

FEBUS Optics: French Innovation Bringing Fiber Optics to the World Stage

In just ten years, FEBUS Optics has become one of the world's leading players in Distributed Fiber Optic Sensing. From its headquarters in Pau, the company develops technologies capable of transforming miles of optical fiber into intelligent sensors used to monitor critical infrastructure around the world.

At a time when energy networks, transportation infrastructure, and telecommunications systems face growing security and resilience challenges, FEBUS Optics continues on a remarkable trajectory. Founded about ten years ago in the region of Béarn (South-West of France), the company now employs more than 75 people and deploys its solutions across several continents.

At the core of its expertise is DFOS (Distributed Fiber Optic Sensing) technology, which makes it possible to use an optical fiber as a continuous sensor capable of detecting temperature variations, vibrations, strain, and acoustic events over dozens or even hundreds of kilometers.

Today, this technology is used to monitor energy networks, pipelines, transportation infrastructure, civil engineering structures, telecommunications and power cables, as well as areas exposed to natural hazards. It also finds applications in the oil and gas industries and in geoscience.

Global Growth from Pau

While its headquarters, research and development activities, and manufacturing operations remain based in Pau, the company has gradually expanded its international presence with offices in Dubai, Houston (through FEBUS Inc.), Kuala Lumpur, and more recently Bogotá. A dedicated Middle East entity is currently under consideration to support rapidly growing demand in the region.



This expansion is built on projects carried out for some of the world's largest energy operators, industrial companies, and infrastructure managers. At the same time, FEBUS Optics remains

committed to its Béarn roots and to French sovereignty. Despite its international footprint, the company continues to prioritize an ecosystem of predominantly French and European suppliers.

Innovation as a Driving Force

Innovation remains one of FEBUS Optics' primary growth drivers. In recent months, thanks to the sustained efforts of its R&D department and its extensive experience, the company has expanded its portfolio with three new interrogators designed to address the growing needs of industrial and scientific markets.

The T1-PLUTON is dedicated to Distributed Temperature Sensing, while the A1-NEO and A1-TELLUS enhance the capabilities of the DAS (Distributed Acoustic Sensing) product line, with performance tailored to a wide range of applications, from industrial operations to academic research.

Beyond equipment, FEBUS Optics provides complete solutions that combine hardware, specialized software, engineering services, commissioning, maintenance, and training. This integrated approach enables the company to tailor each project to the specific operational constraints of its customers.



Artificial Intelligence Serving Critical Infrastructure

In response to the growing volumes of data generated by intelligent networks, the company has also developed its own artificial intelligence algorithms, particularly in the field of machine learning. Their purpose is to automate the analysis of collected data in order to identify, classify, and prioritize events detected on monitored infrastructure.

This capability provides operators with directly actionable information to strengthen infrastructure security, improve performance, and accelerate decision-making.

Challenges That Have Become Strategic

The evolving threats facing critical infrastructure are placing distributed monitoring technologies at the center of today's global economic and technological challenges. Power grids, energy infrastructure, terrestrial and subsea cables, and telecommunications networks all require increasingly advanced monitoring capabilities. In this context, FEBUS Optics aims to continue its international expansion while pushing the boundaries of Distributed Fiber Optic Sensing. From Pau, the company is committed to helping make infrastructure around the world safer, more efficient, and more resilient.