BETA
SIMULATION SOLUTIONS

IMACS
ASERIS-BE™

The electromagnetic simulation solver

High performance
simulations for Electromagnetics

ASERIS-BE™ is a key component of the ASERIS™ electromagnetic simulation suite, co-developed by AIRBUS and IMACS as an essential link in the aircraft design chain.

ASERIS-BE™ is based on the Boundary Element Method (BEM) in the frequency domain. It implements fast solvers such as the multi-level Fast Multipole Method (FMM) and the H-matrix method. Main applications include among others: Radar Cross Section (RCS), antenna design, antenna placement, Electromagnetic Compatibility (EMC), Lightning Direct and Indirect Effects (LDE/LIE), High Intensity Radiated Fields (HIRF).

For almost 20 years, continuously being improved, ASERIS-BE™ has a record of successful implementation in several industrial domains and application scenarios, while its capabilities allow its further deployment for addressing more computational challenges.

With the deployment of the BETA CAE Systems suite, combined with ASERIS-BE™, the industry solves problems emerging from complex applications and tackle challenging scenarios, with high Return On Investment.

Features:

- Exact electromagnetic modelling of complex, real-life scenarios.
- Flexible and dynamic post-processing of EM fields with low computational footprint.
- Handling of arbitrary combinations of dielectric and conducting objects, including zero-thickness sheet modelling.
- Supports a wide variety of electromagnetic material types, covering a broad spectrum of modelling needs
- Great variety in model excitations (analytical/numerical, distributed/lumped).
- Generation of and coupling with Huygens sources.
- Broad-band simulations feasible due to low-frequency stability and high-performance computing.

Benefits:

- Broad range of implementation areas.
- Reduced modeling effort.
- Smaller model sizes and storage requirements.
- Low memory and computational footprint.
- Very high performance in all the supported computational platforms.
- Very accurate numerical approximations.
- Efficiency and reliability.
- High level interaction with BETA CAE Systems software suite.
- Automated processes, model set-up and post-processing tools with BETA CAE Systems software.
- Prompt and committed technical support.
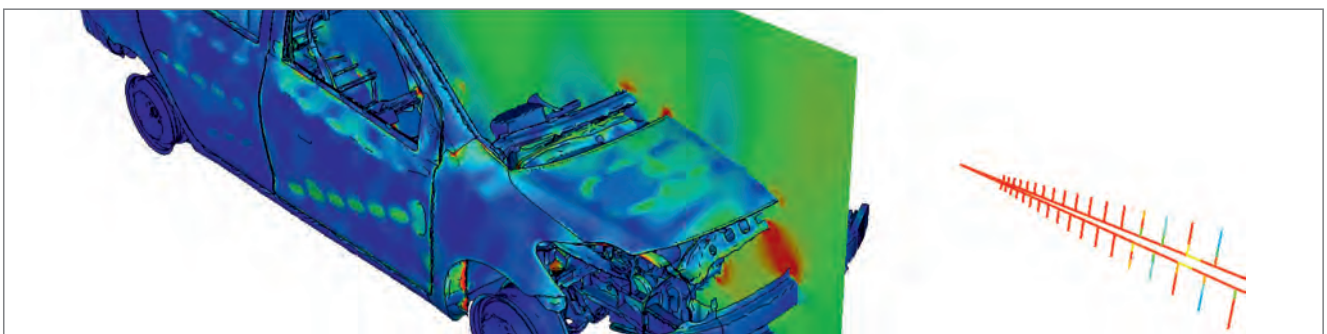
ASERIS™ & ASERIS SOFTWARE™ are registered trademarks of AIRBUS S.A.S.

BETA
SIMULATION SOLUTIONS

physics on screen

www.beta-cae.com