DigiProces

Electromagnetic Compatibility Laboratory (EMC)

The Electromagnetic Compatibility Laboratory (EMC) at DigiProces allows to perform pre-certification essays in an almost immediate way and speeding up the verification and validation time for the commercialization of electric and electronic products.

Ensuring electromagnetic compatibility of a product is essential to avoid interferences affecting its proper functioning and taking EMC into account from early stages of design is the best way to avert delays when bringing the product to the market.

Advanced technology

The DigiProces EMC laboratory integrates a semi-anechoic chamber covered with ferrites in this first phase, which allows to carry out essays with radiated emissions and radiated immunity up to 6 (1) GHz.

- Capacity to develop essays with precise measurements:

Conducted emissions

Conducted immunity

ESD (electrostatic discharges)

Optimize resources and reduce costs

Having an internal laboratory for these tests is a great competitive advantage for DigiProces.

Final essays in a certified laboratory get reduced to a mere formality allowing to:

- Avoid redesign works in final stages because of a last minute default
- Minimize reengineering costs

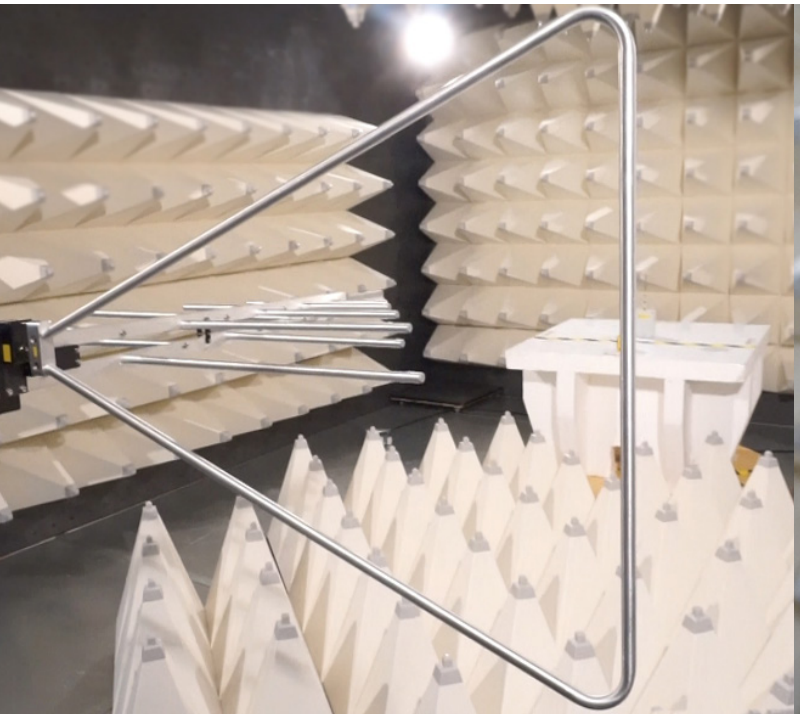
At DigiProces we can develop investigative essays to guarantee the efficacy of the electronic design and optimize the solutions required: **maximum performance at the lowest cost**.

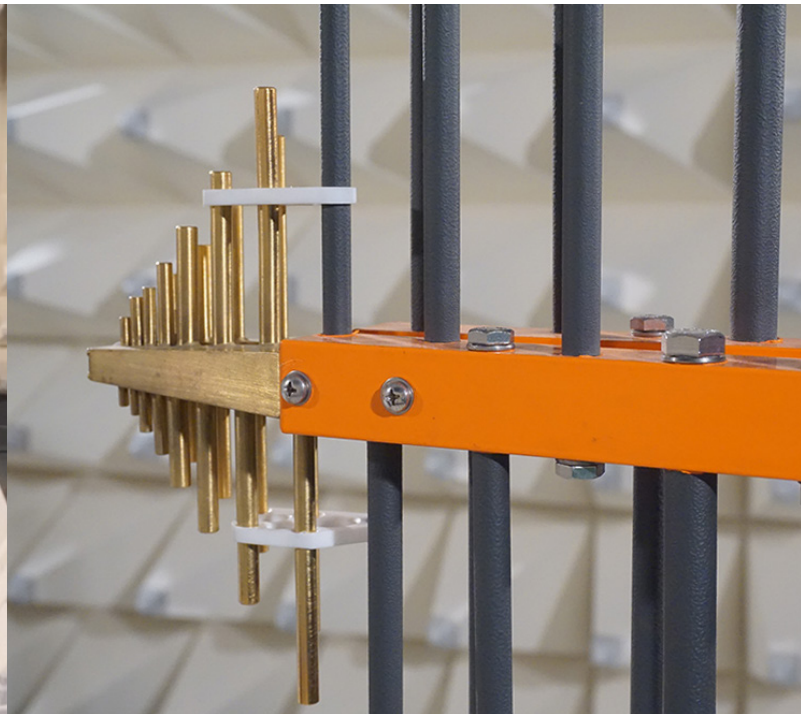
Experience and reliability

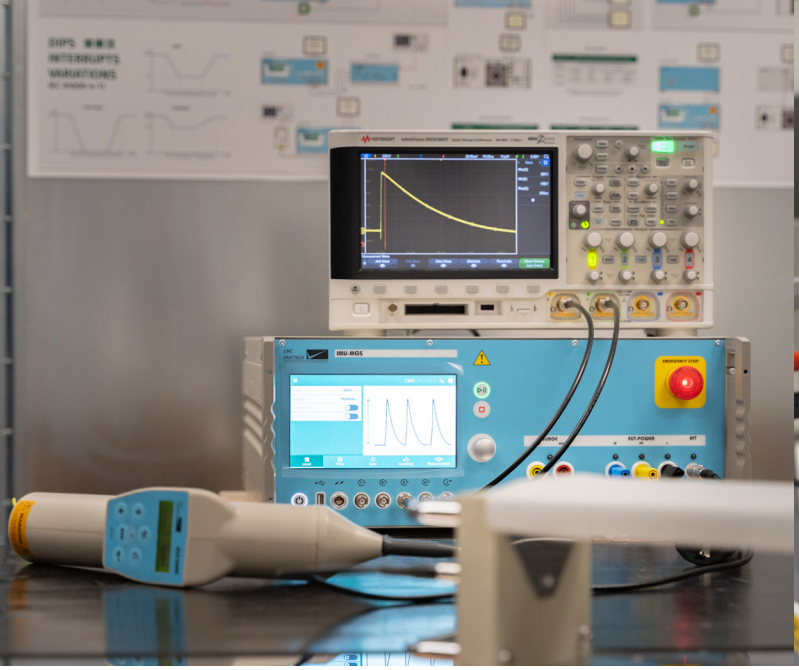
The innovative facilities of the DigiProces EMC laboratory are handled by an experienced team that assures the most demanding results in every project.

At the service of the industry

DigiProces also makes its EMC lab available to the industry, offering other companies the possibility of using it so that they can assess the status of their projects, improve them or solve problems before their launch onto the market in a quick, efficient and cost-effective way.







CAPACITIES OF THE LABORATORY

General description	Pre-certification essays for electronic equipment in a semi-anechoic chamber sized 6 x 4.4 x 2.7m measuring up to 6 GHz according to standards such as UNE-EN IEC 61000-6-1 Immunity for residential environments, UNE-EN IEC 61000-6-2 Immunity for industrial environments, UNE-EN IEC 61000-6-3 Emission for residential environments and UNE-EN IEC 61000-6-4 Emission for industrial environments.	
Standard	**Specification**	**Capacities**
UNE-EN 55011 (CISPR 11)	Industrial, scientific and medical equipment. Radio-frequency disturbance characteristics.	Conducted emissions: According to CISPR16-1-2 for equipment up to 32 A, DC at 60 Hz, 230 Vac / 325 Vdc L/N-L/PE-N/PE or discontinuous emissions according to CISPR14 and up to 32 A 3-phase. 400 Vac / 565 Vdc (L/L). Radiated emissions: In semi-anechoic chamber at 3 m distance and QZ Ø 01.2 x 1.8 m up to 6 GHz according to CISPR16-1-2.
UNE-EN IEC 55015 (CISPR 15)	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment.	
UNE-EN 55032 (CISPR 32)	Electromagnetic compatibility of multimedia equipment. Emission requirements.	
UNE-EN IEC 61000-3-2	Limits for harmonic current emissions (equipment input current =16 A per phase).	Input current < 10 A
UNE-EN 61000-3-3	Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current = 16 A per phase and not subject to conditional connection.	Input current < 10 A
UNE-EN IEC 61000-4-3	Radiated, radio-frequency, electromagnetic field immunity test.	1.2 x 1 m uniformity plane 20 V/m @ 80 MHz a 250 MHz, 10 V/m @ 250 MHz a 1 GHz. 20 V/m @ 800 – 1000 MHz. Up to 6 GHz in process.
UNE-EN 61000-4-2	Electrostatic discharge immunity test.	Up to 10 kV in contact discharges. Up to 16 kV in air discharges.
UNE-EN 61000-4-4	Electrical fast transient/burst immunity test.	Single-phase supply and I/O wiring. Up to 4 kV.
UNE-EN 61000-4-5	Surge immunity test.	Single-phase supply. Up to 4 kV.
UNE-EN 61000-4-6	Immunity to conducted disturbances, induced by radio-frequency fields.	Single-phase supply ≤ 16 A. Up to 10 Vrms.
UNE-EN 61000-4-8	Power frequency magnetic field immunity test.	1 m x 1m Coil. 50 Hz. Up to 100 A/m.
UNE-EN 61000-4-11	Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase.	Single-phase supply ≤ 16A.
UNECE Regulation No. 10	International regulation regarding electromagnetic compatibility of vehicles.	Limitation by EUT size: Radiated emissions, wide band. Radiated emissions, narrow band. Conducted emissions. Harmonic emissions in AC (limited to 10 A). Flicker emissions in AC (limited to 10 A). EFT AC/DC (single-phase limited). Surge AC/DC (single-phase limited).