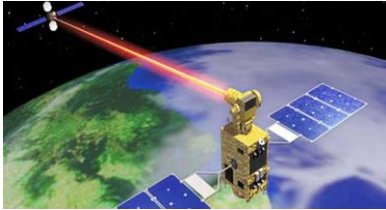


R&D PROJECT



Title of the project

High-performance free-space laser links for terrestrial and space communications on an integrated photonics platform

Acronym

ENLACE

Project content

The ENLACE project deals with the research and development of new solutions from laboratory to pilot plant scale of complete systems as well as components, architectures or subsystems including the integration of innovative photonic technologies based on different frequency ranges that allow their subsequent application in relevant industrial sectors. In particular, it will focus on the investigation of a new free space optical link, through the study of new integrated photonic devices and circuits (PICs) and communication channels based on fiber lasers.

General objectives

The objectives of the ENLACE project are to investigate new integrated photonic subsystems in the NIR optical frequency range (C-L band):

- Transmit integrated photonic circuits
- Receiving integrated photonic circuits
- Integrated photonic adaptive optics for atmospheric correction
- Integrated photonic optical antennas; new integrated photonic subsystems in the terahertz and microwave frequency range
- RF (back-up) and THz (point & track) photonic signal generation, and complete systems in the NIR range in the industrial sector of relevance to terrestrial and space communications
- Fiber laser free space optical link communications channel

Results and conclusions

Project in progress.

Subsidised by the CDTI and supported by the Ministry of Science and Innovation in the framework of the Science and Innovation Missions Programme linked to the Microelectronics and Semiconductors PERTE for the year 2023.

PARTNERS



COLLABORATORS



BUSINESS AREA

Infraestructuras
COMSA, S.A.

DURATION

2023- 2025

TOTAL BUDGET: 4.040.657,00€
(funding of 2.824.108,39€)

COMSA BUDGET: 250.484,00€
(funding of 127.464,27€)

KEYWORDS

Photonic Platform
Communications

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