

2NDSpace

Enabling fast access to space.

Without compromises.



We are 2NDSpace.

LEADERSHIP:



**Davide
Rastelli**
CTO



**Niccolo'
Bellini**
CCO



**Stefano
Naldi**
CEO



**Riccardo
Carlini**
CIO

MANAGEMENT:

AIT & Avionics Managers

TEAM: Aerospace, Electronics & Mechanical Engineers

CONSULTANTS: Financial & Strategy, Legal Advisor

WHO WE ARE

A team of 12 passionate professionals developing advanced technologies for satellite design and manufacturing, making space more accessible.

WHAT WE DO

We provide nanosat and smallsat components and platforms with the goal to reduce mission costs, time, and complexity.

FOUNDERS TEAM EXPERIENCE:

Founders with experience in the space sector with over 10 Satellite manufactured, launched.

2NDSpace IN 36 MONTHS:

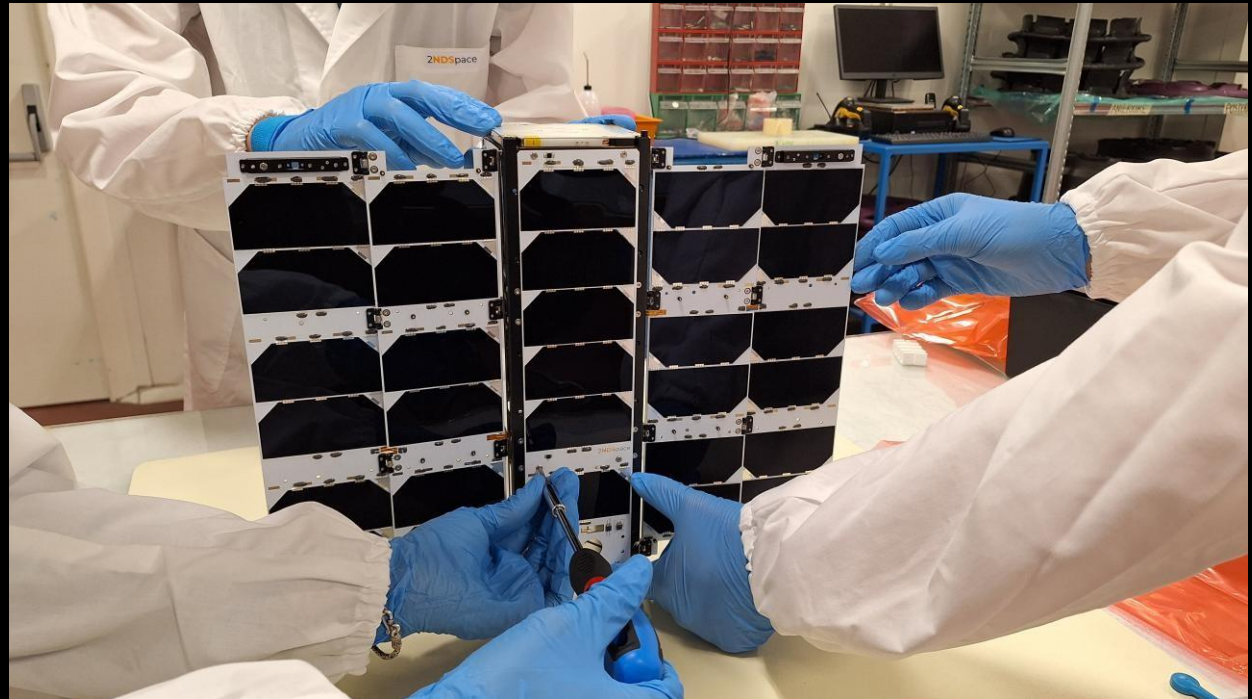
- >25 products developed.
- >100 customers worldwide
- >2 M€ in orders received in the first 36 months of activity
- Supplier of ESA projects and other major space companies in Europe and worldwide.

Our technology

**FLIGHT
HERITAGE**

NANOSATELLITE HARDWARE

- CubeSat Structures
- Solar Panels
- Electrical power systems
- Communication systems
- On-board computers
- Complete CubeSat platforms
- Testing equipment
- Deployers and separation rings



*Assembled 3U CubeSat with deployable solar panels, realized in July 2024
Launched Q4/2024*

CubeSat Structures

TRL 9

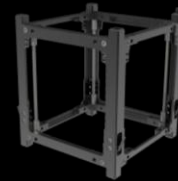
VERSE – CubeSat Structures

The VERSE structure is a modular and high-performance solution designed to support platforms ranging from 1U to 16U.

Thanks to its flexible and secure architecture, it allows fast and optimized integration, ensuring maximum accessibility and ease of assembly.

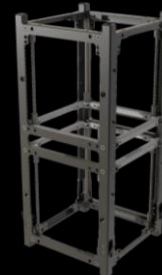
The customizable design allows the layout of openings to be adapted to the specific needs of the mission, assuring compatibility with both custom and commercial components.

Flight heritage – TRL9



VERSE-01

1U Structure



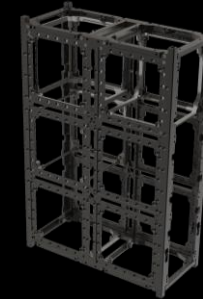
VERSE-02

2U Structure



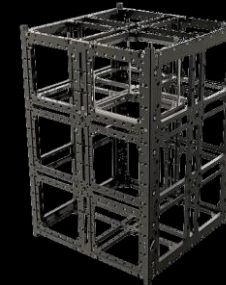
VERSE-03

3U Structure



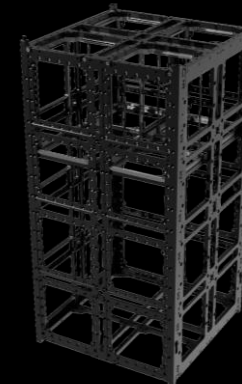
VERSE-06

6U Structure



VERSE-12

12U Structure



VERSE-16

16U Structure

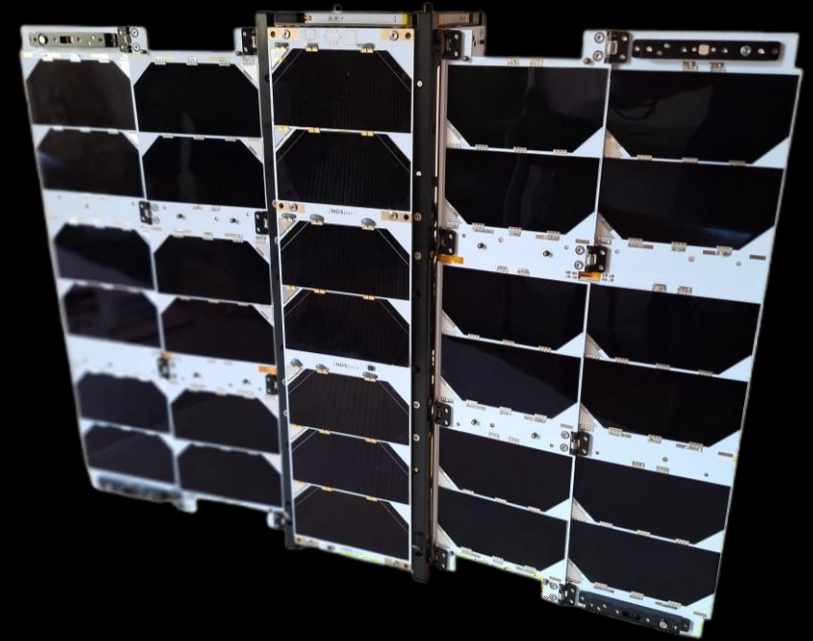
Deployable Solar Panels

TRL9



DROP – Deployable Solar Panels

- DROP deployable solar panels are available for 3U, 6U, 12U and 16U platforms, with single, double, triple and quadruple-wing options.
- Equipped with redundant release mechanisms (HDRM) and an integrated control system.
- Flight heritage – TRL9 qualified.

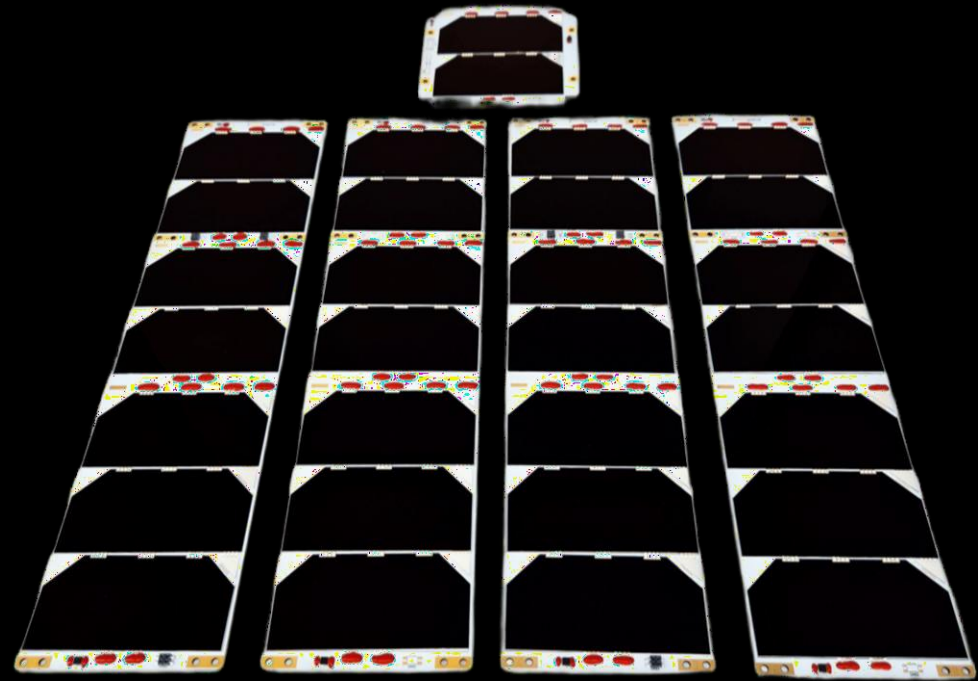


Solar Panels

TRL 9

CORE – Solar Panels

- The CORE solar panel series offers solutions for platforms from 1U to 16U, featuring 30% efficiency Triple Junction cells to maximize energy production.
- Custom cut-outs and configuration allows for maximum platform layout flexibility
- Flight heritage – TRL9



Electrical Power Systems

TRL9

SOLO – CubeSat EPS

- SOLO is a modular power unit for CubeSats.
- Available in two configurations, it provides up to 24 power outputs with customizable voltages, allowing flexible integration with different satellite subsystems.
- It delivers a peak power of 100-160W and an energy capacity of up to 100Wh.
- Optimized energy management from solar panels through 6 independent and programmable MPPT inputs.
- Flight heritage – TRL9.

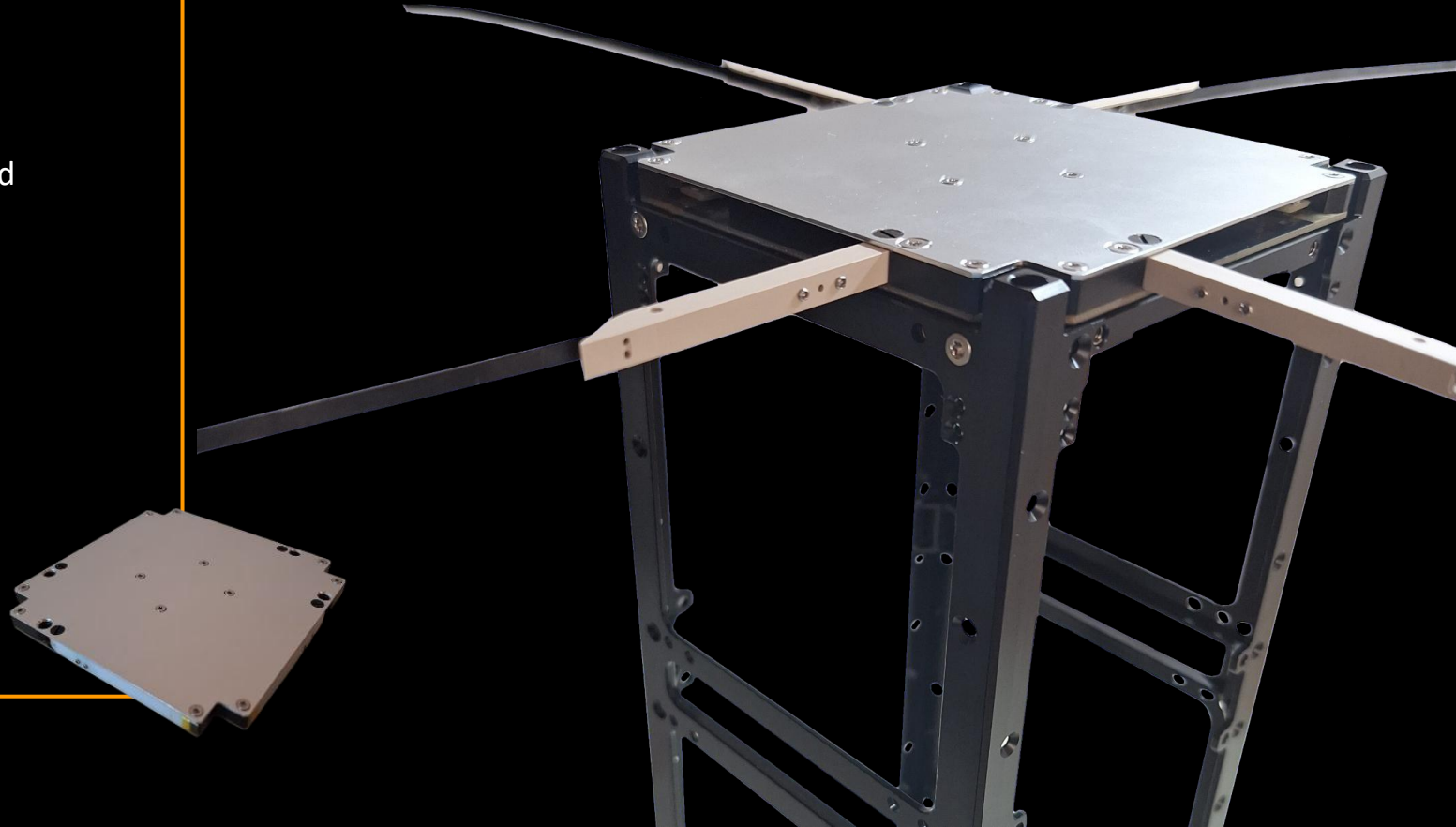


Communication Systems

TRL 9

CHORUS – Deployable Antenna

- CHORUS is a series of deployable antennas designed to operate in the UHF/VHF bands.
- Equipped with support for both linear and circular polarization, it allows communication optimization based on mission requirements.
- Selectable frequency range and customizable interfaces, ensuring compatibility with various platforms.
- Integrated deployment control system.
- Flight heritage – TRL9

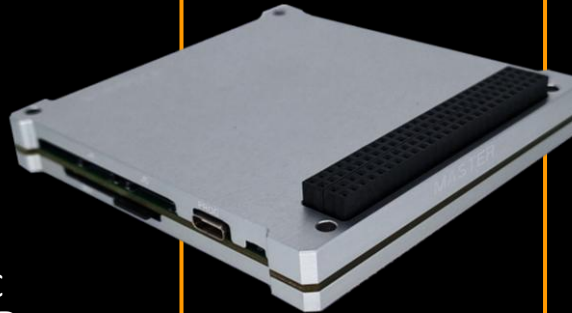


On-Board Computers

TRL 9

MASTER – On-Board Computer

- MASTER is a powerful and versatile system based on a dual-core architecture with a 480MHz Cortex-M7 and a 240MHz Cortex-M4.
- It supports OTA (Over-The-Air) updates, enhancing operational flexibility and guaranteeing continuous software evolution.
- Compatible with FreeRTOS and MBed environments.
- Equipped with 13 communication interfaces, including CAN, RS422, RS485, UART, USART, I2C and SPI. Features 8 GPIOs, 6 ADC inputs, dual SD memory, 64Mb of synchronous DRAM and 32Mbit of serial SPI flash memory. Includes a 6-axis IMU sensor and a temperature sensor.



MASTER II – On-Board Computer

- high-performance solution designed for nanosatellites and microsatellites.
- With a redundant architecture, it consists of two identical sections, each integrating an FPGA and a processor. It supports soft-core processors such as RISC-V and LEON3/4/5.
- Compatible with FreeRTOS, RTEMS and Linux. Edge computing and AI/ML capabilities allow the integration of hardware accelerators, such as Microchip VectorBlox, for advanced onboard processing.
- Quad-core architecture allows the management of mixed software environments via a hypervisor.
- Supported by:  BUSINESS INCUBATION CENTRE Padua

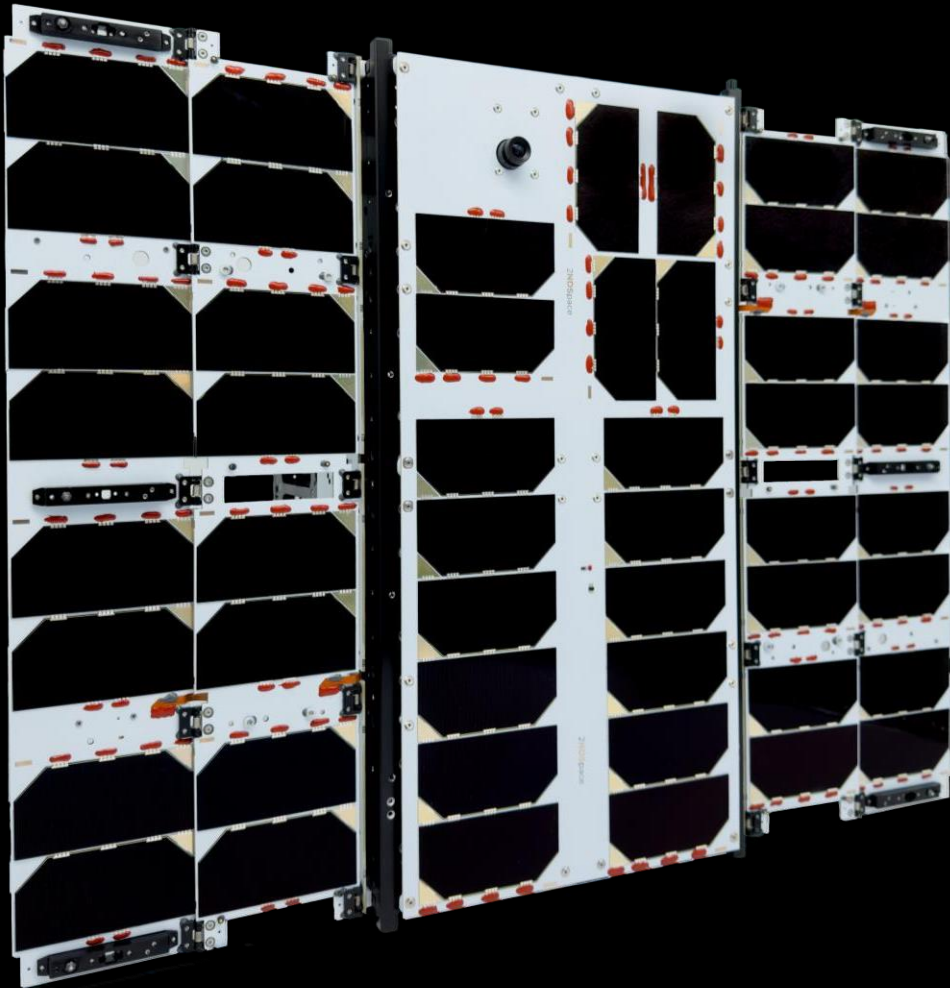
CubeSat Deployer

OPERA – Cubesat Deployer

- 12U and 16U modular deployer
- High lateral clearance enabling high-end mission capabilities (up to 35 mm)
- Customization for OTV and launch service providers
- Easy reset procedure with no consumables
- Redundant deployment feedbackInnovative fail-safe locking and release mechanism
- Continuous dynamic clamping mechanism



CubeSat Platforms



16U Platform developed by 2NDSpace Q4/2024

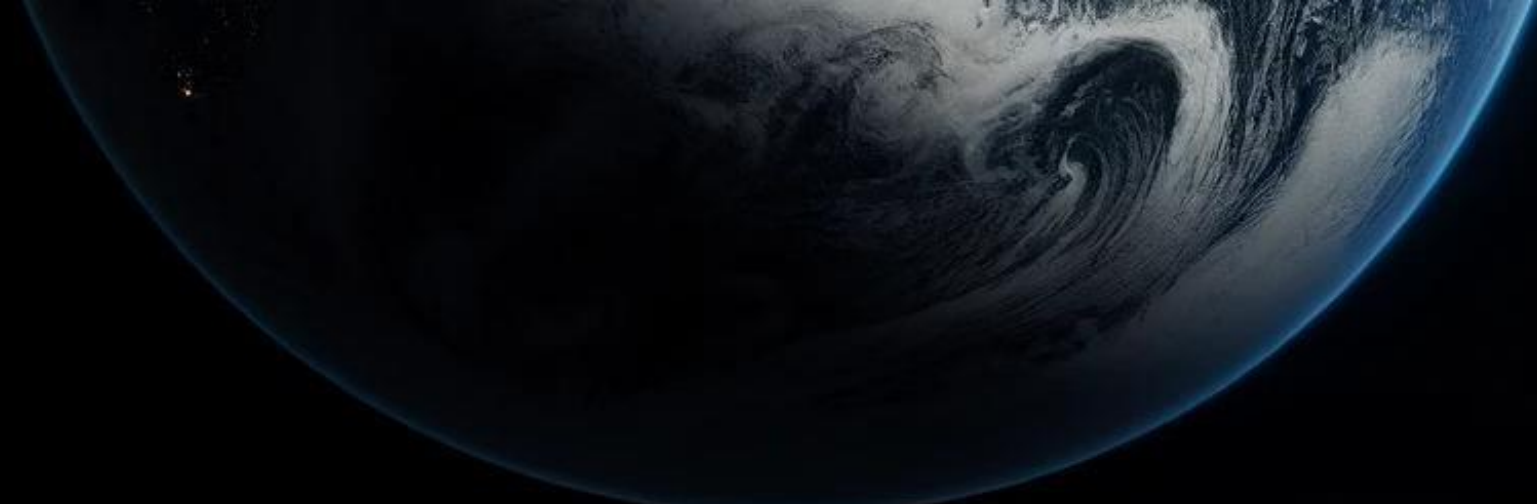
SATELLITE PLATFORMS

2NDSpace's complete platforms are designed for CubeSat configurations ranging from 1U to 16U.

The process includes design, manufacturing and integration-and-testing (AIT) activities.

Each platform undergoes a rigorous qualification campaign to ensure optimal performance in the space environment, following ECSS standards:

- Environmental tests (vibration, mechanical shock, TVAC)
- Electrical and functional tests
- Electromagnetic compatibility (EMC) tests



2NDSpace

Join the future of access to space.

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