Pitch Session (Irish Companies)

13:00 - 14:00

Celtonn
ÉireComposites
ENBIO
Farran
Innalabs
Lios
Mbryonics
MMIC-Lab
O.C.E. Technology
Pilot Photonics
Plasma Bound
Réaltra Space Systems Engineering
Skytek
Tisalabs
Ubotica Technologies
Varadis
Amazon Web Services
Analog Devices Ireland
ATG Innovation
Curtiss-Wright
Intel Ireland
ST Engineering iDirect
Nammo Ireland

Celtonn Design and Manufacture Millimeter Wave Components and Systems

Technology Description

Celtonn design and manufacture mmWave solutions, with a focus on W/D-Band systems 75GHz – 185GHz.

The company's suite of products include components & subsystems covering the RF comms chain such as: Amplifiers, LNA's, Upconverters, Downconverters Multipliers & Mixers.

Aerospace, Telecomms, Satellite and Radar companies choose Celtonn products for their broader bandwidth, leading to superior data transmission and radar definition.

We offered tailored scientific solutions, with inhouse design, assembly and test capabilities

Value Proposition

Celtonn IP has a speciliased waveguide transisiton that leads to faster data transmission and broader bandwidth.

Our RF engineers are experts in the field and can solve complex bespoke challenges for our customers.

Relevant Customer References

Space Tech: ESA & Harp Technologies
Aerospace: Alaris Linwave
Autonomous Vehicle: Provizio
SATCOMMS: Richardson RFPD & PRFI

Technology applications and manufacturing facility and services

Technology lab validated TRL 4 and currently being increased to TRL 7 through collaboration with a large aerospace company utlising our Transmitters and Receivers within the Aerospace Communication System.

Contact
Mark.Kelly@celtonn.com

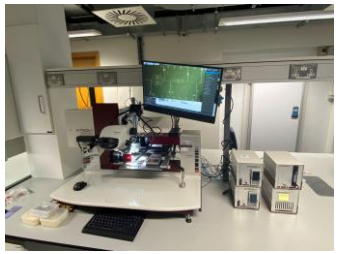
Website
www.celtonn.com

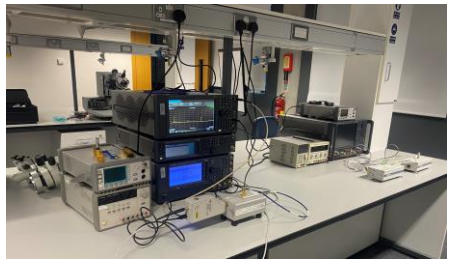
Company Size
SME (5 employees)

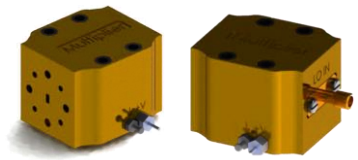
Facility
Fully equipped 100m2 RF Manufacturing and Test Facility

Country
Ireland

Awards
Celtonn selected as one of Ireland's 'Most Ambitious Companies 2024'







ÉIRECOMPOSITES

MAKING A MATERIAL DIFFERENCE

Introduction

- Established in 1998, based in Galway, Ireland
- Specialist in composite manufacturing & R&D
- 70 staff members
- Customer industries include Space, Aviation, Renewables
- AS9100 Accredited and NADCAP Approved (Thermoplastics)

Customers

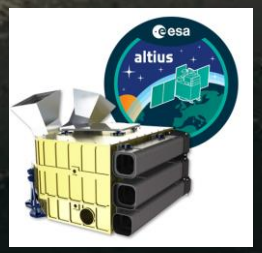
- OIP Sensor Systems
- ATG
- Spirit Aero Belfast (Bombardier, Airbus)
- Safran Aero Boosters
- SACC

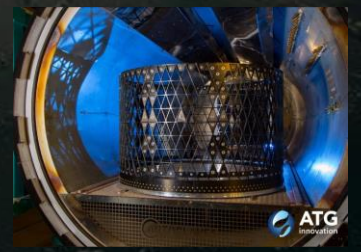
Projects

- Several ESA funded R&D projects since 2008
- Stray Light Baffles for Altius Mission 2026
- Lattice Central Structures w/ATG (CTP 1 & 2)
- High performance composite mirrors for Telecoms.

Facilities

- 2 x Class 8 Clean rooms
- 2 x 5 Axis CNC Machines
- 1 x 6m & 1 x 3m Autoclaves up to 10 bar
- 16 metre oven
- Accredited Composite Test Lab EN, ASTM, ISO and SRM



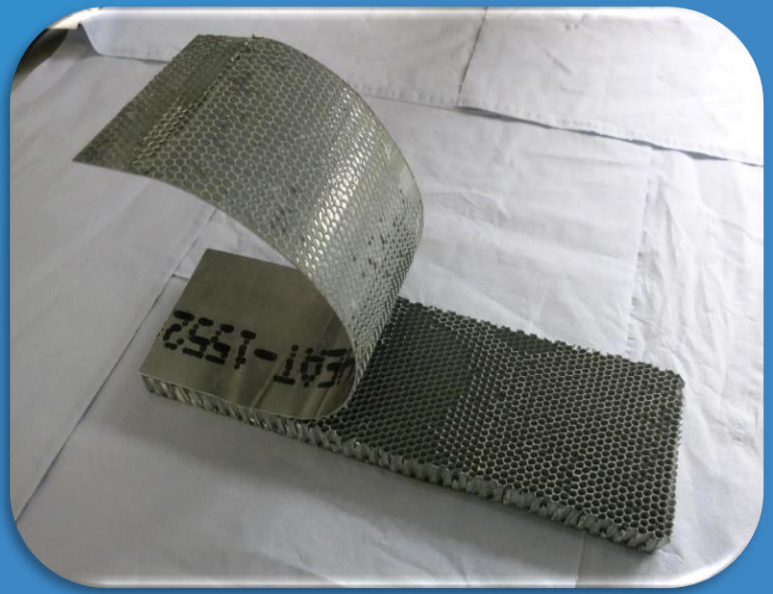


www.eirecomposites.com
info@eirecomposites.com

ENBIO

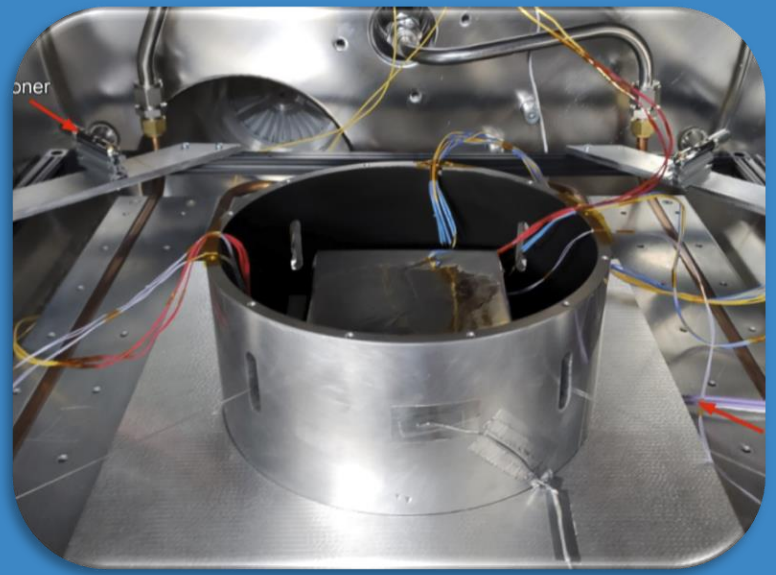
Thermo-optical coatings

COBLAST
TECHNOLOGY



REACH Compliant Chromate-free primers

Mold Release for high-risk applications



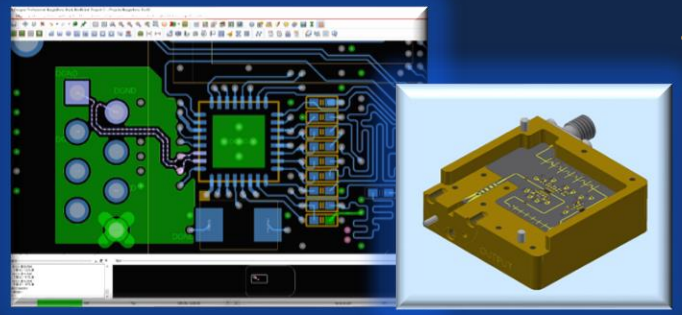
Qualification Testing (TVAC)

E: info@enbio.eu www.enbio.eu

Capabilities

farran

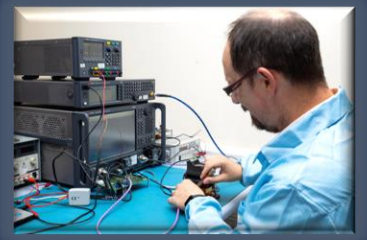
Design



Production

Q, V, E, W, D, G waveguide bands and beyond

Test

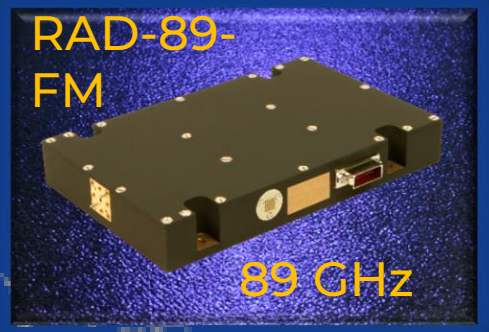


40 YEARS +

Space Projects

R&D work with ESA

Commercial – receivers for Atmospheric Sensing



Millimeter wave design, production & test enterprise

Customers

QUALCOMM®

BAE SYSTEMS

ADVANTEST®

MBDA

QinetiQ

THALES
Together • Safer • Everywhere

KEYSIGHT TECHNOLOGIES

esa

TESLA

WIN SEMICONDUCTORS

NASA

www.farran.com

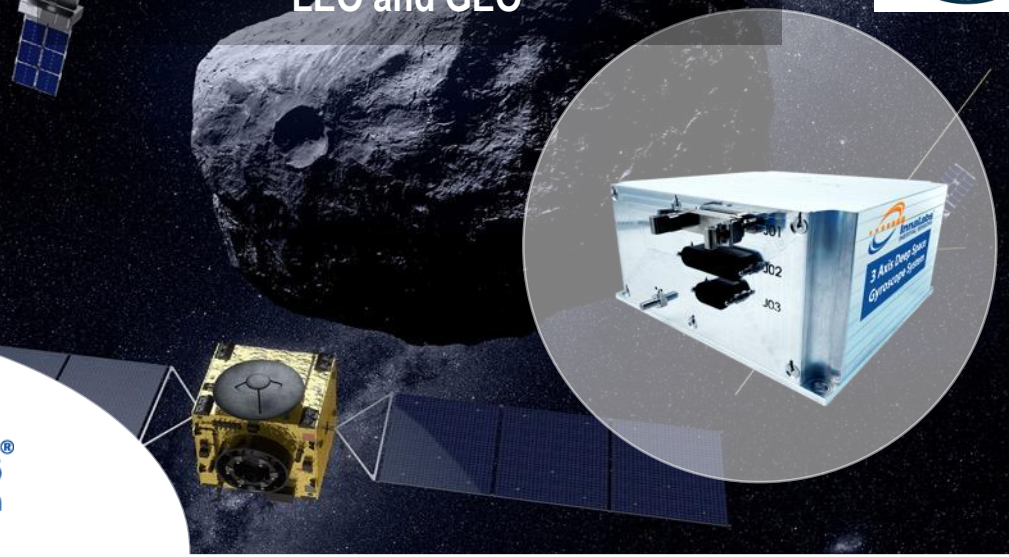
www.youtube.com/@farrantechnology

ARIETIS Rad-Hard Gyro

In qualification, for class 1 missions

ARIETIS-NS Rad-Tolerant Gyro

TRL9 in ESA Hera mission, selected for LEO and GEO



InnaLabs®
www.innalabs.com

Cutting-edge Inertial Sensors for Space, Aerospace & Defence & Future Emerging Technologies

COTS Gyro

TRL9, >5,000,000 hours in LEO

Accelerometers

TRL9 for launchers, in development for deep space

New noise reduction materials for industry

Pilot projects with application customers in

- Home Appliances
- Automotive
- Construction
- Aerospace

ESA development contract

esa European Space Agency

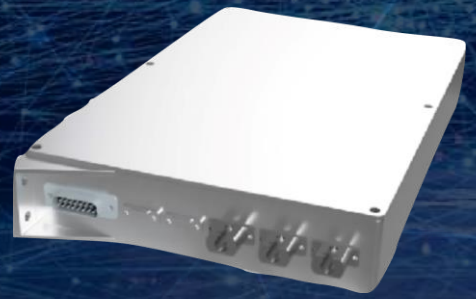
arianeGROUP

beyond gravity

End-to-end Optical Payloads

StarCom

Fibre coupled full-duplex Optical terminal and QKD

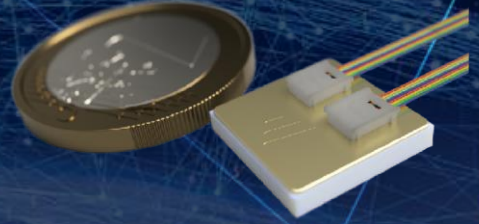


StarLight

Modem - current generation is SDA compatible

Next generation coherent version 100G+

Optical amplifiers



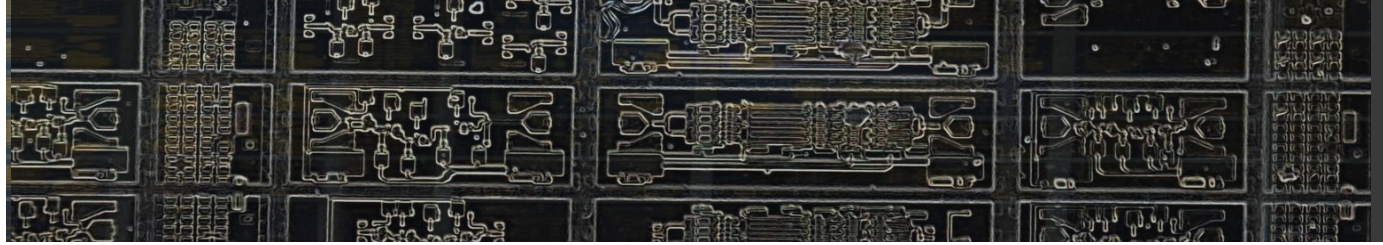
TeraBIX

Lowest power photonic digital interconnect for linking satellite payloads for digital beam forming

Bifrost

Optical ground station

MBRYONICS



MMIC-LAB
III-V semiconductor

Advanced front-end ICs for next generation mm-Wave communications

Status – Established premises at RDC, DkIT Dundalk and joined ESA BIC Ireland in 2023.

Founding team of 3 senior engineers with 20-year history in GaAs/GaN MMIC power amplifier and multifunction IC development. Set up lab and prototyping facility.

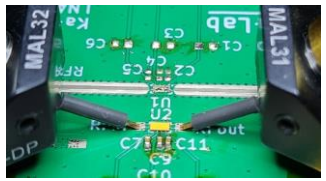
Negotiating contracts to develop compact K/Ka band chipsets for LEO satellite phased array antenna.

Technology– high linearity and efficiency power amplifiers up to 100GHz

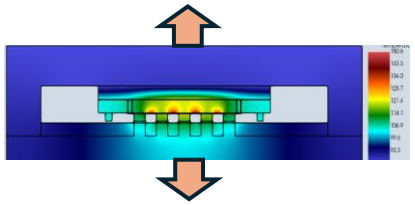
Novel chip scale and low thermal path packaging for phased arrays antennas,

Projects

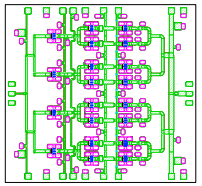
24-34GHz Cu Pillar Flip Chip GaAs LNA



Dual thermal path Flip Chip PA Package for Phased Array Antenna



E-band 71-76GHz 2W GaN PA



Offering– Contract design services, design and supply, standard product

info@mmic-lab.com | www.mmic-lab.com

Irish company, founded 2013, located in Dublin

Embedded software

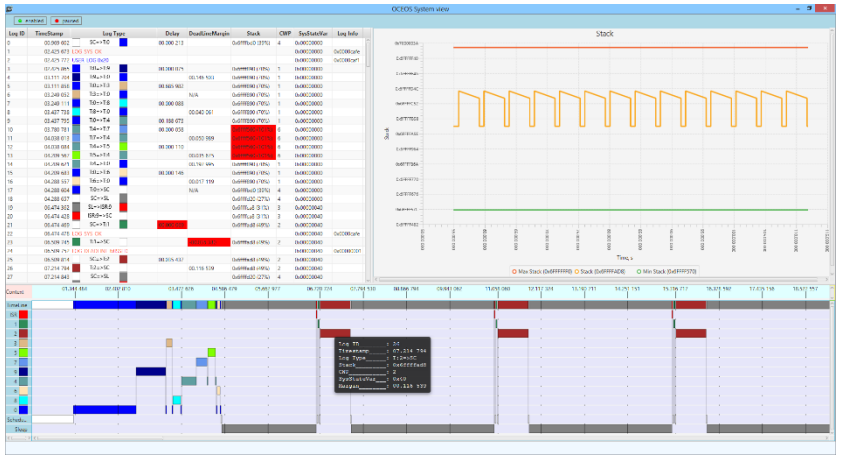
- Multicore RTOS – ECSS Cat B (RISC-V, ARM, SPARC)
- Debug Tool (SPARC, ARM)
- Application Design Service

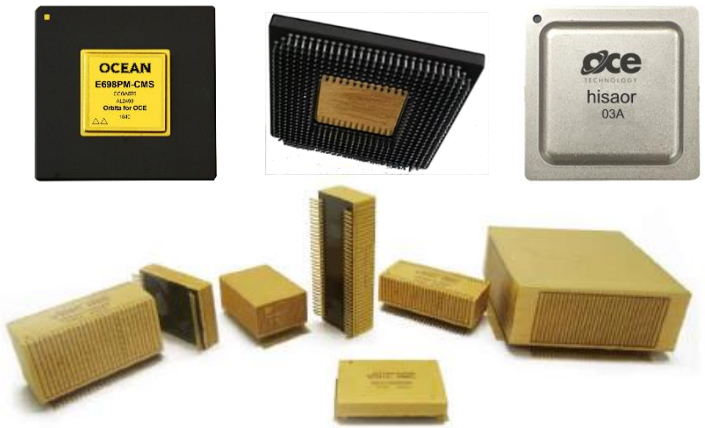
Hi-rel components

- Rad-hard SPARCx4 SOC
- Rad-hard edge AI SOC
- SIP memories

Satellite Subsystems

- Star trackers
- Solar cells/panels
- Cubesat ADCS
- Magnetorquers





https://ocetechnology.com

sales@ocetechnology.com

mmWave photonic integrated circuits

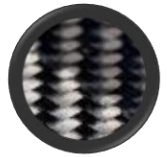
- mmWave technology enables cutting edge communication, sensing, imaging

- Photonic -vs- electronic approaches
  - Widely tunable and precise
  - Compact, lightweight, power efficient
  - EMI & radiation tolerant

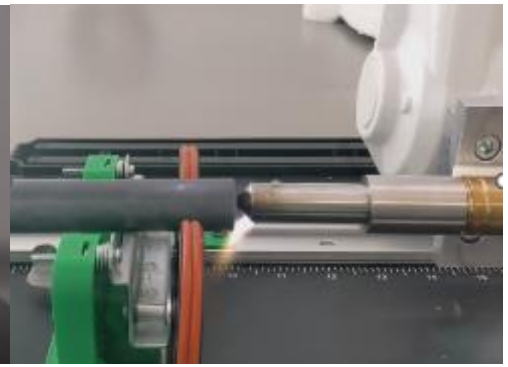
- Let’s discuss a pilot project to tailor our technology to your needs

PLASMA BOUND

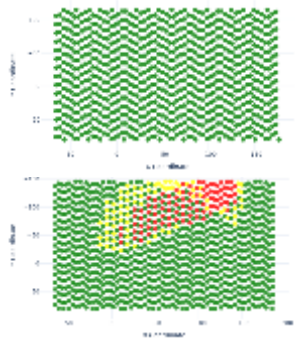
FULLY AUTOMATED SURFACE PREPARATION OF COMPOSITES BEFORE PAINTING OR BONDING



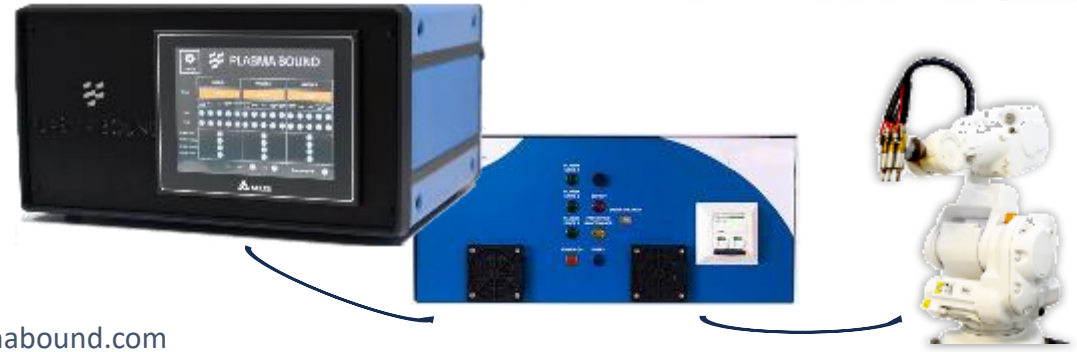
Atmospheric plasma compressed air



Up to 300mm/sec



FULL TRACEABILITY



CONTROLLED POLYMER ABLATION (CPA™)

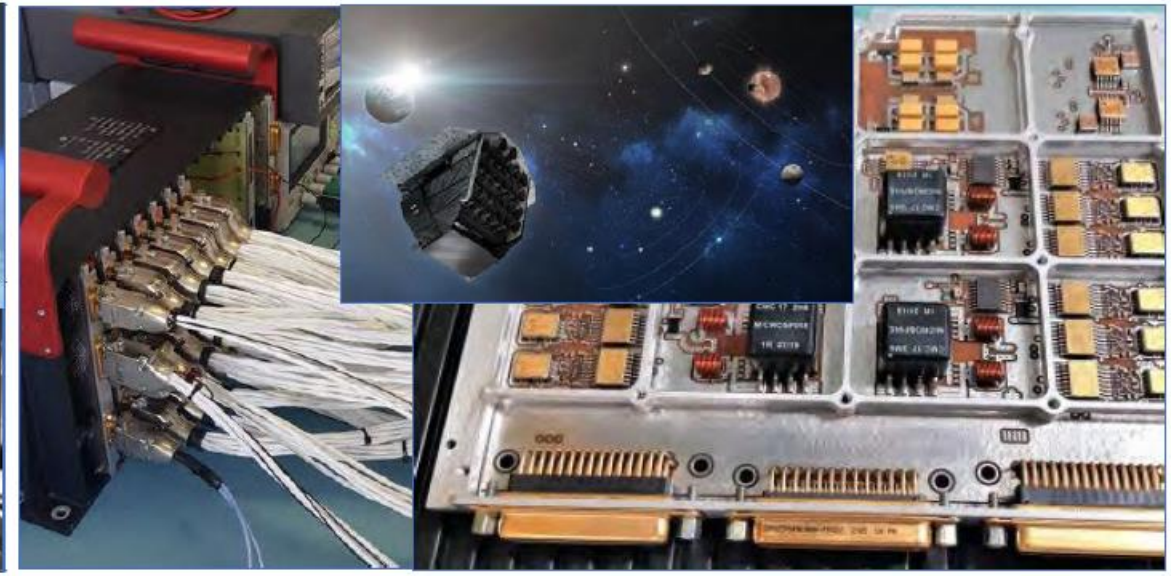
xavier.montibert@plasmabound.com

For a Lighter Future.

Cutting-edge Electronics for Space Applications

Launcher Telemetry Systems with HD Video

Spacecraft Avionics Systems



TTE Network Switch for Space Applications

RÉALTRA

Réaltra dramatically reduces the life-cycle cost and risk to operate electronics systems in space by fusing our space know-how with non-space COTS technology.

GNSS Telemetry Systems for Launchers

skytek

SPACE TO INNOVATE

SPACE EXPERTISE

Celebrating 20 Years of Space Innovation

Human Space Flight

- Primary software system on ISS for crew manual procedures (IPV Tablet/XTP)
- Full end to end suite of tools for human space flight authoring, workflow and execution.

Earth Observation

- Information systems built with data fused from visual EO, SAR data and satellite sensor.
- Web based SAAS map-based application.
- ML and image analysis.

Cyber Protection

- System and service for protection of European Space domain infrastructure.
- European ISS module cyber protection software systems.

Spacecraft AIT

- Software solutions for procedure support during Assembly, Integration, Testing of spacecraft, launchers, satellites.
- Augmented Reality systems for test engineers.
- EGSE integration using EGS-CC standard.

Virtualization Solutions

- Human Space flight virtualization solutions for payload support systems.
- System deployed on ISS.
- Support rapid development, turnaround for future commercial payloads.

Contact: Paul.Kiernan@skytek.com

Protecting Space Assets: Real-Time Cybersecurity Solutions

TisaLabs

Security-First Approach

End-to-End solution ensures data integrity and protection against threats. Identity Management provides Data source accuracy and Consistency.

Predictive Maintenance and Failure Analysis

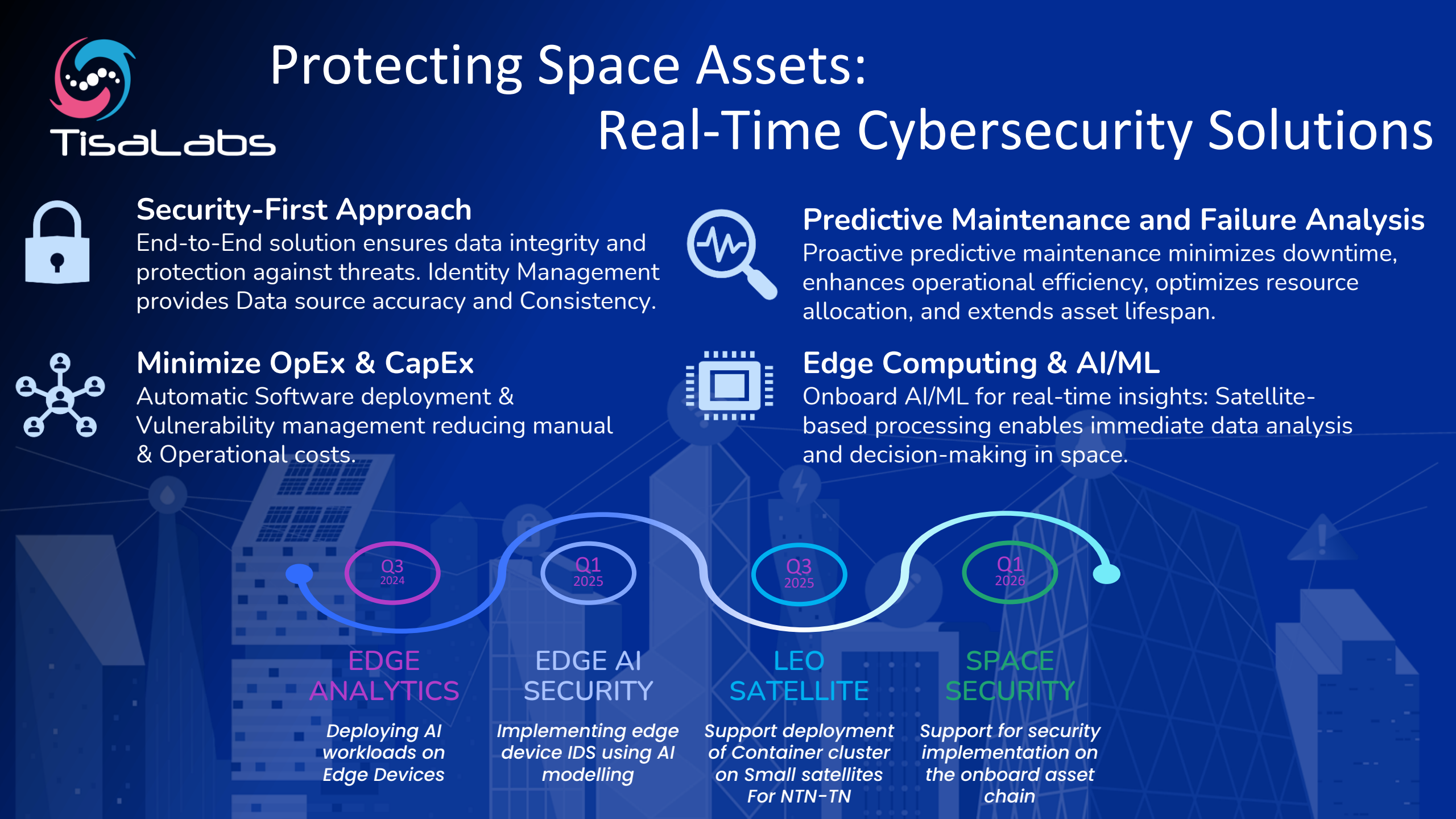
Proactive predictive maintenance minimizes downtime, enhances operational efficiency, optimizes resource allocation, and extends asset lifespan.

Minimize OpEx & CapEx

Automatic Software deployment & Vulnerability management reducing manual & Operational costs.

Edge Computing & AI/ML

Onboard AI/ML for real-time insights: Satellite-based processing enables immediate data analysis and decision-making in space.



UBOTICA™
SPACE:AI

SPACE:AI

Enables satellites to think, see, inform and act autonomously.

Efficient, proven, and programmable Edge-AI platform empowers satellites to:

1. Process data on-board in real-time,
2. Autonomous smart decisions,
3. Unlock insights efficiently.

Varadis

www.varadis.com

Who We Are

Varadis is a global leader in the design and manufacturing of high-energy radiation detection components and systems.

Why We Do It

In ever-busier orbits, where risk of system failure and collision becomes higher, Varadis technology empowers you to identify radiation damaged components early.
Early damage detection enables quick action to resolve or potentially safely manoeuvre a satellite to a safe orbit.

Our Heritage

- Alphasat
- DESTINY+ Phaethon Asteroid
- ESA Chimera
- ESA Rosetta
- ESA Space Technology Research Vehicle
- EuCPAD (European Crew Personal Active Dosimeter)
- Galileo
- Galileo II
- GlobalStar
- HAKUTO-R 2 Lunar Lander
- International Space Station
- JAXA MDS-1
- JAXA SDS-1
- NASA Artemis
- NASA Living with a Star (LWS)

Who's Already With Us

ASTRANIS, intel, NASA, esa, CERN, QUANTUM SPACE, JAXA, BOEING, BLUE ORIGIN, YORK SPACE SYSTEMS, AIRBUS

"Varadis RADFET technology is a crucial tool for the design and iteration of space hardware. Its ability to verify on-orbit doses and validate shielding design makes them an invaluable asset for any manufacturer looking to improve decision making, iterate designs and build more resilient spacecraft."

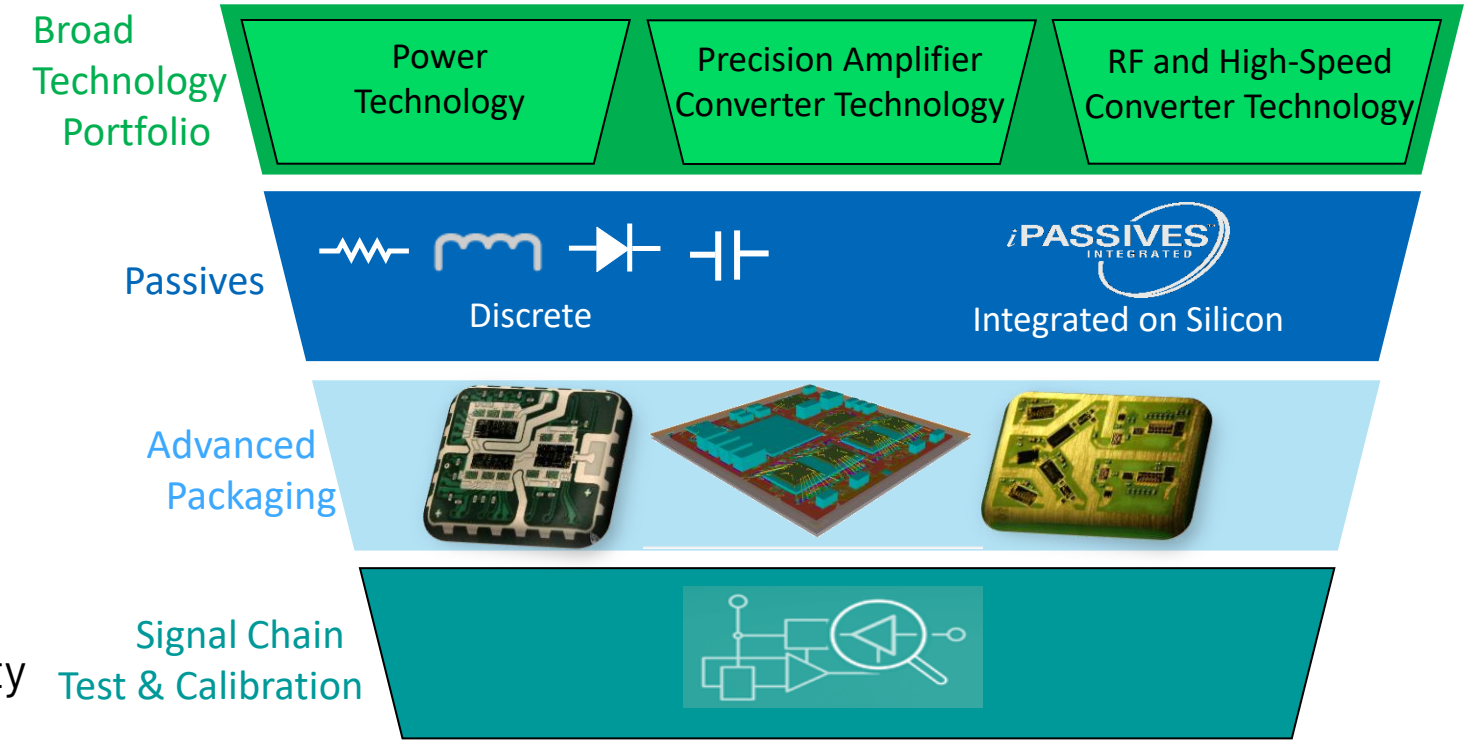
Dr. Matthew Gill, Nuclear Engineer, Rocket Scientist and Founder of Space Radiation Services

Our Mission to Keep Space Safe

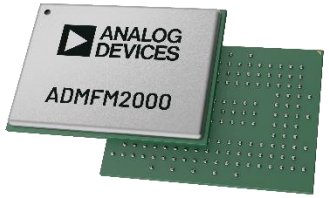
Customised System in Package Solutions

Benefits

- 75% Footprint reduction versus equivalent discrete solution
- More complete solution covered by Analog Devices datasheet
- Reduced Total Cost of Ownership
- Leverage Analog Devices circuit design domain knowledge and simulation capability
  - Reduce Time To Market
- EU Development Team
  - SiP product is not subject to ITAR restriction



Power Solutions

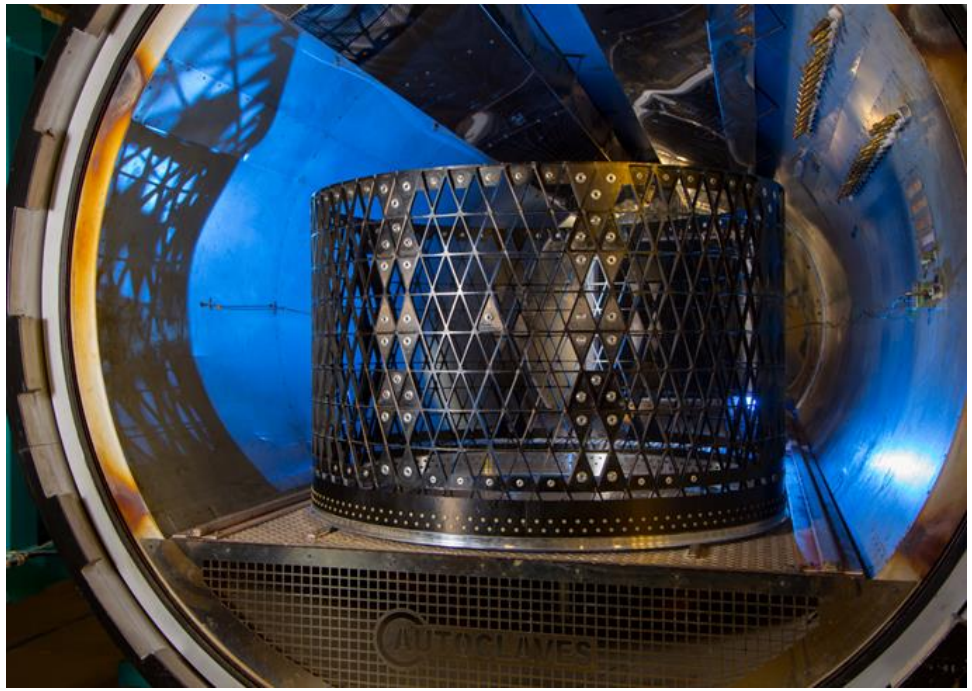


RF Solutions

Precision DAQ Solutions

ATG Innovation (Irish subsidiary of ATG Europe)

- Specialises in lattice & grid-stiffened CFRP structures for large spacecraft components
- Mass savings of 20-60% depending on the application
- Applications includes satellite central tubes, launcher interstages, payload adaptors & dispensers



Satellite Central Tubes

RFA One Interstages


CURTISS-
WRIGHT

ST Engineering

35+ **Years of Innovation** – 35+

Employee Strength – 1000+

Global Presence – US, Singapore, Belgium, Ireland

Product portfolio – Best-in-class solutions branded under iDirect for broadest range of services

#1 **Market Leadership** – Across Mobility, Broadcast and Government/Military

Group: Part of ST Engineering group

iDIRECT


Namm