Emtech Space

Suitcase Multi-Magnetometer Facility

The Suitcase Multi-Magnetometer Facility is a portable magnetic field measurement and modeling system designed for spacecraft magnetic cleanliness applications, supporting both DC and low-frequency AC measurements.

Magnetic Measurement Unpacked

Solves the fundamental mobility limitations of traditional magnetic cleanliness facilities by enabling in-situ testing of subsystems, payloads, or complete small satellites.

- Early Issue Detection
- Light weight - easy to carry - easy to use
- Reduced Logistics

Synchronous DAQ

A dedicated unit providing power, acquisition, and precise timing across all sensors.

Deployable Sensors

Synchronized fluxgate (DC) or search-coil (AC) magnetometers arranged in a scalable architecture

Dual-Platform Software

Mobile application for guided setup and configuration, paired with desktop software for data retrieval and visualization

Photogrammetry Positioning

A smartphone-based application automatically estimates the precise 3D position of each sensor relative to the test article.

Easy Integration

Direct compatibility with magnetic dipole modeling tools for spacecraft-level field prediction

Specifications*

Facility Elements

Magnetometers (in one case):
2
Type
Fluxgate (DC field)
Search Coil (AC Field)
Range
70 or 100 µT, DC-3kHz (fluxgate)
2µT p-p. 1 mHz-50 kHz (search coil)
Power Supply
via EMTECH Space synchronous DAQ
Mechanical Support
2 tripods with suitable housings
Height Range
0.48 - 1.22 m

DAQs

DAQs (in one case)
2, one for each magnetometer
Resolution
16 bit
Bandwidth
200 kHz (min)
Input ranges
USB, Bluetooth
Interfaces
SD Card
Data Storage
Synchronous (with other DAQs also)
Features
Several suitcases can be used in synchronous mode to increase accuracy
DC offset removal
Battery operated
DSP based
Interface to SW application

System Features

- Matlab/Scilab Interface with direct/inverse MDM solvers
- Automatic magnetometers positioning estimation (photo based)
- Software Application for the control of the facility

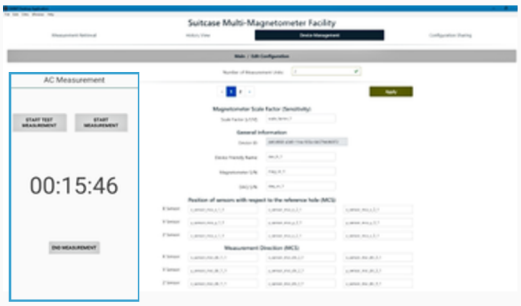
*Contents are subject to change without prior notice.

Facility Main Elements

EMTECH DAQ

Fluxgate /Search Coil Magnetometers

Software application



Proven Capability

Resilience: Accurate EUT magnetic signatures under realistic conditions.
Innovation: Photogrammetry-based system eliminates major measurement uncertainties.
Lifecycle Control: Supports in-situ deployment for subsystems and satellites throughout development.

Contact us

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