMAGNETIC FIELD PROBE



EFcube is a broadband electromagnetic field probe that allows field measurement with minimum disturbance of the electromagnetic environment due to its small size and fibre optic connection.

The EFCube probe is isotropic, comprising 3 orthogonal sensors, so that it will give an accurate value for the electromagnetic field regardless of polarisation and its direction. The probe measures and gives the value of the field on 3 axes and makes a vectorial sum to obtain the total field.

The probe is powered by a rechargeable battery and is connected to a PC using a fibre optic connection and a small fibre-USB converter, EFCube Reader software allows easy reading of each independent axis and the total field

### FREQUENCY CORRECTION

The probe can be used in two ways:

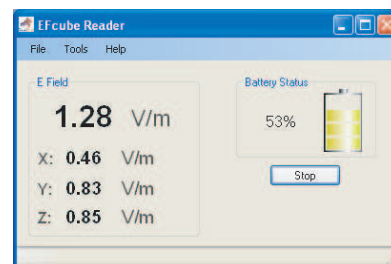
- With frequency correction:  
Indicating the frequency at which the measurements are taken, the software eliminates the uncertainty introduced by the probe frequency response.
- Without frequency correction (as a broadband probe):  
With the uncertainty indicated in the specifications.



### MEASURING SYSTEM

The EFCube system consists of the field probe, the fibre-USB converter, a fibre optic cable and a USB cable that provide the full path for obtaining the field measurements on a PC.

The system is completed by the EFCube Reader software (included), which allows a PC to display the field values and the charge level of the probe's battery.



### USUAL APPLICATIONS

- Field monitoring in radiated immunity measurements.
- Calibration of anechoic chambers, OATS, TEM cells, WaveCell, GTEM, etc.
- Field homogeneity measurements.

## Technical Specifications

<b>Sensor type</b>	Isotropic. 3 orthogonal axis
<b>Frequency range</b>	30 - 3000 MHz
<b>Field measurement range</b>	1 - 150 V/m
<b>Dynamic range</b>	44 dB
<b>Sensitivity</b>	1 V/m
<b>Resolution</b>	< 0.05dB (< 0.5 % of measured field)
<b>CW damage level</b>	1500 V/m
<b>Linearity</b>	± 0.5 dB
<b>Firmware update</b>	conector mini USB
<b>Isotropic deviation</b>	< ± 0.4 dB [30 - 2000 Mhz] < ± 1 dB [2000 - 3000 Mhz]
<b>Frequency response flatness (without correction)</b>	± 1.6 dB [30 - 1000 MHz] ± 2.7 dB [30 - 2800MHz]
<b>Sample rate</b>	5 samples/s
<b>Power supply</b>	Li-ion rechargeable battery
<b>Battery life</b>	> 10 hours
<b>Dimensions</b>	
<b>Probe:</b>	56 x 48 x 48 mm
<b>USB converter:</b>	78 x 40 x 23 mm
<b>Weight</b>	60 g
<b>Temperature range</b>	0 - 45 °C (recom. 15-30 °C)
<b>Physical interface</b>	Single optical fiber + Optical-USB converter
<b>Software</b>	EFcube Reader (included)
<b>System requirements</b>	Windows 2000/XP/Vista and USB port
<b>Calibration interval</b>	24 months recommended



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