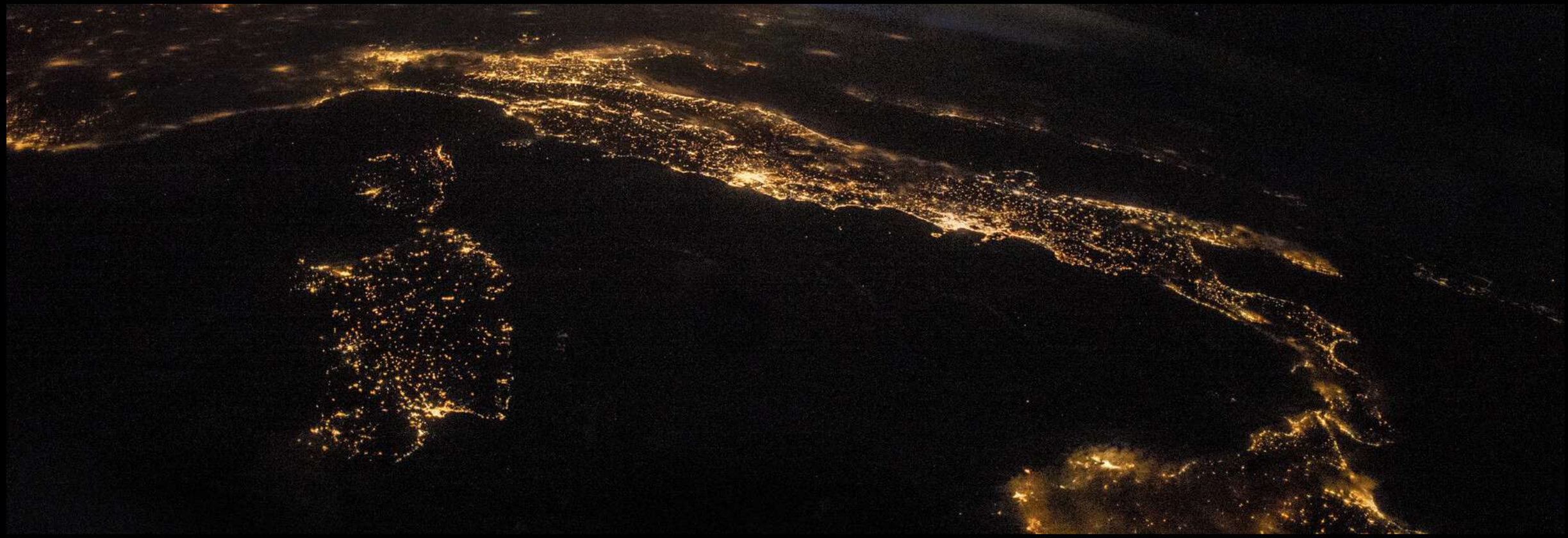

CSHARK®
power up your future

We believe that technology can improve people’s lives and business operations

Cshark was established in 2018 as an I.T. startup end we developed in aerospace and A.I. company. In 2022 we launched our first picosatellite PILOT-1® with the Falcon 9 carrier rocket. To this day, the company holds patents registered at European level: PONGO® , PILOT®, ANDROMEDA® and PERSEUS®.



Alessandro **FANNI**

CEO CSHARK

Expertise, experience and flexibility for global service

Alessandro Fanni
CEO

Pedro K. PhD
CTO, Mechanical Engineer

Chantal C.
PhD Advisor

João P.
Head of RF

Mattia G.
Aerospace Engineer

Franco D.R. PhD
R&D Manager

Fabrizio R.
Head of Software Development

Mattia M.
CAT

Lothian G.
Quality Officer

Ricardo C.
Electronic Engineer

Sara F.
Head of Administration

Aurora V.
Competition - Marketing

Giorgia C.
Accounting

Filippo P.
Director of Sales & Strategy

Daniele F.
Account Manager

Jacopo B.
Account Manager - America

Rodolfo Guzzi
Honorary President

VISION

Our vision is to create a new HW/SW infrastructure that allows the integration of any IoT/ gateway device and can communicate with the control room even without an internet connection, at an affordable cost.

MISSION

Our mission is to launch a constellation of 100 pico-satellites to create a global IoT coverage that is always available and without significant latency, entirely managed by devices and software designed and patented by us.

A completely innovative integrated technology

PROBLEMS

The problems we identified are a lack of communication systems in remote locations to transmit data machine-to-machine and a difficulty for system integrators to integrate IoT different devices into a unique environment.

DTSLPWAN

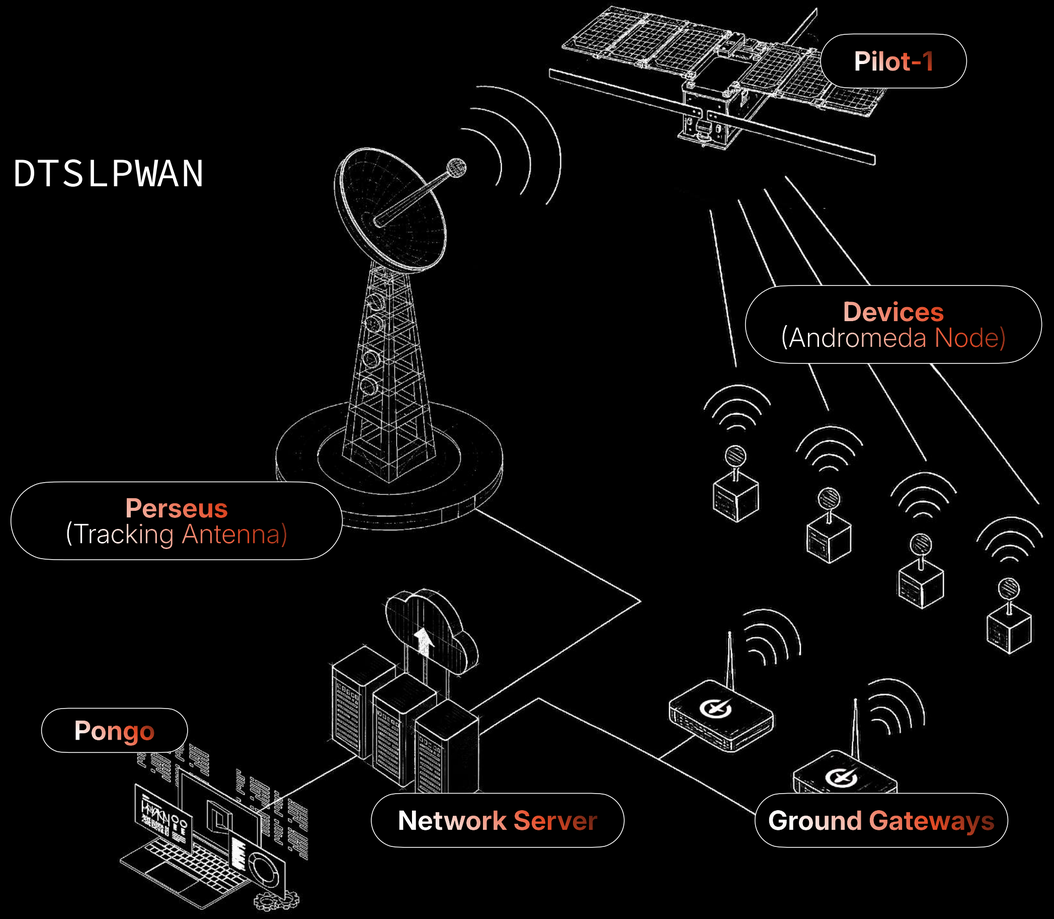
Direct To Satellite Low Power Wide Area Network

SOLUTION

Our solution is to create a new innovative HW/SW infrastructure that permits to integrate any IoT devices, gateways and that can communicate to the control room also without Internet connection at an affordable cost.

Direct To Satellite Low Power Wide Area Network

DTSLPWAN



To have a full coverage the devices with Andromeda® nodes on board will communicate data firstly to the satellite (a gateway in orbit), then to the Perseus® ground station and finally to the Pongo® control platform via a Network server.

In absence of satellite coverage, the process is done through the Internet connection, where the devices communicate directly to ground gateways. Our ecosystem's components are developed in Italy and mainly internally at CShark. Our communication network uses a blockchain to guarantee a safe transfer of data.

As a private communication system and, given that PONGO® is the software that elaborates and stores all the data, we can certify that nobody other than Cshark and its clients have access to the transmitted data.

Low

Orbit

LEO Orbit

Frequency

Use theLoRaWAN protocol

Pollution

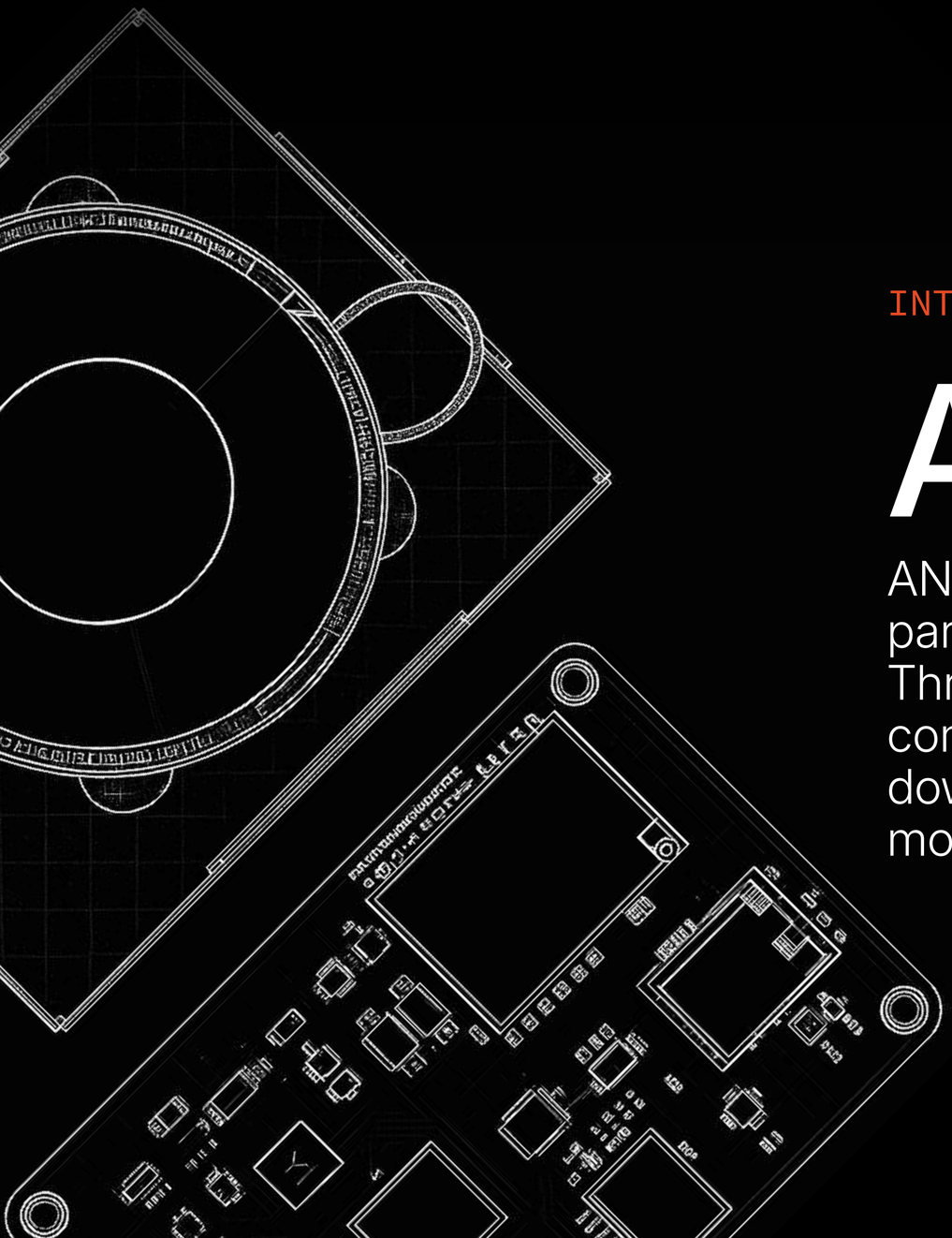
No debris in deorbitation

Energy

Thanks to the LoRa protocol, low energy consumption is achieved

Cost

Small satellite size, allowing cost savings



INTEGRATED SYSTEM COMPONENTS: WHAT IS

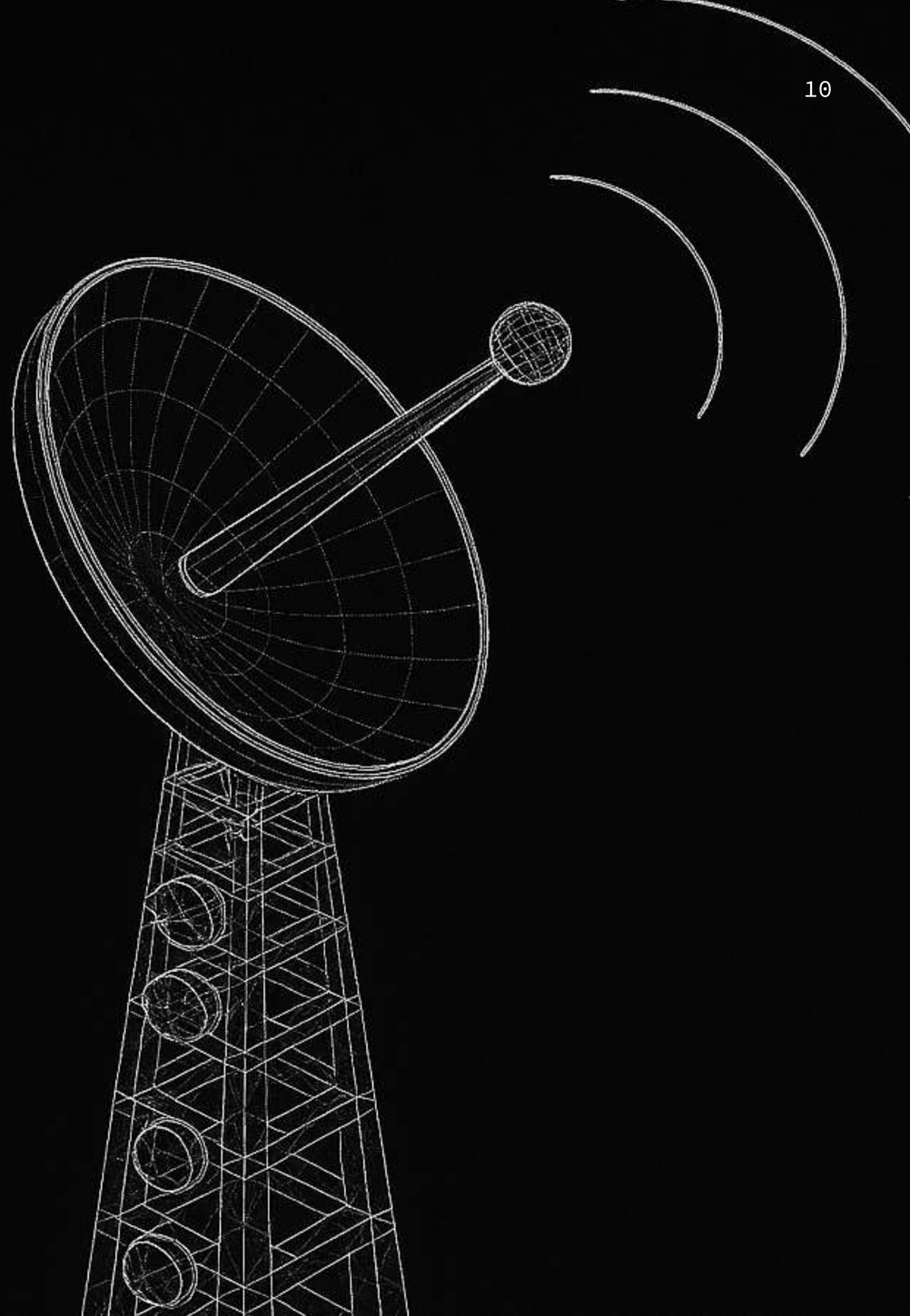
ANDROMEDA®

ANDROMEDA® is the node that enables the hardware part to communicate with PILOT® satellites.
Through it we can make any device on the ground communicating. We can provide a stable uplink/downlink in 868MHz, 915MHz and 2.4GHz with LoRa modulation.

INTEGRATED SYSTEM COMPONENTS: WHAT IS

PERSEUS®

PERSEUS® is our ground station. CShark has developed a network of 12 Ground Stations to communicate bidirectionally with satellites in Low Earth Orbit (LEO), both in UHF and S-Band, and to send/receive data from a server network, allowing a choice between signal speed and data rate.



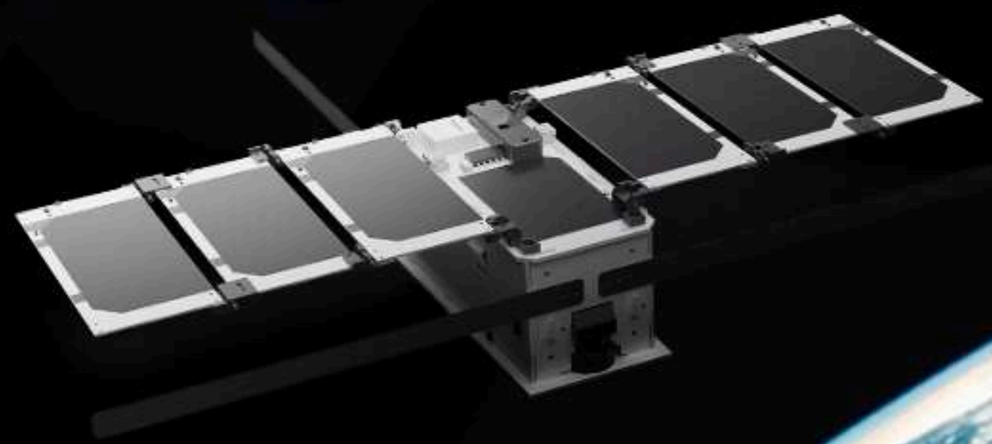
INTEGRATED SYSTEM COMPONENTS: WHAT IS

PONGO®

Born as an integrated development environment (IDE and API based), PONGO® is our AI, through which we can send commands to ANDROMEDA® and the other segments of the integrated system.

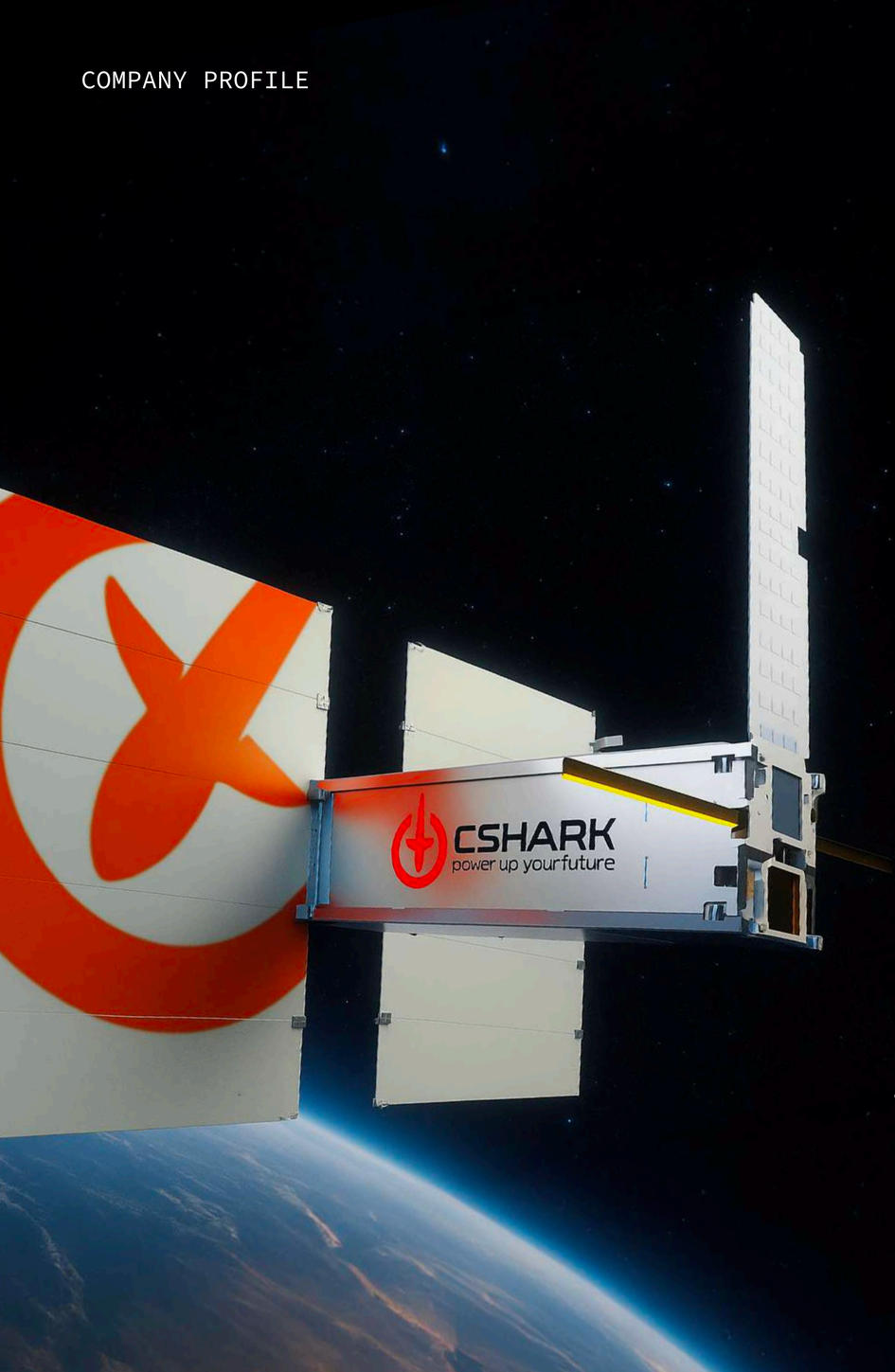
INTEGRATED SYSTEM COMPONENTS:
OUR FIRST PICO SATELLITE

PILOT-1®



PILOT-1® can acquire data from various sensors and process radio-frequency signals. Its unique features include a compact size, as it is the smallest commercial tele-communications satellite on the market.

Its components are almost entirely produced in-house and fully developed by our team. It utilizes high-performance solar panels and it is equipped with an ionic thruster, enabling it to remain in orbit for many years.



OUR CUBESAT:

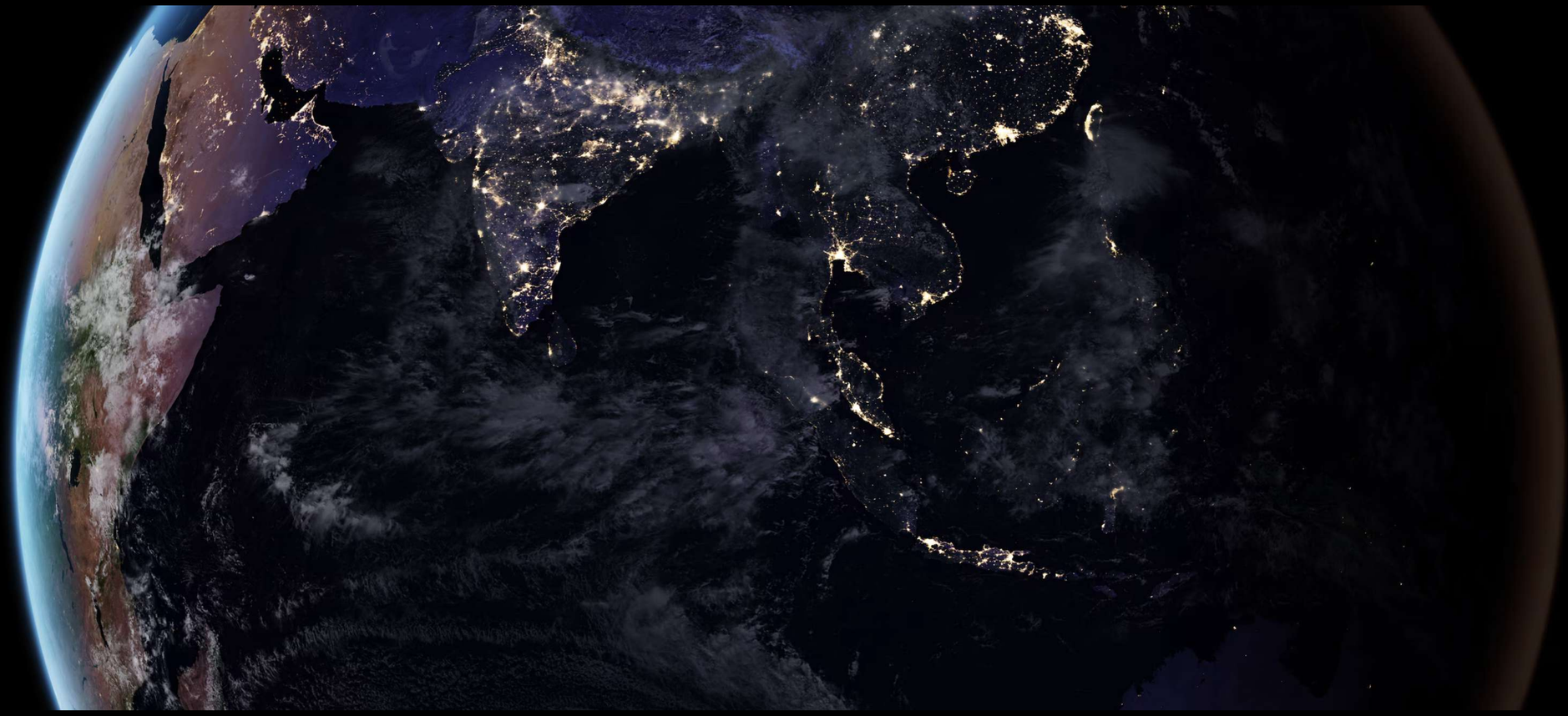
ANT-1

We are upscaling PILOT-1®'s technology to CubeSat sizes. This larger format will allow CShark to undertake more complex missions such as Earth Observation (that require larger telescope apertures), more powerful radio missions, and board third-party payload.

This upscale is possible by using the same system architectures from PILOT® but adapted for CubeSat demands, such as more powerful EPSs or larger batteries, this way we can save more than 60% of the total space.

CSHARK PLAYS A ROLE IN CONDUCTING HIGHLY INNOVATIVE MISSIONS

CShark's In-Orbit Demonstration offers flight opportunities for innovative technologies It demonstrates new technologies, such as innovative materials (active thermal protection), novelty payloads (CCD Particle Detector) and even business models testing MVPs of new products.



Planned missions

IOD MISSION:

Deployment of the first 8 PILOT-1 of the constellation with customers payload - Q2 2026

Veículo lançador: **Innospace**

IOD MISSION:

3U CubeSat with customers payload - Q3 2026
Launcher: **UARX - SpaceX**

What we offer

IOD/IOV mission management

Design and development of hardware solutions for satellites

Sale of components for picosatellites, such as magnetorquers, ADCS, etc.
All components designed and developed internally

Rental and testing with stratospheric balloons

Production of private constellations

01

Hardware design and production

02

End-to-end satellite production and orbit positioning

03

Manufacturing of artificial intelligence software

04

GCS production DTSLPWAN

05

Oriented IOT device

06

Private constellation as an IoT telecommunication service

07

Integrated AI tool for automation and data collection.

08

Let’s talk about your project...

STRADONE FARNESE, 39/C, 29121 PIACENZA (PC) ITALY

+39 0523 143 0454

amministrazione@cshark.it

www.cshark.it