



LANDING GEAR LOAD SENSING

In the CleanSky 2 program Technobis is partner in the ALGeSMo project to develop a sensing system that will measure load at the landing gear. The objective for this system is to provide load data for use in aircraft systems that can be integrated with aircraft Health Monitoring, hard landing detection, flight management and flight controls.

The project is taking a fully integrated system from post-TRL 4 through to flight test on a single-aisle aircraft and to the demonstration of a working aircraft-integrated system at TRL 6. This includes the integration of load and torque sensors into large passenger aircraft landing gear to provide robust, accurate, reliable load measurements and the potential for Health Monitoring capability. The sensors will measure loads using Fibre Bragg Grating technology integrated into Airbus-patented landing gear.

The project covers a complete framework of activities, starting with the integration of dedicated optical fibers into composite structures, the readout of the optical fibre sensor with state-of-the-art miniature and reliable ASPIC-based FBG Interrogator Technology from Technobis.

For this purpose Technobis developed an OEM multi-channel and high speed FBG interrogator device, called **LandingGator**. Although the system is developed in the context of the landing gear load sensing application, the system being qualified for the aerospace environment actually supports many more aerospace sensing applications where multiple fiber optic channels and high speed FBG interrogation is required, such as damage and impact detection, shape monitoring of morphing structures and structural load sensing.

LandingGator



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