

# 2024 International SpaceTech Startup Supporting Program

**One Pager**

Advisor



經濟部中小及新創企業署  
SMALL AND MEDIUM ENTERPRISE AND STARTUP ADMINISTRATION  
MINISTRY OF ECONOMIC AFFAIRS

Organizer

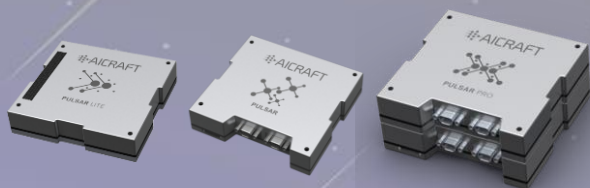


ITRI  
Industrial Technology  
Research Institute



- ★ Founded: 2020/11/23
- ★ Funding Status: Customers
- ★ Web: [www.aircraft.com.au](http://www.aircraft.com.au)

SPACE



Pulsar Lite

Pulsar

Pulsar Pro

INDUSTRIAL



NEO-1

NEO-2

NEXUS



AICRAFT Pty Ltd



## Introduction:

We design and manufacture smart products for onboard AI computing of Big Data at the edge.



## Core Technology/Competitive Advantage

- Compact and low-power edge devices
- Ultra-fast (high data volume) processing



## Business Model

- Hardware-enabled Services
- Hardware-as-a-Service



## Achievements & Milestones

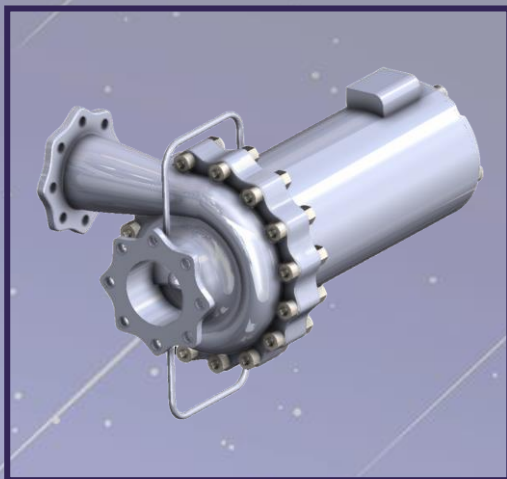
- Pulsar in Janus-1 mission (Antaris Space)
- Pulsar in Waratah Seed 1 mission (CUAVA)
- 2024 Top 50 most innovative manufacturer



## The ask

- PCB & 3D printing metal manufacturers
- System and payload developers
- AI/ML organisations and companies

- ★ Founded: 2021/07/13
- ★ Funding Status: Seed
- ★ Web: [www.dbSPACE.technology](http://www.dbSPACE.technology)



**Introduction:** DBSpace is the 1<sup>st</sup> IP factory in the world focusing on electric pumps and enabling the future of propulsion – in space and on Earth. DBSpace is now focusing on pumps for storable and cryogenic propellants to become a global leader of hydrogen turbomachinery technology. The startup is supported by the European Space Agency and backed by Exor Seeds – Vento Investments.



## Core Technology/Competitive Advantage

- Advanced high-performance e-pumps for storable and cryogenic propellants
- Fast development cycles, agile R&D
- Cost-effectiveness



## Achievements & Milestones

- Tech verification in lab environment
- Proprietary test facility for e-pumps
- LOIs signed with NewSpace companies
- Incubatee at ESA BIC Turin
- Accelerated by SpaceFounders program



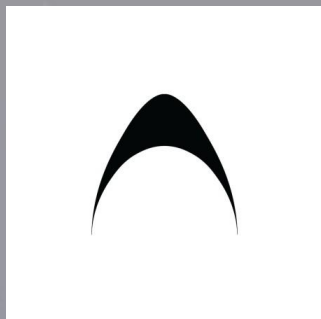
## Business Model

- B2B
- Hardware-as-a-Service (reusable products for space applications)



## The ask

- Partnerships with manufacturers of rockets, space vehicles and their propulsion systems
- Looking for suppliers of electric power train parts; bearings; seals



- ★ Founded: 2022/05/30
- ★ Funding Status: Seed
- ★ Web: [www.etherealx.space](http://www.etherealx.space)



**Razor Crest Mk-1**



## ETHEREAL EXPLORATION GUILD PRIVATE LIMITED (EtherealX)



### Introduction:

EtherealX's mission is to successfully build and operate the world's first fully reusable medium-lift Launch Vehicle - Razor Crest Mk-1 by 2027 and to operate at and drive the earth-to-orbit price significantly down to a launch price as low as \$350/kilo which is 1/35th of the current global launch price avg. (\$12,500/kilo). We will be the world's most affordable, sustainable, accessible, and economical choice for earth-to-orbit and back transportation.



### Core Technology/Competitive Advantage

- Launch Price Range of \$350/Kilo - \$2000/Kilo (or)
- \$8Mn - \$45Mn per launch
- 16 Orbit insertions
- 72 Hour turnaround time for refurbishment, propellant loading, and relaunch



### Achievements & Milestones

- First start-up in history outside of US and Europe to be invited to Beyond Gravity's Launchpad Program.
- First qualified hardware testing of the World's First seal-less injector aimed at reusability.
- Proprietary in-house software for Engine Design more accurate than NASA CEA and RPA.



### Business Model

- Expendable @ USD 50M per launch [73% Gross Margin]
- Partially Reusable @ USD 45M per launch [85-88% Gross Margin]
- Fully Reusable @ USD 8M onwards per launch [80% Gross Margin]



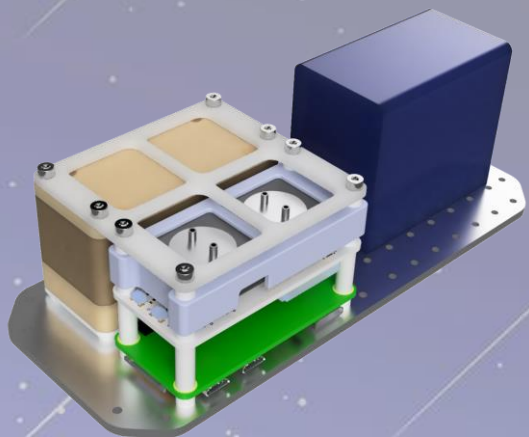
### The ask

- Provisioning of launch services for Taiwan's space ecosystem including launch insurance and compliance activities to cater for all customers and book our launch vehicle's payload.
- Securing suppliers for manufacturing of turbomachinery, electronics, on-board computer, ground stations and etc.





- ★ Founded: 2017/06/17
- ★ Funding Status: Series A
- ★ Web: [https://iddk.co.jp/app-def/S-102/iddk\\_wp/](https://iddk.co.jp/app-def/S-102/iddk_wp/)



# IDDK Co., Ltd.



## Introduction:

IDDK provides bio experiment services in microgravity that leverage our patented microscopic observation technology, Micro Imaging Device (MID). We provide pharmaceutical and drug discovery companies with the opportunity to conduct experiments in space, which has special environments such as microgravity.



## Core Technology/Competitive Advantage

Micro Imaging Device — one chip microscopic observation technology



## Business Model

- Pay per experiment
- Partnership for space education



## Achievements & Milestones

- Fundraised pre-series A from 3 venture capitals in 2023
- Will demonstrate our service in outer space in 2024

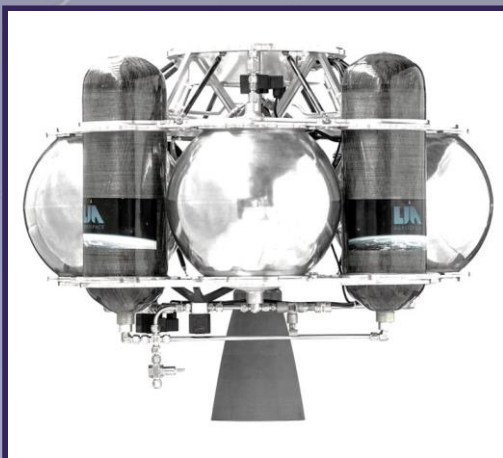


## The ask

- Service verification
- Customer development



- ★ Founded: 2021/03/03
- ★ Funding Status: Seed
- ★ Web: <https://lia-aerospace.com/>



# LIA Aerospace Ltd.



## Introduction:

LIA Aerospace develops non-toxic, high-thrust, chemical in-space propulsion systems at 20% the price and with a 6-month lead time. LIA works to ensure satellite, spacecraft, launch and lunar lander companies don't need to choose between reliability, performance, speed and costs.



## Core Technology/Competitive Advantage

- Cost-effective
- Fast, responsive maneuvers
- Non-toxic, storable propellants
- Short lead times



## Business Model

- Direct sale of propulsion systems
- Licensing of propulsion systems and propellants



## Achievements & Milestones

- 20+ thrusters hot fired
- 60+ seconds of accumulated burn on a single thruster



## The ask

- £ 5 MM
- To achieve spaceflight qualification



MANASTU SPACE

- ★ Founded: 2017/04/17
- ★ Funding Status: Pre-Series A
- ★ Web: <https://www.manastusp.space.com/>



## Manastu Space technologies



### Introduction:

Manastu Space stands at the forefront of space technology, pioneering solutions to tackle the challenges of space debris and enhance satellite safety. Our innovative green propulsion system is designed for agility, superior performance, and significant cost savings, redefining standards in space technology and advancing the future of satellite missions.



### Core Technology/Competitive Advantage

- Efficient & Reliable Engine Design
- Proprietary hydrogen peroxide-based fuel
- Ultra-High Temperature Ceramic Catalyst
- 20x times more agile
- 50% increase in performance
- 60% reduction in operational costs
- Eliminates toxic hydrazine, reducing environmental and operational risks



### Achievements & Milestones

- Raised USD\$ 3 million in pre-series A funding.
- Completed TRL 7, on track for TRL 8 and 9.
- 3 paying customers, MoUs & LoIs - USD\$100 Million.
- IOD (In Orbit Demonstration) is scheduled for the last quarter of 2024.



### Business Model

- Sells affordable propulsion systems to satellite startups.
- Markets via LinkedIn, emails, and events.
- Funded by VC, angels, grants, and customers.
- Systems are 60% cheaper, with 50%+ profit margin.
- Offers in-space refueling and de-orbiting.
- First customized system at low cost to build relationships.



### The ask

- Technology exchange and joint R&D.
- Leverage Taiwan's green tech sector & private and government funding for growth.
- Utilize supply chain & semiconductor industry for efficient production and procurement.



- ★ Founded: 2016
- ★ Funding Status: Raising Series B
- ★ Web: <https://oqtec.com>



## OQ Technology



### Introduction:

OQ Technology is the world's first global satellite 5G IoT operator providing uninterrupted cellular coverage for your assets and machines anywhere on the planet.



### Core Technology/Competitive Advantage

4G/5G IoT Connectivity from space – Market frontrunner with 10 operational satellites providing commercial services globally.



### Business Model

- B2B
- B2C



### The ask

- 30 Million EUR in Series B from New & Existing Investors to launch 20 more satellites
- Leverage Taiwanese Semiconductor Ecosystem for identifying the right partner for NTN IoT chipset



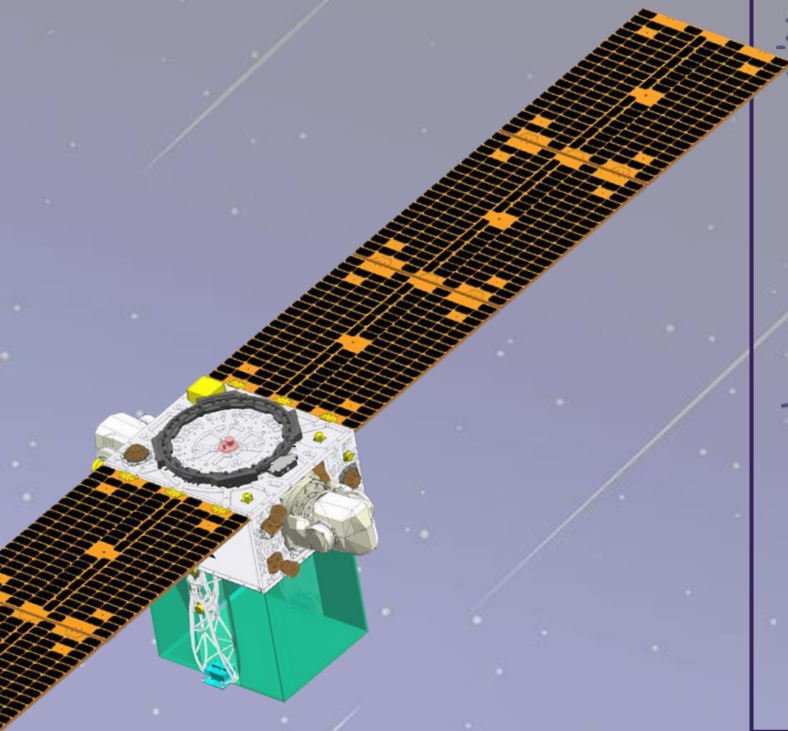
### Achievements & Milestones

- Established subsidiaries in Greece, Saudi Arabia and Rwanda
- Launched 10 satellites in orbit





- ★ Founded: 2021/05/01
- ★ Funding Status: Series A
- ★ web: [www.ReflexAerospace.com](http://www.ReflexAerospace.com)



## Reflex Aerospace

(Germany: Berlin and Munich)



### Introduction:

Reflex designs and manufactures sophisticated satellites that provide the volume, power, and performance to host even the most demanding payloads. The goal is to enable our customers to deploy payloads in space that generate the best data quality and quantity. This helps them to fully fulfill their use and business cases. Our Satellites can host payloads from 30 kg -250 kg for use cases like: Earth observation (EO), SatCom, GNSS / LEO PNT, SigInt, and others.



### Core Technology/Competitive Advantage

- Rapid development processes enable from vision to satellite in < 18 months
- S/W defined satellites allow in-orbit mission adaption



### Achievements & Milestones

- 1<sup>st</sup> satellite launch in Oct. 2024
- 3 more missions in the pipeline
  - Earth observation and SatCom
  - To be launched in 2025, '26, '27



### Business Model

- Development of tailored, stand-alone satellites and constellations
- Development of turnkey end-to-end missions (mission planning, satellite design, payload procurement, operations)



### The ask

Introduction to

- Customers for satellites, constellations
- Partners for mutual project
- Component + subsystem suppliers



- ★ Found Date: 2018/06/12
- ★ Funding Status: Pre Series C
- ★ Web: [www.Skyroot.in](http://www.Skyroot.in)



**Vikram Series Launch Vehicles**



## Skyroot Aerospace Private Limited



### Introduction:

Skyroot Aerospace, headquartered in Hyderabad, India, pioneers affordable, reliable space services with the Vikram series (VK-I, II, III). The Vikram-S suborbital launch marked South Asia's first private spaceflight, validating technologies in propulsion, avionics, and more. With over 300 professionals, Skyroot excels in carbon composites, cryogenic, and liquid engines, preparing for a Q4 2024 orbital launch.



### Core Technology/Competitive Advantage

- Launch Vehicle propulsion systems
- Carbon Composites
- Avionics and GNC



### Business Model

Provide launch services to the commercial and government customers.



### The ask

To enhance launch capabilities and overall infrastructure through Taiwan's strategic location in East Asia offers for logistical advantages for regional space missions and satellite deployments in the Asia-Pacific region.



### Achievements & Milestones

- Vikram-S Suborbital flight,
- Validated many technologies for orbital flight with flight expected by end of the year 2024.
- Pre Series C : Raised USD 95 mn



- ★ Founded: 2021/03/29
- ★ Funding Status: Series A
- ★ Web: <https://www.spacedreams.com/>



# SpaceDreamS



## Introduction:

Created in 2021, based in Paris and Toulouse, SpaceDreams is a spaceport architect. We aim to enhance the competitiveness of launchers through the development of interoperable and modular launch pads. The company provides turnkey ground systems solutions for launchers and spaceports, as well as launch and operational maintenance services, in order to reduce the cost and time of access to space. A multiple winner of the France 2030 program, SpaceDreamS benefits from the support of the CNES, ESA and European Commission to support the growth of its clients worldwide.



## Core Technology/Competitive Advantage

- With the interoperability of the launch site, multiple launchers can use a single launch pad, which reduces overall costs.
- The modularity of our ground systems allows them to be moved to different sites, increasing launch capacities.



## Achievements & Milestones

- Design and manufacturing of interoperable and modular ground means for launchers and spaceports.
- France 2030 and Horizon Europe laureate.



## Business Model

- **Turnkey solutions for ground segment**  
We produce a launch pad interoperable with any type of launchers.
- **Spaceport and launch operator**  
We can provide a spaceport global offer with a price per launch to have access to a sea launch pad, as well as launch operation services.



## The ask

- Taiwanese launcher: We can help Tispace to build, operate and maintain its ground segment including the launch pad, cryogenic fluids.
- Establishing a network of industrial and institutional partners.



# TETHYS

- ★ Founded: 2023/04/25
- ★ Funding Status: Seed
- ★ Web: <https://tethys.cool>



## Tethys



### Introduction:

We are the provider of Thermal Control Solutions. Lightness, high efficiency, low-consuming and high-power transport needs fit with our Hardware Proposal. Today, our flagship product, *Tempesta*, a miniaturized, fully portable and wearable device, provides personalized thermal comfort to individuals operating in extreme conditions. We are preparing a new Thermal Control System for Space Suits and we provide heat sinks to very high dissipative payload units for Spacecraft operations.



### Core Technology/Competitive Advantage

- Miniaturization
- Nuclear and Space Technology embedded
- Versatility and Adaptability
- Space Expertise



### Achievements & Milestones

- Early Product Development: Successfully developed the first prototypes of the Tempesta device
- Currently testing the product in the industry (Nuclear, Manufacturing, etc.)



### Business Model

- Provide tailored solutions
- Direct Sale
- Subscription Services, ensuring continuous optimal performance



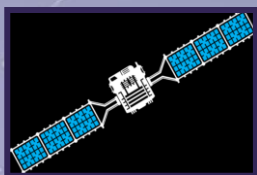
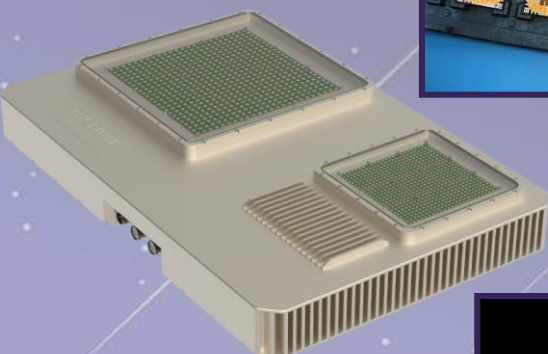
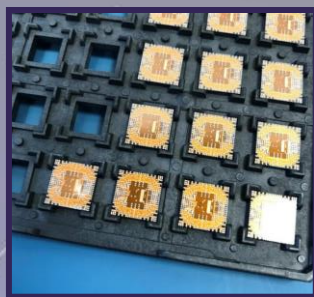
### The ask

- Partnerships: Development Projects
- Support in Scaling Production (Manufacturing Assistance, Investment in Production Facilities)
- Market Entry Support, Sales and Distribution Channels





- ★ Found Date: 2017
- ★ Funding Status: Series B
- ★ Web: <https://thorium.space/>



# Thorium Space Technology



## Introduction:

The company is formed by 50+ best in class engineers with support of highly experienced management. Our mission is to design innovative technological solutions in the field of constructing intelligent matrix antennas and space vehicles applicable in the space industry and defense sector. Becoming a leader on the market of intelligent matrix antennas by conducting innovative research processes and a leading partner in providing technology for constructing innovative transceiver devices. Poland is on its way to gaining a strong position in the market for small satellites and satellite devices and play important role in a future Satellite systems dedicated to safe and critical resources.



## Core Technology/Competitive Advantage

- Chipsets
- Antennas



## Achievements & Milestones

- Chipsets design and IP owned
- Flat Ka band antenna designed and tested



## Business Model

- Direct sales
- Distributors market



## The ask

- Partnership in manufacturing
- Collaboration with Space Agency, Clients



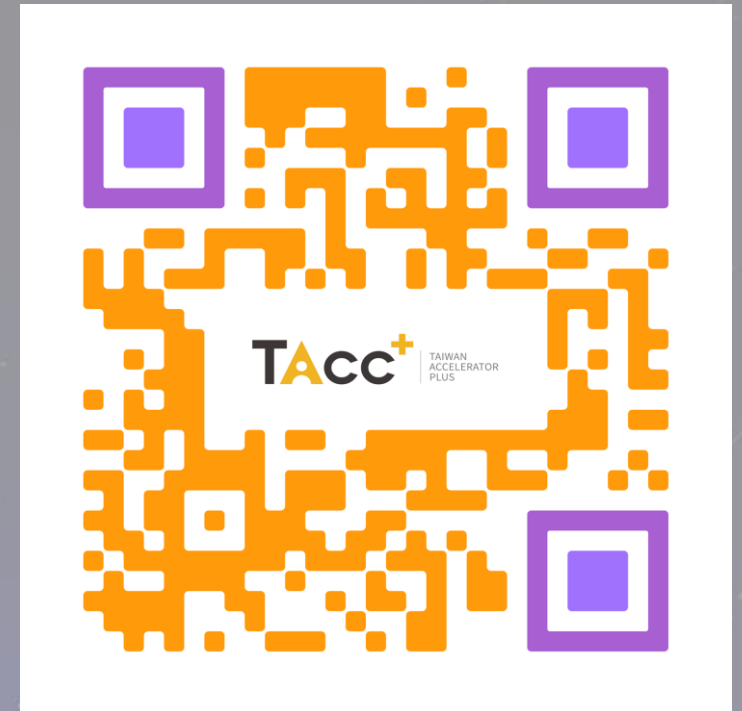
# Meet Up with International Space Startups

During the International Space Startup in Taiwan (9/30-10/25), if you are interested in having further discussions with these startups, please scan the QR code and select the startups you wish to engage with. We will arrange the matching process accordingly.

If you have any questions, please do not hesitate to contact us.

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廖子綺 Ms. Laura Liao : [lauraliao97@itri.org.tw](mailto:lauraliao97@itri.org.tw)





# To Infinity and Beyond!



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