

Launchers  
Satellites  
Transversal competencies



Terakalis, specialist of **TeraHertz electromagnetic waves**, designs and manufactures highly innovative devices for the analysis and the **Non Destructive Testing** of the **internal properties** of non-metallic materials (polymers, elastomers, ceramics):

- **2D or 3D imaging defect:** porosities, homogeneity, corrosion under coating, cracks, delamination, foreign particles, adhesive bonds, welding control...
- Single or multi-layer cartography **thickness measurement** (thin or thick)
- **Material aging** characterization

## COMPETENCIES & CAPABILITIES

For the health control of mechanical parts or structures or coatings, we have:

- a team of 4 expert engineers/doctors in the TeraHertz field, experienced in material inspection issues, also capable of developing electromagnetic modeling tools
- an exhaustive technological platform to test the performance of our solutions on samples, industrial parts with 2D or 3D geometry
- a team of 12 engineers/technicians to design and develop innovative solutions, experienced in the fields of TeraHertz optics, radio-frequency, electronics, mechanics, robotic, signal, image processing and AI
- 2 project managers for the management of R&D projects



# TERAKALIS

## PRODUCTS & SERVICES

### PRODUCTS

This technology is fast with high sensitivity of detection to heterogeneities, non-contact and non-harmful, portable, integrable on robot arm. We offer a full range of products, from lab equipment to integrated line-of-production equipment and portable solutions for operational sites.

### SERVICES

We have a complete technology platform and a multidisciplinary team to carry out our services samples analysis, feasibility studies, prototyping, expertise. We have at our disposal instruments for imaging, thickness measurement, terahertz spectroscopy, Industrial robot, and IT tools like modelling, AI, etc.

We are able to support our clients during all phases of their project from start to finish. And offer you the necessary support whether for training, maintenance or after-sales service.

## MAJOR SPACE PROJECTS & REFERENCES

Since its creation in 2013, Terakalis has carried out more than 250 demonstration studies in different sectors of activity such as aeronautics, defense & space, automotive or oil and gas. Today our solutions are used in industry.

We have participated in many projects in the space sector. As for example in 2017, we were the winner of the ESA Bic Sud France competition. In 2020 we were a finalist in an open innovation competition organized by Ariane Group in the predictive maintenance category.

We are currently working with various space players, in particular with CNES, Thales Alenia Space, Avio and Air Liquid.

## POINT OF CONTACT

**ADDRESS** 256, rue de Thor  
34000 MONTPELLIER France

**WEBSITE** [www.terakalis.com](http://www.terakalis.com)

**PHONE** +33 (0)4 11 93 73 67

**POINT-OF-CONTACT** : Sabri BEN KHEMIS, commercial engineer  
[s.benkhemis@terakalis.com](mailto:s.benkhemis@terakalis.com), +33 (0)6 03 21 03 47

**TURNOVER** > 1M€

**WORK FORCE** 20 employees

**SPACE TURNOVER** NC

**SPACE WORK FORCE** 20 employees