



# STRUCTURAL HEALTH MONITORING IN AIRCRAFT STRUCTURES

*In the Horizon2020 program Technobis is partner in the EXTREME Dynamic Loading project for the development of a Fiber Optic Sensing system with the capability to perform extreme measurements. In this project the general objective is to push the boundaries of aerospace composite material structures.*

The aim of the project is to develop novel material characterization methods and in-situ measurement techniques, material models and simulation methods for the design and manufacture aerospace composite structures under EXTREME dynamic loadings leading to a significant reduction of weight, design and certification cost. Technobis involvement concerns the development of the *SuperGator*.

The *SuperGator* an FBG interrogator with a Sampling Speed up to 1MHz, a Resolution of less than 0.1 pm, and Dynamic Range of 5%, which demonstrates high performance measurement capability utilizing standard optical telecom fiber for extreme loading conditions. The *SuperGator* is intended as an ideal measurement solution that provides high performance measurements on static, dynamic, high dynamic and extreme dynamic phenomena in aircraft structures with one single low footprint system. The *SuperGator* is considered a breakthrough in applicable and affordable sensing capabilities.

*SuperGator*



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