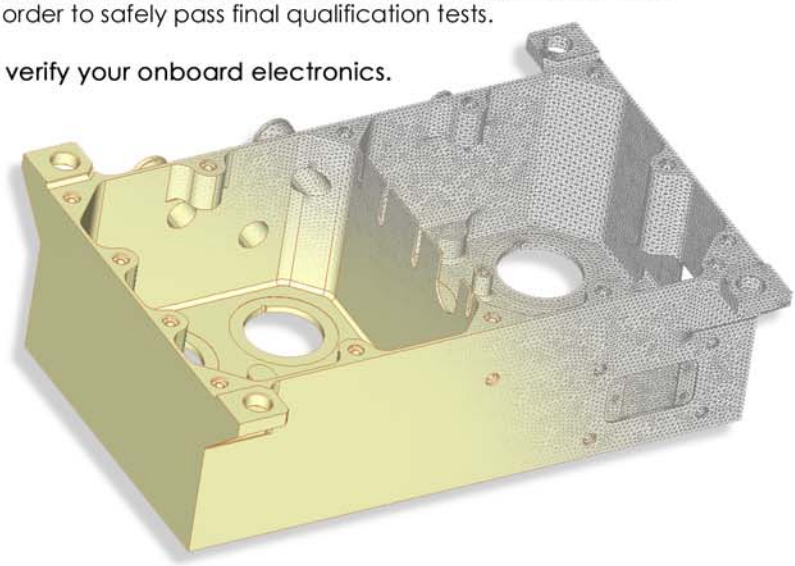
Onboard Electronics
Mechanical Design & Analysis

Onboard electronics is nowadays present in most of the transportation systems - aircraft, automobile, trains -, aerospace systems - spacecraft, launch vehicle -, and defense systems. One can find sensors, electronic boards, racks, switch boards, converters, etc. Very often these electronic equipments have to be packaged in a hardly mounted rack or in a dedicated container. Because of their final use, these equipments have to survive harsh mechanical environment described as high accelerations and shocks, large temperature variations, high level vibrations, etc. It is thus critical to account for these environmental characteristics early in the design process in order to safely pass final qualification tests.

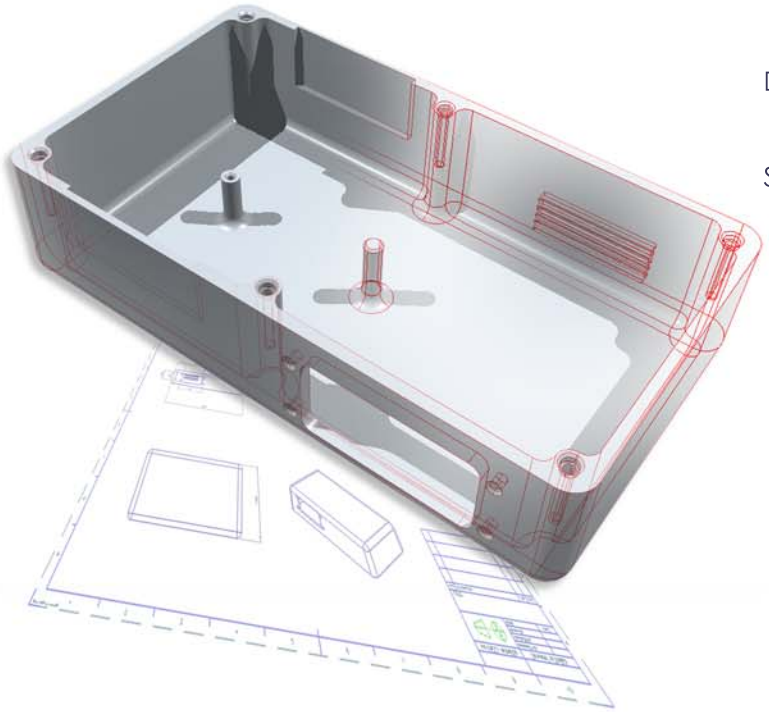
In this demanding context, we can help you design and verify your onboard electronics.



Mechanical Design

Definition of technical requirements
Feasibility study
Dimensioning (hand-calculation / FEA)
Material selection
3D CAD Modeling
Industrialization (sheet metal / molding)
Nomenclature
Geometric dimensioning and tolerancing
Drafting and detailing

Design report
Drawings (Assembly / Details)

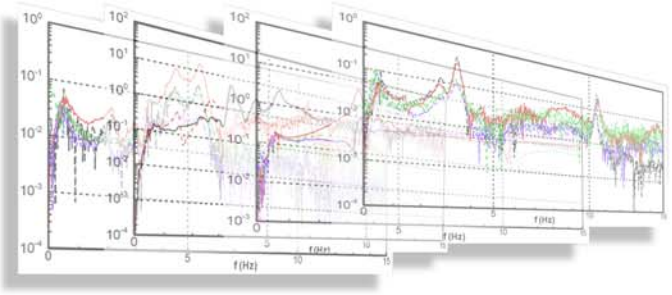


Structural Analysis

Structural performance evaluation *(under mechanical environment)*
- Force / pressure
- Body acceleration
- Thermal loading

Dynamic response analysis
- Sine/random excitation
- Shocks (ex. half sine)

Support for mechanical test planning
- Recommendations for sensor types and locations
- Test measurement simulation(using FEA)



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