Alliance Coordinated By Japan Space Systems

JAPAN BOOTH

2025

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idemitsu
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SPACE COMPASS
SPACE ONE
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Small Sat
small SATELLITE CONFERENCE

ArkEdgeSpace

Empowering people with satellites for a prosperous future.

Spun off from the University of Tokyo's Intelligent Space Systems Laboratory, who developed and operated the world's first CubeSat in 2003, ArkEdge Space develops high-performance satellites at ultra-compact sizes, leveraging advanced technologies from lunar and deep-space exploration and the results of Earth-based applications.

As a Comprehensive Micro-satellite Integrator

01

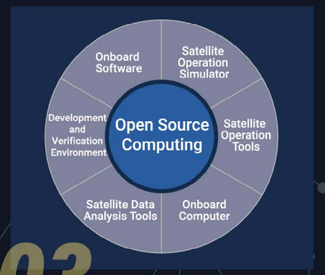
Supporting a Variety of Missions

Satellite platforms capable of supporting diverse missions, including marine communications, positioning and location services, remote sensing, lunar infrastructure, and deep space exploration.

02

Delivering Rapid and Efficient Satellite Mass Production

Optimized at every stage of satellite mass production, from design to testing and assembly, delivering a fast turnaround and high efficiency.



03

Offering Space Development with an Open Approach

Flexible and fast development, implementation, and operation of satellites through the use of open and standardized software systems.

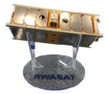
Satellite Series

We are developing a wide variety of small satellites that can provide such services as Earth observation, communication, and location information. Beginning from 2024, we are in a full-fledged satellite launch and utilization phase.

3U & 6U Satellites

Operating Satellites in orbit

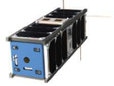
Launched in 2019



RWASAT-1
3U-class IoT satellite

Operating Satellites in orbit

Launched (deployed) in 2023



OPTIMAL-1
3U-class demonstration platform

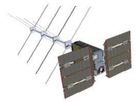
Under development

From 2024 onwards
7 launches planned

6U multi-purpose bus series
Mass production model of a 6U-class multipurpose satellite (METI and NEDO funded project)

Under development

Scheduled for multiple launches from 2024 onwards



VDES* demonstration satellite
6U-class satellite for maritime domain awareness (Commissioned project by METI and NEDO VDES*)

30 – 100kg class

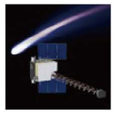
Under development

Scheduled for 7 launches since 2024 onwards

VDES— Marine communication and monitoring
Satellite-based communication and monitoring system for ships (Commissioned project by METI and NEDO)

Under development

Scheduled for launch around 2029



Comet Interceptor
Deep space satellite (Joint project with JAXA and ESA)

>100kg class

Under development

Demonstration satellite scheduled for launch around 2028

Lunar positioning satellite
Positioning satellite for lunar activities (under development through a JAXA commissioned project)

Under development

Demonstration satellite scheduled for launch around 2027

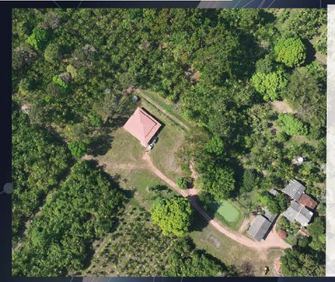
Hyper-spectral remote sensing satellite
Multi-frequency monitoring satellite for the environment, agriculture and forestry (METI-funded project)

VDES* (VHF Data Exchange System)

Projects

Marine Monitoring

Satellite VDES (VHF Data Exchange System) is an advanced version of AIS (Automatic Identification System), a mandated requirement for all large vessels. VDES will serve as a next-generation marine information infrastructure, enabling two-way communication between ports, ships and other maritime elements via satellite.
By developing satellite systems that support VDES communication via satellite, we aim to contribute to the digitalization of various maritime operations and also improve port navigation for ships outside the range of radio waves from ground stations. To track the movements of ships and other vessels at sea, we are also developing solutions that combine AIS/VDES information with satellite remote sensing data such as optical, SAR, and radio wave observations to estimate vessel positions and realize maritime domain awareness for sovereign authorities.



Satellite Remote Sensing

Satellite remote sensing is a generic term for technologies used to study the shapes and properties of targets from a distance via satellites, which is then utilized across a variety of applications. Through the deployment of small satellite constellations, equipped with hyper-spectral sensors, we will perform multi-frequency observations of greenhouse gases, deforestation, crop growth conditions, and ocean pollution. We are also developing a geospatial platform that integrates data obtained from satellites and ground sensors. Our aim is to make satellite observation data more accessible and more useful to more people through our data platform, which can be operated intuitively without specialized knowledge, and can be customized according to need.

Satellite-based Positioning, Navigation and Timing (PNT)

Satellite-based PNT is a system that uses signals transmitted from satellites to determine the location and time of objects on the ground. It is widely adopted across nearly all facets of everyday life, including smartphones and transportation, and serves as an essential component to society's critical national infrastructure, such as power stations, financial services and telecommunications.
In cooperation with industry, academia and government, we are working on the construction of an advanced Moon positioning satellite system (a lunar version of GPS) which will serve as an essential infrastructure for the Artemis program. It will support human activities, including the development of a lunar base alongside surface exploration with crewed rovers.
In recent years, there has been an increase in activities aimed at degrading and denying existing satellite positioning signals, severely impacting aviation and maritime sectors, and potentially disrupting society today. Given these circumstances, we have been studying new LEO satellites to complement existing systems and help enable new performances for autonomous platforms, such as driving or agriculture.

Deep Space Exploration

ArkEdge Space is undertaking projects for pioneering the future of deep space exploration. The spacecraft for this project comprises of a main vehicle and two probes, with one being provided by ArkEdge Space. This marks the first occasion in which JAXA has commissioned a Japanese start-up to develop a deep space probe. The spacecraft are scheduled to be launched in 2029, where it will wait in space until the discovery of a suitable target. The flyby mission will be performed by 2035.
Additionally, we are also working with academic institutions to consider lunar and deep space probes of various sizes ranging from 6U-class to 100 kg-class. We will continuously strive to achieve low-cost, high-frequency deep space exploration with small satellites.

ArkEdge Space Website

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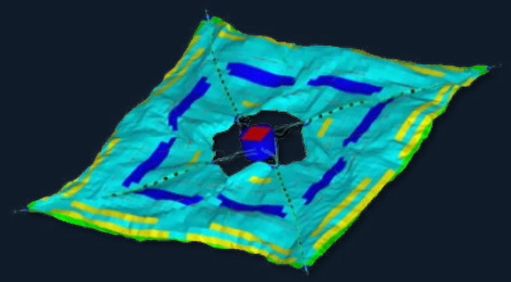
Always beautiful, our blooming technologies will bring innovation to space industry.

cosmobloom



cosmobloom originated from the Space Structure Systems Laboratory at Nihon University, now part of JAXA. Our team offers services in the analysis, design and development of flexible space structures.

Our core technology in based on the analysis of flexible space structures. The nonlinear elasto-dynamic analysis code, NEDA, was developed in the lab and used to simulate the membrane deployment of JAXA's small solar sail spacecraft IKAROS, launched in 2010—the world's first successful interplanetary mission using a solar sail as its primary propulsion system.

In addition, all our members have hands-on experience in the full lifecycle of nano-satellites, from design and development to operation. This practical expertise is one of our greatest strengths and enables us to provide higher-quality services than other companies.By combining our core technologies with real-world satellite development experience, we deliver exceptional value to clients working with flexible structures. We continue to pursue our philosophy: "Keep challenging, create together, bring hope for all."

About us

Company Name: cosmobloom Inc.

Established: April 24, 2023

CEO: Momoko Fukunaga

Address: ROKUGO BASE 229, 3-10-16
Minami-Rokugo, Ota-ku, Tokyo, Japan

Business Areas:
- Structural analysis services for flexible space structures
- Consulting for flexible structure-based space systems
- Human resource development for the space industry
- Research and development for space-based solar power (SSPS)

History

1991 Miyazaki Laboratory established

2006 Launch of the micro-satellite SEEDS

2008 Launch of the micro-satellite SEEDS II

2010 Conducted membrane deployment analysis for the solar sail demonstration spacecraft IKAROS

2014 Launch of the micro-satellite SPROUT

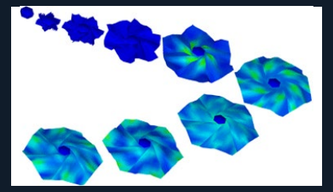
2016 Winner of the Deorbit Device Competition

2017 Winner of the Debris Mitigation Competition

2019 Launch of the micro-satellite NEXUS

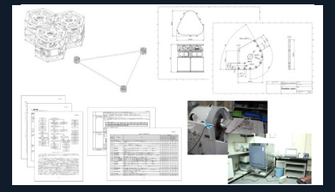
2023 cosmobloom Inc. incorporated

Service



Analysis support

We support structural analysis of space structures using our proprietary analysis tool, NEDA.



Design support

We support the analysis and design of deployable structures, including extremely flexible members such as membranes and cables.

Consulting

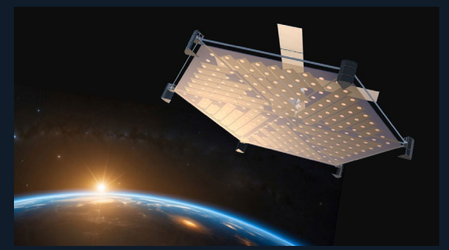
We provide solutions for the design, development, and utilization of flexible deployable structures.

Product

Drag Sail

We are now developing one of the smallest Drag Sail in the world, designed to be mounted on 3U/6U CubeSats.

Item	Value
Altitude	550km
Size	82mm×82mm×25mm
Membrane Shape	Triangle
Membrane Surface Area	3.05m^2
Mass	325g
Satellite Type	3U/6U
Electric I/F	5V and GND line
Natural Frequency	Over 200Hz



Membrane Antenna (Front: Antenna, Back: Solar cells)

We are developing an ultra light-weight, large antenna that can be mounted on 12U CubeSat or larger.

Item	Values
Frequency Band	2.45GHz Band
Module Connection	Anable
Stowed Size	200mm×200mm×200mm
Mass	Under 5kg
Antenna Diameter	About 2m
Target Satellite	12U CubeSat ~
Communication Speed	150Mbps
Antenna Gain	45dBi ※To achieve this gain, it is necessary to combine modules (7 modules) to construct an antenna with a diameter of approximately 8 m.
Transmission Power	325W
Beamforming	±60deg

Contact

Mail	info@cosmo-bloom.com
HP	https://cosmo-bloom.com
YouTube	https://www.youtube.com/@cosmo-bloom
X	https://twitter.com/cosmobloom_Inc

For expanding data business;

We provide you with outstanding Space Optics by free of charge.

You provide us with Satellite Bus and flight opportunity by free.

Why not to discuss now?
Go to the Genesia booth, in Japan pavilion
Dealing for capability exchange

sales@genesia.co.jp

http://www.genesia.com

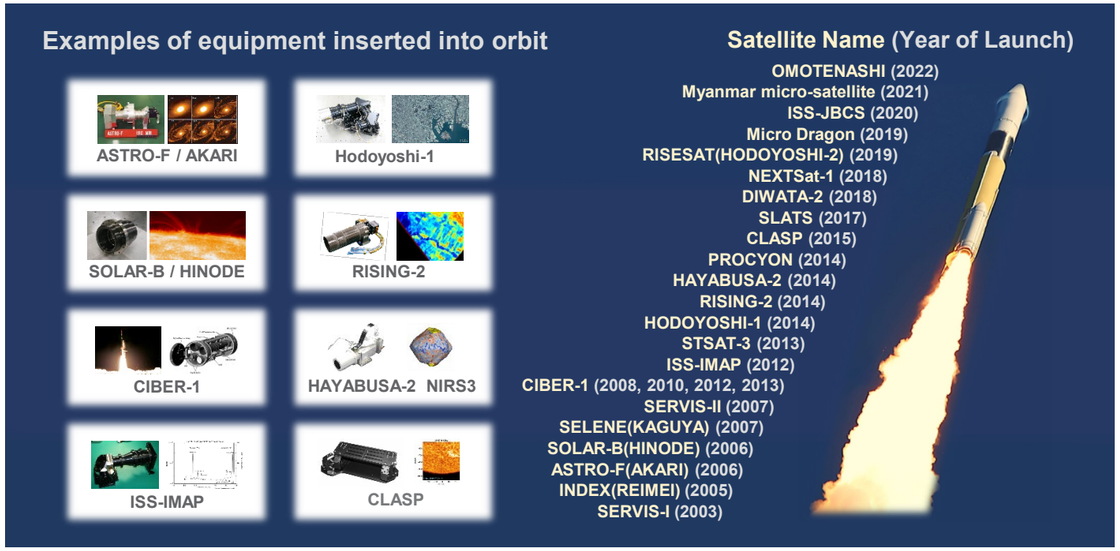
3-38-4 Shimo-Renjaku, Mitaka, Tokyo, 181-0013, Japan

Genesia Corporation

Our primary scope of business is R&D,
manufacturing and sales of high value-added optical systems such as;

- **Optical systems (UV/VIS/IR) for aerospace equipment**
  - Many imaging units equipped on Earth observation satellites, interplanetary spacecrafts, astronomy satellites and International Space Station, etc.
- **Optical systems (UV/VIS/IR) for high-energy plants**
  - Optical units for nuclear fusion experimental reactors
- **Hyper/Multi-spectral imagers**
  - Developments of imaging systems with LCTF (Liquid Crystal Tunable Filter)

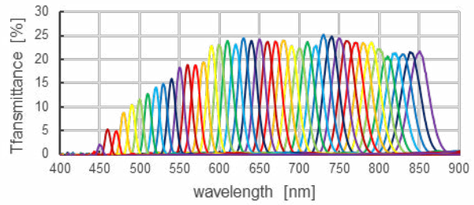
Genesia's Observation equipment in the field of satellite and space exploration



Example of Space optics for Tunable multi-wavelength

Liquid Chrystal Tunable Filter (LCTF)

LCTF is an optical filter that electronically controls liquid-crystal to transmit a selectable wavelength of light. Its rapid tuning capabilities over a broad spectral range allows for numerous applications using one system without the need for multiple filters.



Transmission Profile of LCTF (VIS)

Key Features of Camera with LCTF

- Light Weight & Compact
- Broad Spectral Range (e.g. 400nm-1600nm)
- No need to carry multiple filters
- Low-Cost
- Multipurpose : Marine Debris Detection, Mineral Detection, Vegetation Mapping, Advanced Precision Agriculture and more !


Camera with LCTF

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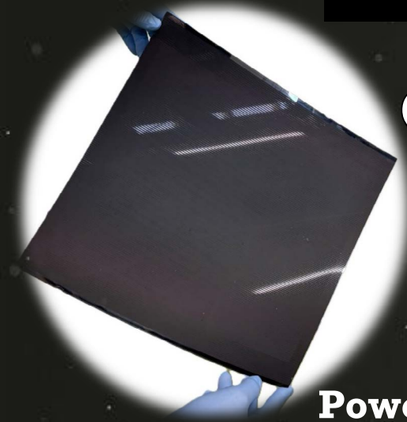
CIGS Solar Cell



Resilience redefined:
Power that outlasts the mission

High Power Output

17% Conversion Efficiency at EOL after 15 years operation in GEO.
Increase the packing factor with square cells.

Superior Radiation Resistance

Our CIGS solar cells maintain their conversion efficiency even under intense radiation exposure.

Optimized for your Application

CIGS Solar Cell have a monolithic construction allowing cells to have customizable voltage and dimensions.

Durability by XL Sized Cells

Cells can be made as large as 900 cm^2 reducing the number of interconnections per panel.
Space proven, TRL6

Scalable Manufacturing

We have over 30 years experience CIGS production and plan to scale to megawatts per year.

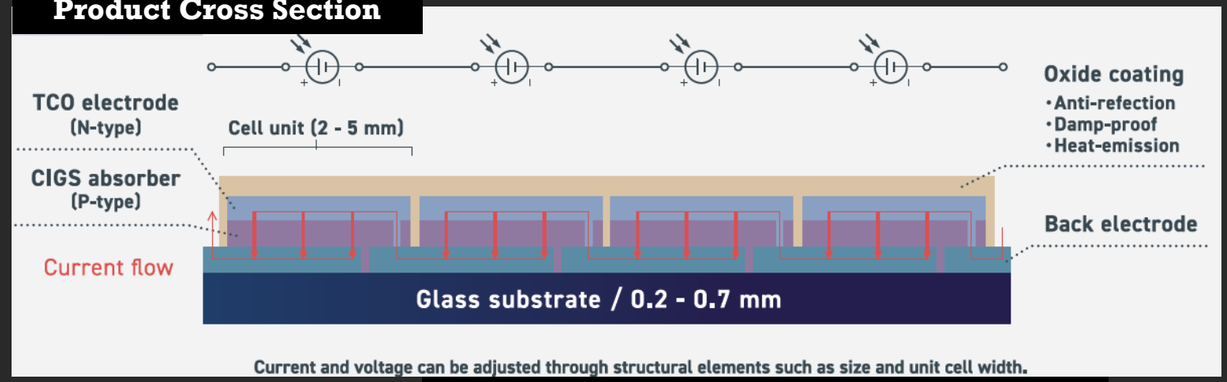
Lightweight

With no need for cover glass, CIGS cells have a specific power of 465 W/kg using a 0.2 mm glass substrate.

Products

idemitsu

Product Cross Section



Current and voltage can be adjusted through structural elements such as size and unit cell width.

Predicted values

* The tentative active area will be 290 mm x 300 mm.
Each 5 mm wide area are on each side will be used for wiring.

Sample ID	Total Area* (cm^2)	Number of cells	Eff. (%)	P_{max} (W)	V_{oc} (V)	J_{sc} (A)	V_{mp} (V)	J_{mp} (A)	FF
Future	900	41	17.0	14.2	27.7	0.693	22.38	0.632	0.741

Temperature Coefficients

The following values are characteristic values per unit cell and are derived from IV characteristic results from -40°C to +120°C.
The values are subject to change with future cell development.

P_{max} (μW/cm^2/°C↑)	V_{oc} (mV/°C↑)	J_{sc} (μA/cm^2/°C↑)	V_{mp} (mV/°C↑)	J_{mp} (μA/cm^2/°C↑)
-74	-1.7	1.3	-1.5	-29

1 MeV Electron Radiation Degradation (Remaining Factors)

Fluence (e/cm^2)	P_{max}	V_{oc}	J_{sc}	V_{mp}	J_{mp}
1E14	0.98	1.00	1.00	1.00	0.98
1E15	0.99	1.01	1.00	0.99	1.00
1E16	0.97	1.00	1.00	0.99	0.98

Ready to Power Your Mission? Contact Us Today!

Have questions or need more information?
Reach out via the QR code or following e-mail address, and let's take your space project to new limits with CIGS solar cell technology!

E-mail: CIGS-customer@idemitsu.com

Home Page

Ver. 202502

IHI AEROSPACE Co., Ltd.

IHI AEROSPACE is prime manufacture of EPSILON which has been developed with JAXA as a Japanese Flagship rocket. Even though EPSILON is solid propellant rocket, it can provide quite high orbit-injection accuracy, equal to or better than that of liquid propellant rocket. Also, EPSILON can provide dedicated and rideshare launch based on Customer's requirement. EPSILON is one of perfect choice for access to space, especially for small satellite with high reliability, reasonable launch price, and the ability to meet customer's requirement.

EPSILON Launch Service

SPEC	Epsilon
Capability	Suitable for launching small satellite to wide range of Inclination.
Accuracy	Altitude ±15[km] or less (Actual: **1.2[km]@F4**) Inclination ±0.15[deg] or less (Actual: **0.08[deg]@F5**)
Multiple Satellite Launch	**Available**

EPSILON: Begin space access with flagship launch vehicle of Japan

- ✓ Suitable for small satellites
- ✓ Dedicated and Rideshare launch is available.
- ✓ Satellite delivery to launch site by X-10 to launch

Please see more detail from QR code.

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Japanese Small Satellite Component Catalog

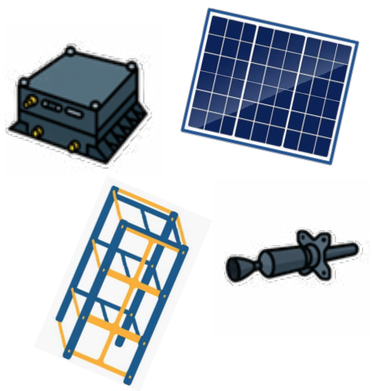
Explore Japan's Space Technologies

–A Glimpse into Japanese Space Components & Parts–

JAXA (Japan Aerospace Exploration Agency) is working to connect Japanese companies with global space industry players. This "Japanese Small Satellite Component Catalog" introduces subsystems, components, and parts for small satellites and CubeSats — everything you need to support your next mission.

Highlights of the Catalog

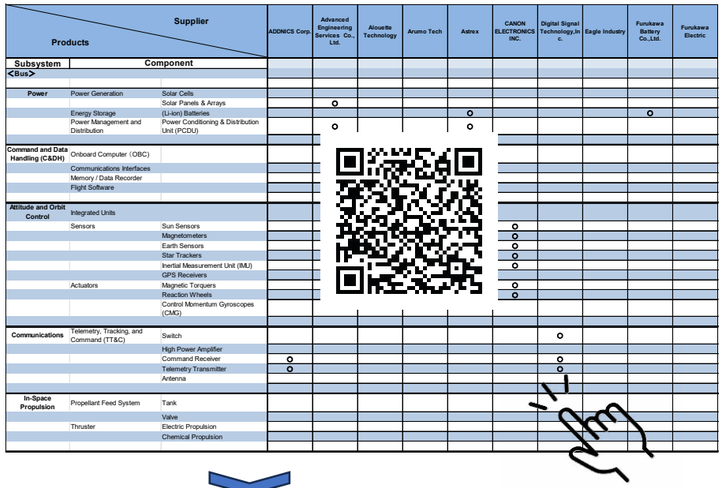
- Component–Supplier Matrix for easy comparison
- Clickable circles linking to supplier webpage
- Covers key categories: structure, power, thermal, etc.
- Designed to help you find your next partner



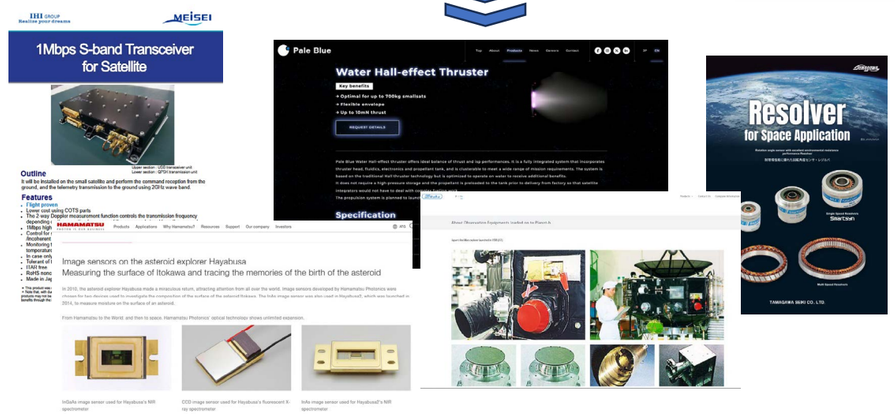
Scan the QR code to view the full interactive catalog!

How to Use the Japanese Small Satellite Component Catalog

1. Find the component you're looking for in the matrix.
2. Click the circle at the intersection with the supplier.
3. Jump to the supplier webpage featuring the relevant product.



Products / Supplier			ADSNICS Corp.	Advanced Engineering Services Co., Ltd.	Alouette Technology	Arumo Tech	Astrex	CANON ELECTRONICS INC.	Digital Signal Technology, Inc.	Eagle Industry	Furukawa Battery Co.,Ltd.	Furukawa Electric
Subsystem	Component											
<Bus>												
Power	Power Generation	Solar Cells										
		Solar Panels & Arrays		○								
	Energy Storage	(Li-ion) Batteries					○				○	
	Power Management and Distribution	Power Conditioning & Distribution Unit (PCDU)		○			○					
Command and Data Handling (C&DH)	Onboard Computer (OBC)											
	Communications Interfaces											
	Memory / Data Recorder											
	Flight Software											
Attitude and Orbit Control	Integrated Units											
	Sensors	Sun Sensors						○				
		Magnetometers						○				
		Earth Sensors						○				
		Star Trackers						○				
		Inertial Measurement Unit (IMU)						○				
		GPS Receivers						○				
	Actuators	Magnetic Torquers						○				
		Reaction Wheels						○				
		Control Momentum Gyroscopes (CMG)										
Communications	Telemetry, Tracking, and Command (TT&C)	Switch							○			
		High Power Amplifier										
		Command Receiver	○						○			
		Telemetry Transmitter	○						○			
		Antenna										
In-Space Propulsion	Propellant Feed System	Tank										
		Valve										
	Thruster	Electric Propulsion										
		Chemical Propulsion										



Feel free to reach out to any of the featured companies — we look forward to this being the start of exciting new business opportunities on the global stage.

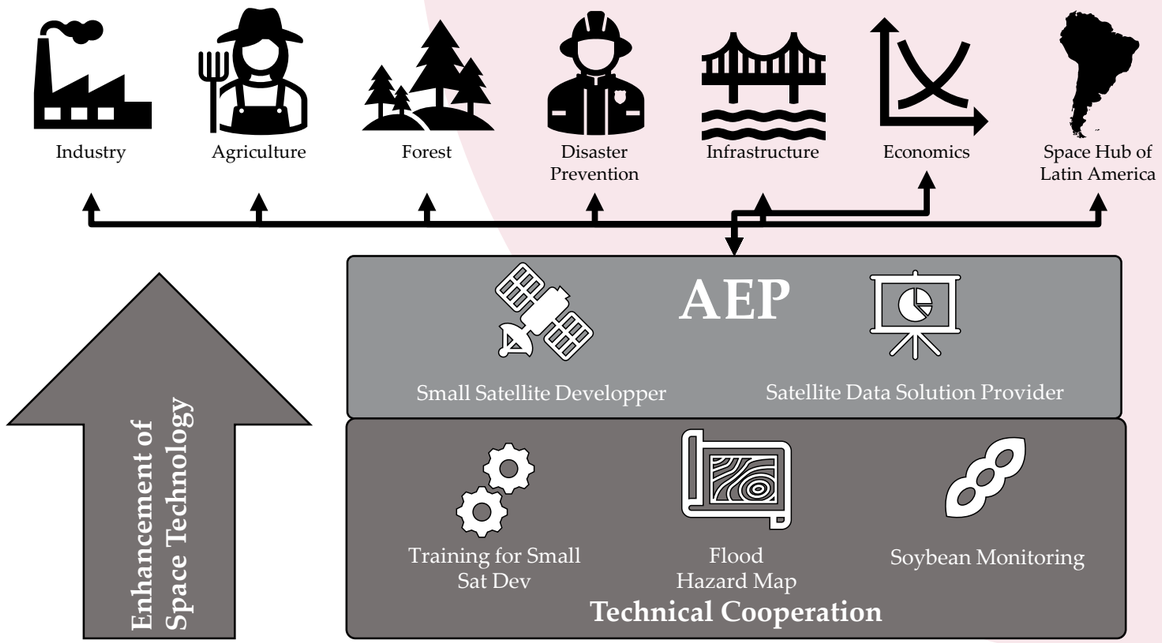
For any inquiries, please contact:
Email: japan_catalog@astec.or.jp, maruoka.shingo@jaxa.jp, or kashiwabara.takehito2@jaxa.jp

Corporate version of the catalog is available here:
https://aerospacebiz.jaxa.jp/japanese-space-industry/

International Space Cooperation between Japan & Paraguay

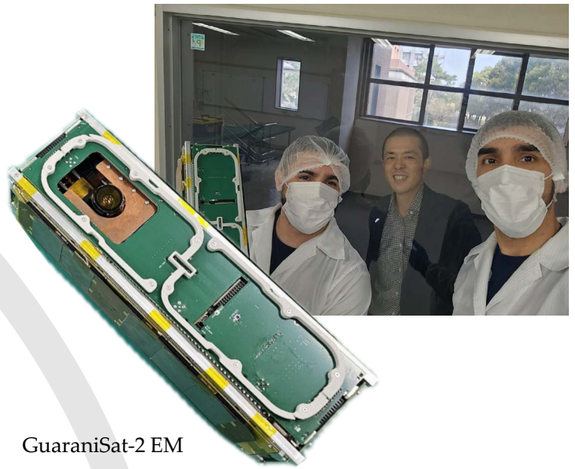
Overview

Space Agency of Paraguay (AEP) has an ambitious goal to achieve an initiative for developments, operations and utilizations of small satellites in Latin America. Authors collaborated to enhance Paraguayan space programs on socioeconomic benefits through 3 items: 1) small satellite developments, including Paraguayan 2nd small satellite, GuaraniSat-2 Engineering Model tests in Japan; 2) creating a flood hazard map and designing; and 3) developing soybean monitoring systems through multiple optical satellite data analysis and combining weather information with agricultural and Livestock ministries and institutions. The Project was designed as the first step for deepening international space cooperation between Japan and Paraguay. Cooperation and enhancement of space program would be able to contribute to Paraguayan socioeconomic especially efficient disaster management and agricultural productivity and quality improvement and effective. Paraguayan satellite launches, moreover, have been supported by Japan; the Project was expected to strengthen science technologies and international space cooperation between Japan and Paraguay.

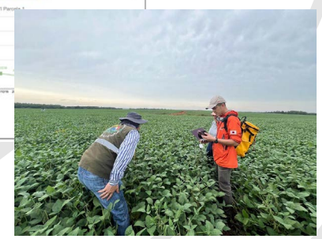


System Development

GuaraniSat-2: AEP develops a 3-U satellite, GuaraniSat-2 by themselves. For enhancing their satellite development abilities and testing GuaraniSat-2 Engineering Model, authors requested Kyutech to provide a training program for small satellite developments and GuaraniSat-2 Engineering Model test between October 2024 and May 2025. A total of 3 AEP engineers achieved knowledge through the program.



GuaraniSat-2 EM



Satellite Data Applications

Disaster: Authors had a training program on open-free flood simulation software, iRIC for identifying flood impacts by a single river channel using digital elevation models between September 2024 and January 2025. They developed a hazard map and operation manuals based on the simulation results.

Agriculture: Authors applied multiple optical satellite data analyses into soybean fields. The methods and results were also shared and discussed at Working Group consisted with AEP and agricultural ministry and institutions in Paraguay. Authors verify their methods by applying another soybean season between February and August this year, 2025.

Japan Space Systems

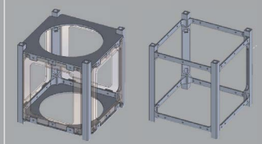
Japan Space Systems is an organization which contribute to develop space industry through research & development, operations, satellite data analysis, international cooperation, human resource developments and investigations & consolations.

https://www.jspacesystems.or.jp/en

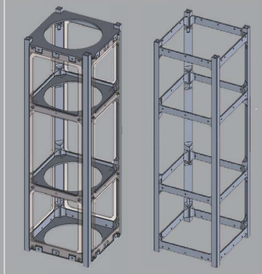
Nakamura-Shinsaku@jspacesystems.or.jp

Japanese high-quality craftsmanship cubesat structure

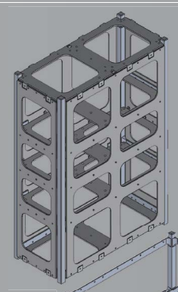
Type:A

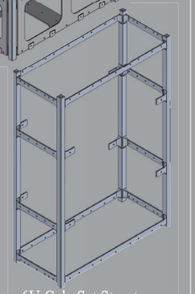


ex. 1U CubeSat Structure



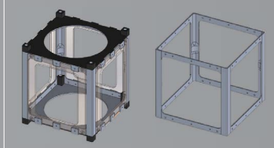
ex. 3U CubeSat Structure



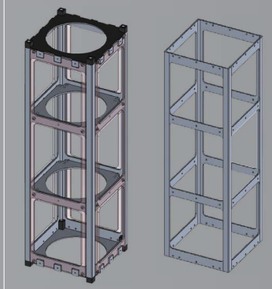


ex. 6U CubeSat Structure

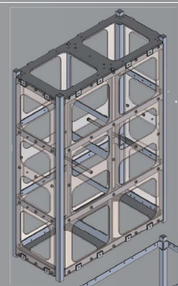
Type:B

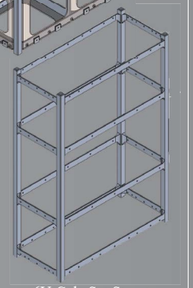


ex. 1U CubeSat Structure



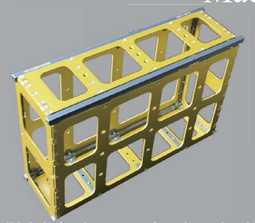
ex. 3U CubeSat Structure





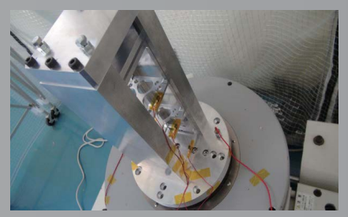
ex. 6U CubeSat Structure

Machined structure developed by KIKUCHISEIKI

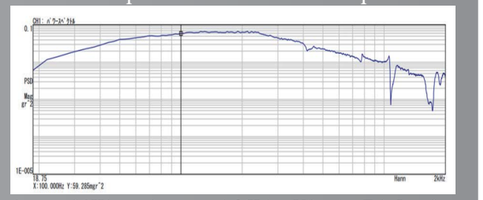


ex. 6U CubeSat Structure of products developed jointly by three companies in Hitachi-city

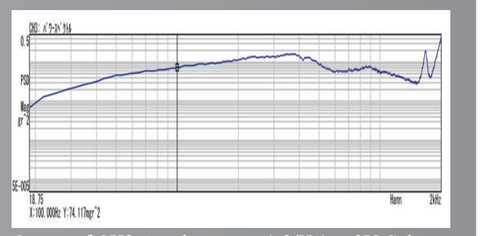
< Vibration Test >



< Exsample of Accelerometer Output >



Output of CH1 Accelerometer (g2/Hz) at Vibration Tale Interface



Output of CH3 Accelerometer (g2/Hz) at 3U Cubesat

ex. 3U CubeSat Structure during Processing

It is the result of joint research with the University of Tsukuba.

We can provide structures for CubeSats ranging from 1U to 24U,
made from a single block of aluminum with precision machining.
We pursue both high rigidity and lightweight design in our frames.
Our frames are designed using the latest 3D modeling and optimization software,
Inspire1, and can be customized to meet specific requirements.
Our production lead time can be as short as one week.

Project Leader
Masahiro Kikuchi
Managing director

Satellite structure

Company Profile

Head Office

2-12-11 Oomika-cho, Hitachi-shi, Ibaraki

Second Plant

4-13-21 Oomika-cho, Hitachi-shi, Ibaraki

Mukaiyama Works

1047-5 Mukoyama, Naka-shi, Ibaraki

Utsunomiya Office

Room 202, Level Comp II, 600-34 Nishihara, Utsunomiya-shi, Tochigi

TEL +81-29-295-8511
FAX +81-29-298-8820
WEB http://www.kikuchiseiki.com
EMAIL eigyou@kikuchiseiki.com

History

2023: Began the Cubesat structural development business
2019: Launched a business in the space industry
2015: Began the aerospace industry and received its first order
2013: Acquired JIS Q 9100 certification (August 31, 2013)
2009: Expanded the large-scale machinery processing factory
1995: Built the Mukoyama factory and consolidated production bases
1983: Built a second factory and began unit assembly
1976: Established "Kikuchi Seiki Co., Ltd."
1966: Converted to a parts processing business
1961: Established as a press die manufacturer

JAB MS CM023

BSK ISO BSKA0198

Main business items.

- Manufacturing of parts for the power and energy industry
- Precision machining of parts for industrial machinery
- Machining of engine parts for aircraft
- Design and manufacturing of large-scale jigs and fixtures for the aerospace industry
- Development of structures for ultra-compact artificial satellites

Comprehensive large-scale metal processing achieved through a wide range of machinery and quality assurance systems.

Our main focus is on precision machining of high-quality parts using our large-scale five-axis machining centers and turning centers. We are capable of managing the entire production process, including design, material procurement, sheet metal fabrication, heat treatment (annealing), machining, surface treatment (painting), assembly and precision adjustment.

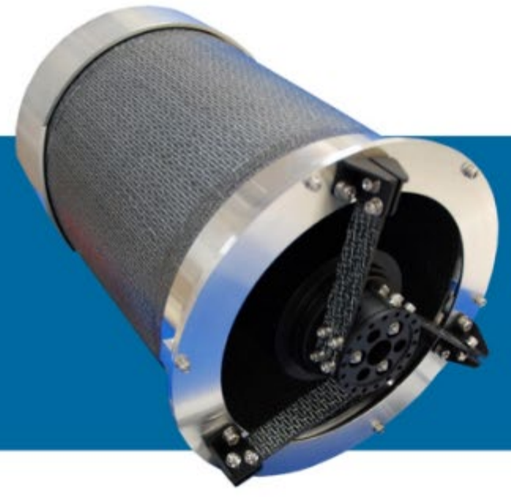
Maximum processing range
3500mm x 6500mm x height 1500mm Maximum weight 30t

Neoa-10:φ1250mm×740mm
Neoa-12:φ1400mm×1500mm
Neoa-20:φ2000mm×1500mm Maximum weight 8t

KIKUCHISEIKI CO., LTD.

kiyohara

World renowned for our high standards of quality, Kiyohara Optics is an industry leading optics manufacture with more than sixty years of seasoned experience in the design, development, and manufacture of finely tuned optics and precision optical components. We specialize in providing built-to-order manufacturing to meet the most exacting expectations. Whether your mission is research and development or you need subject-matter expertise in the development of optics for a prototype, Kiyohara Optics is your choice for quality.



SPACE TELESCOPE

Deployed into LEO as part of HODOYOSHI-4 sat

Designed and developed specifically for configuration and integration with small satellites

GSD : 6m
Primary dia : ϕ150mm
FL : 1000mm
Total unit weight : 3.8kg

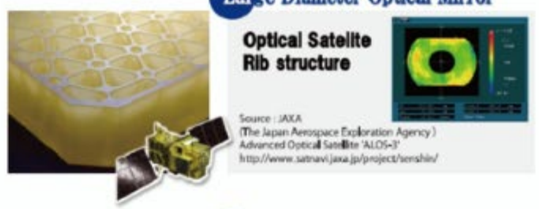
We are partnered with Crystal Optics to provide comprehensive optical service solutions. Please feel free to ask about any of our products our capabilities with:

- Optical design
- Opti-mechanical design
- Precision machining
- Optical manufacturing
- Assembly
- Mechanical and optical testing

Kosuke Kiyohara
Executive Officer
KIYOHARA OPTICS Inc.
kosuke.kiyohara@koptic.co.jp

Location

Large Diameter Optical Mirror



Large Stainless Toroidal Mirror

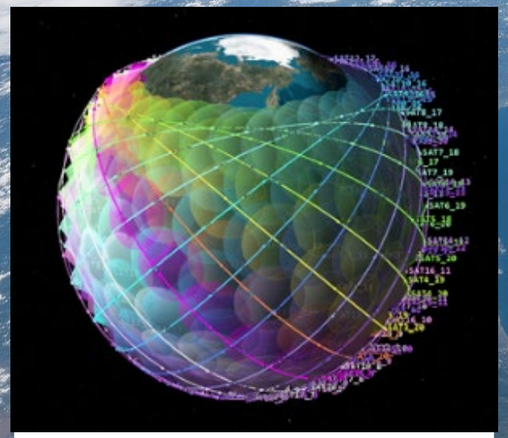
Space Telescope

kiyohara

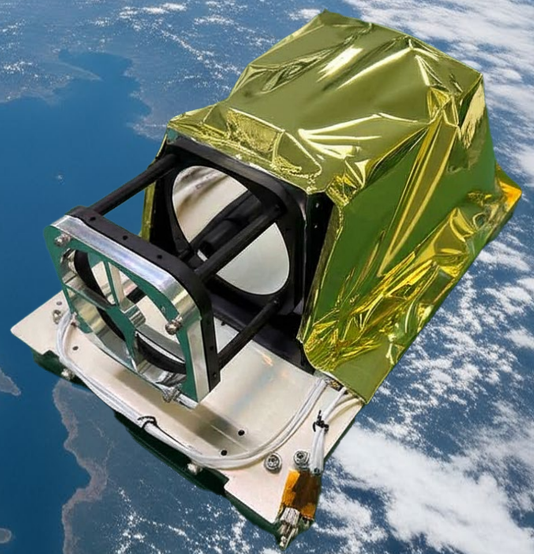
Optical Communication Terminal

・All Aluminum Mirror Unit

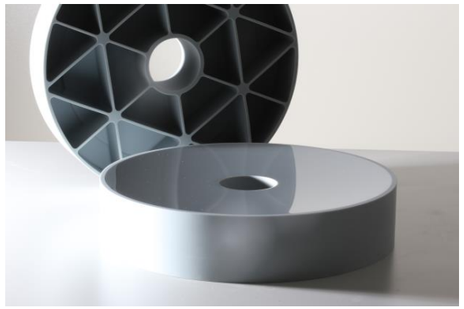
・Glass mirror + Invar Rod



Example of communication satellite constellation in Low Earth Orbit using the results of this R&D



Fine-Cordierite



Enabling **High Precision** and **Light Weight** with **High Rigidity**

- **70% Weight Reduction**
- **For Optical Structural Parts**
- **Minimal Temperature Deformation**

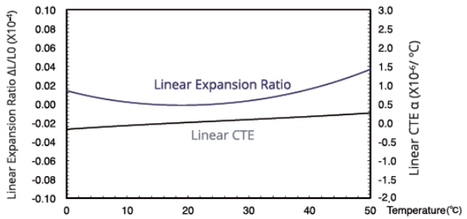
Low Thermal Expansion Ceramic Mirror

Material Characteristics comparison with Low CTE Glass

Item	Unit	Low CTE Glass	Cordierite CO720
Density	kg/m³	2.53	2.55
CTE	ppm/K	0.02	0.02
Elasticity Modulus	GPa	90	144
Specific Rigidity	–	36	56

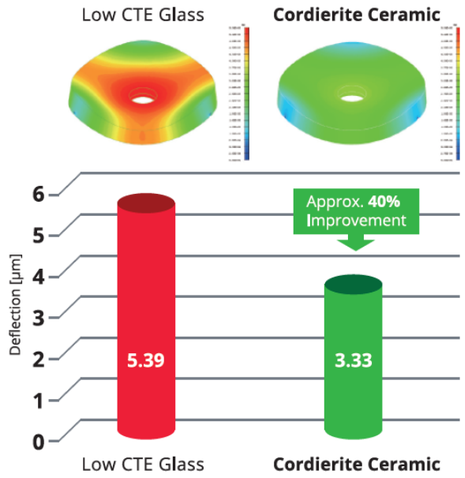
Temperature Dependency Graph
〈Cordierite CO720〉

Temp. Curve of Linear Expansion Ratio (α)



Values are typical properties, and may vary depending on product configurations or manufacturing processes.

Deflection by 3-Point Support



Comparison Conditions
Product Size : Φ 1020 x 120mm(Rib Structure)
Supported Points : Outside 3 Points
Load : Self-weight

KYOCERA

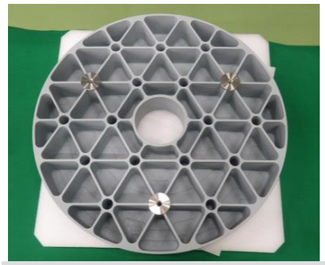
KYOCERA is one of the world's leading manufactures of high precision, high quality ceramic products. In the field of space and astronomy, KYOCERA has made numerous contributions through its superior quality materials such as telescope mirrors, optical structural components, and much more.

Newtonian Telescope

Optical System

Flat Mirror

Parabolic Mirror



Mirror for NASA

Scan here to visit KYOCERA website and learn more about our Fine Cordierite – Low Thermal Expansion Ceramic

KYOCERA

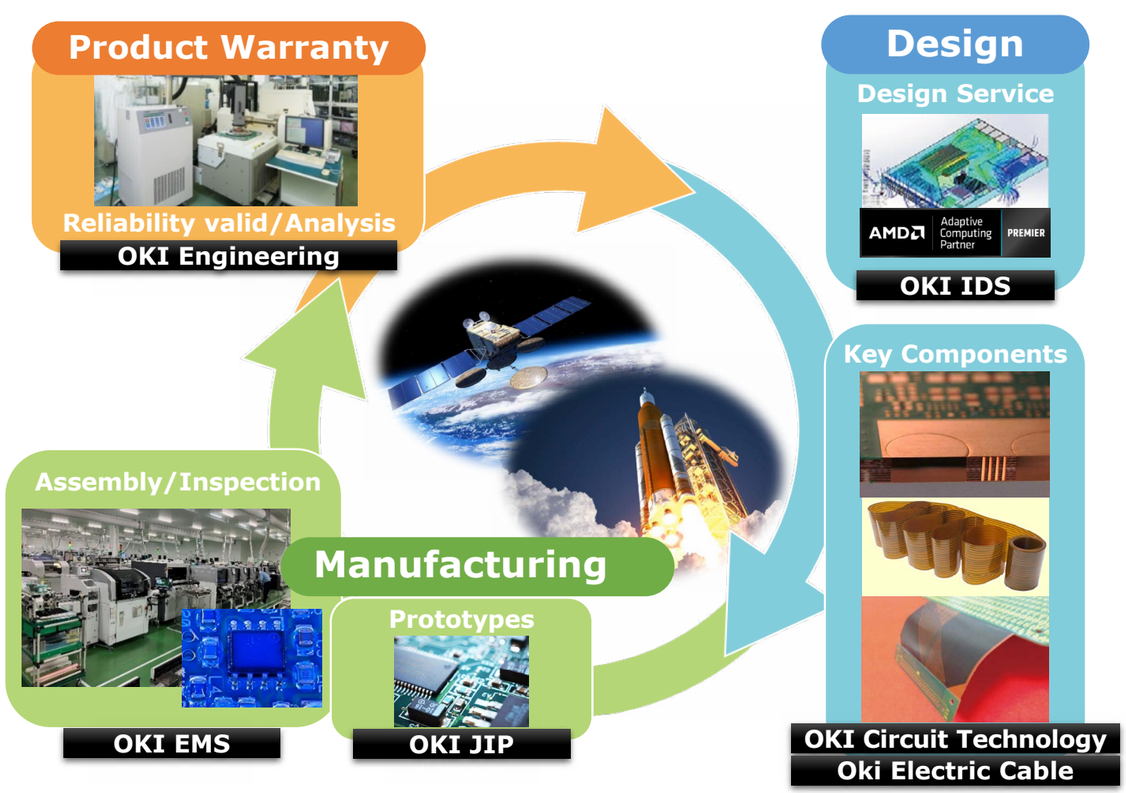
OKI *Open up your dreams*

SEAMLESS MANUFACTURING SOLUTIONS PARTNER FOR YOUR SPACE MISSIONS

About OKI
OKI is a Japanese company specializing in information and communications technology, providing solutions to society with a vision to "create a safer and more convenient society through innovative technology and solutions."

OKI group's "One-Stop Service" for space equipment

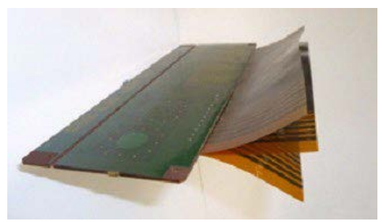
OKI offers comprehensive EMS solutions—from design and manufacturing to reliability testing. Leveraging our expertise in communications and mechatronics, we deliver high-quality electronic products for aerospace and other fields.



We offer "JAXA-certified" highly reliable PCBs

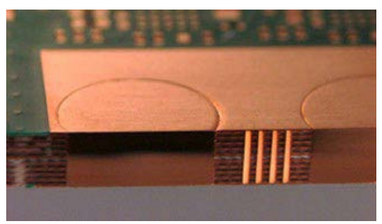
OKI has acquired JAXA certifications for all seven PCBs and has a proven track record of delivering durable, reliable products for the demanding space environment.

Rigid-flex construction



Connectorless miniaturization and high density, reducing cable connection errors and wiring man-hours.

Special structure



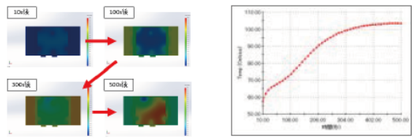
We solve the problems of high current, high voltage, and heat dissipation with a special structure.

Do you have thermal issues unique to space?

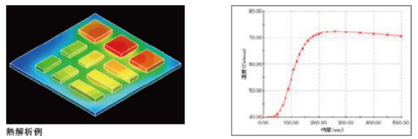
OKI Circuit Technology
OKI Electric Cable
Simulation (analysis) x Validation (analysis and measurement)
→ "SimuValid Solution"
OKI Engineering

Design evaluation service for thermal management systems in vacuum space

Ex. Heat radiation analysis

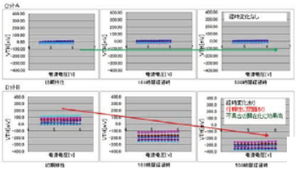


Ex. Heat Transfer Analysis



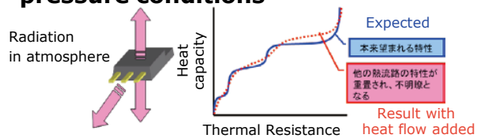
Screening Service

Ex. Burn-in test, thermal shock test, etc.



Sample moving type thermal shock tester

Thermal resistance measurement under pressure conditions



Scan here and visit our website to learn more about our business

https://www.oki.com/

Uniting the Universe

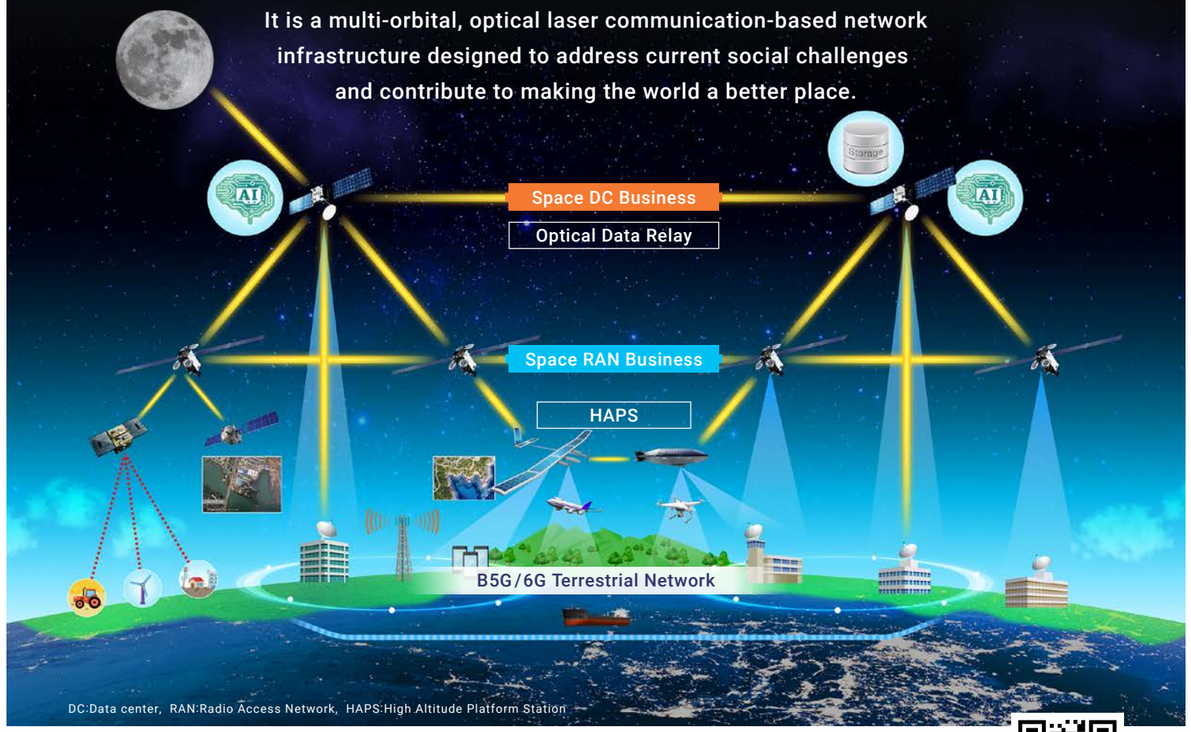
NTT × JSAT

SPACE COMPASS

NTT and JSAT jointly established Space Compass in 2022 to develop
the 'Space Integrated Computing Network,' a groundbreaking infrastructure that leverages
and orchestrates state-of-the-art terrestrial and non-terrestrial network technologies.

Space Integrated Computing Network

It is a multi-orbital, optical laser communication-based network
infrastructure designed to address current social challenges
and contribute to making the world a better place.



DC:Data center, RAN:Radio Access Network, HAPS:High Altitude Platform Station

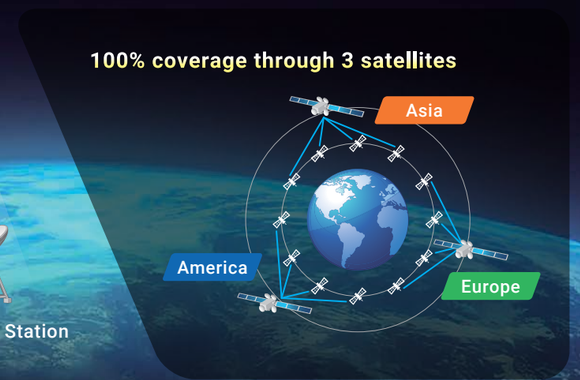
SPACE COMPASS
Company name: Space Compass Corporation
Phone: +81-3-6275-6877
https://space-compass.com/en/

GEO Optical Data Relay

Space DC Business

Over 1 Gbps, High Capacity, Immediate Connectivity

- **Immediate Delivery**
  Get real-time Observation data from space faster than ever.
- **Secure Data Transfer**
  Our optical communications technology prevents jamming, interception and detection, ensuring your data is secure.
- **Ultra-High-Speed Over 1 Gbps**
  More data, more detail, better decisions.Our Ultra-High-Speed communication allows for extensive latency-free data transfer



HAPS Services

Space RAN Business

Connectivity × Earth Observation & Sensing

- **Direct to Device (D2D)**
  Enable ubiquitous access to broadband internet without an antenna, wherever you may be—on land, lakes, or coastal waters.
- **Earth Observation & Sensing**
  Low-latency, ultra-high-resolution Earth observation data provide real-time insights.

SPACE ONE Co., Ltd.

Booth #2550

We Believe Every Small Satellite Deserves a BIG Launch

-SPACE ONE offers dedicated launch solutions for small satellites-

SPACE ONE is a Japanese private space launch services company offering rapid, flexible, and precise injection of small satellites into orbit.

We're on a mission to achieve the world's shortest timeline from contract to launch. Powered by solid-fuel rocket technology, we aim to launch within just 4 days of payload handover at our dedicated launch site.

Visit us at **Booth #2550** to learn more about our space launch services, discuss upcoming missions, and get an exclusive look at our newly released **User's Guide.**

Why choose SPACE ONE for your launch?

Reliability
Our launch vehicles leverage Japan's rich heritage in solid propellant technology.

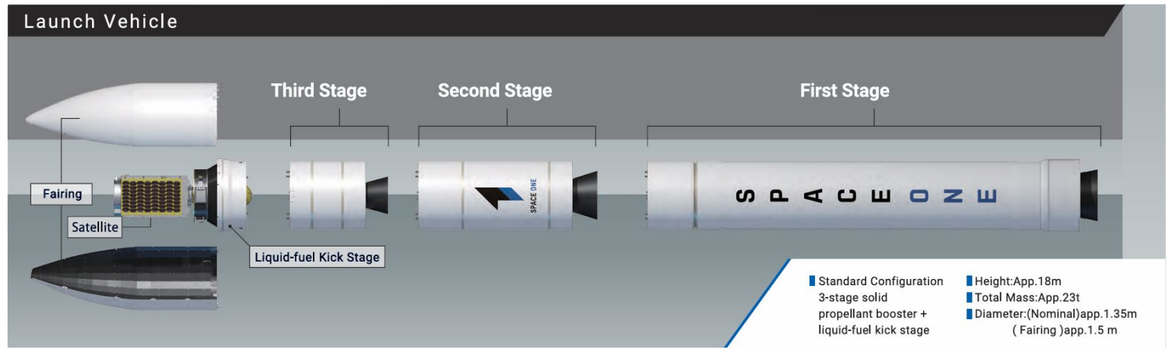
Responsiveness
We target the world's fastest service from contract to launch.

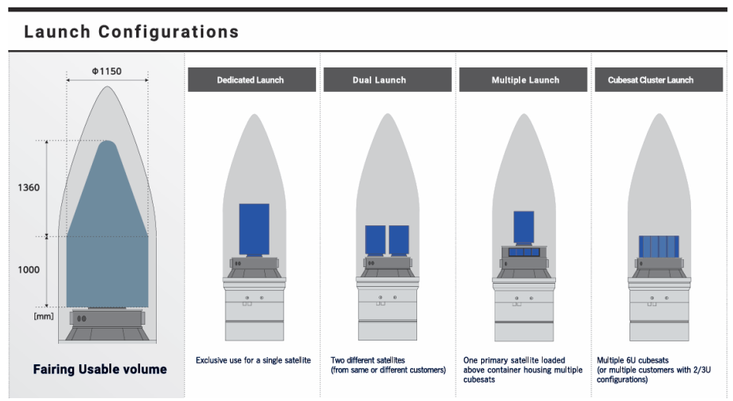
Flexibility
Our southeast-facing launch site allows flexible satellite delivery.

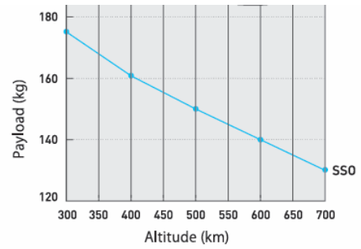
Affordability
We keep the configuration and operation simple, ensuring competitive prices.

Specifications

Our launch vehicle, KAIROS, is purpose-built for the timely injection of small satellites into orbit. Developed using proven solid-propellant technology and cross-industry expertise, KAIROS combines reliability with the agility required for today's fast-moving missions.







Spaceport Kii – Our Dedicated Launch Site

Spaceport Kii is SPACE ONE's dedicated launch site, located in Japan.This facility allows us to manage the entire process in-house — from development to launch — ensuring speed, control, and quality at every step.
Facing both south and east, Spaceport Kii supports a wide range of orbital inclinations, including Sun-Synchronous Orbit (SSO) and Low Earth Orbit (LEO).
Strategically located at the southern tip of Japan's main island, access to Spaceport Kii is smooth and efficient. From Tokyo, it takes approximately 2.5 hours via a combination of air and road transportation.

Contact

Tokyo Office: Land Mark Shiba Park Bldg. 6F, 1-2-6 Shibakoen, Minato-ku, Tokyo, Japan
Spaceport Kii: 1663 Tawara, Higashimurogun Kushimotocho, Wakayama, Japan
Web: https://www.space-one.co.jp/index_e.html **Mail:** info@space-one.co.jp

TFS
Takasago Fluidic Systems

TEL: +81-52-891-2302
Email: info@takasago-elec.co.jp

Website
LinkedIn

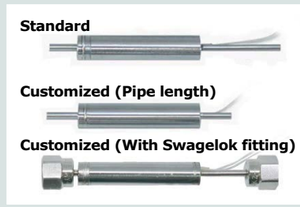
Supporting innovators around the world to realize their dreams through our 10,000+ product lineup & 500 new drawings/year.

Thruster Valves for Satellite Propulsion Systems

HVA/HVAL Series
2 MPa, 8 g

HVD/HVDL Series
10 MPa, 10 g

Customized Thruster Valve

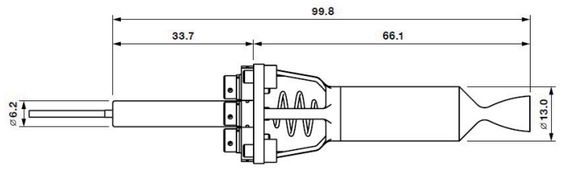


Qualified for 2nd-RCS on the JAXA's EPSILON

HVC Series
20 N-Class
2.8 MPa, 200 g

Space Qualified

YUTA Thruster



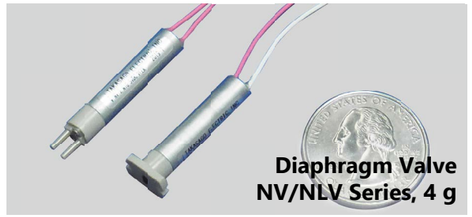
*This item was developed using subsidies from the Japanese government.

YUKI Precision and TFS have developed a small thruster (31g weight including valve) for green propellant HTP (90%).

Suitable for altitude control, de-orbit, etc,. to be used in SmallSats or CubeSats.

Thrust	**0.2 N**
Supply Pressure	**0.9 MPa**
Power Supply	**3 V / 0.4 W for holding 12 V / 6.5 W for opening**
Heater Power	**0 W (cold start OK)**
ISP	**150 – 155 sec**

Valves and Pumps for Space Experiment Equipment



Diaphragm Valve
NV/NLV Series, 4 g

Pen-Type Syringe Pump
SBP Series, 80 g

Ring Pump
RP-Q Series, 11 g

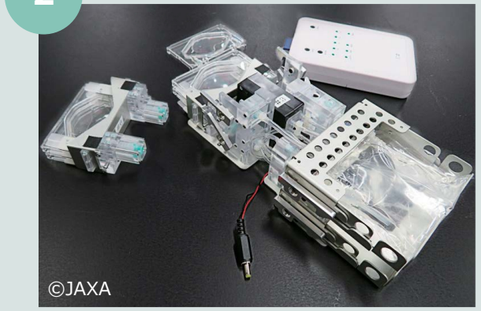
Piezoelectric
Micro Pump
SDMP Series, 4 g

Application Examples in Space Industry

1

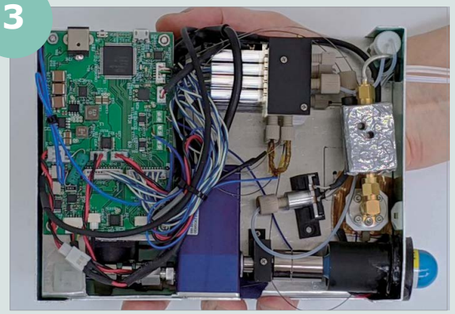
Small ring pump for regenerative medicine experiments in ISS by Redwire Corporation (Tech shot, Inc.)

2



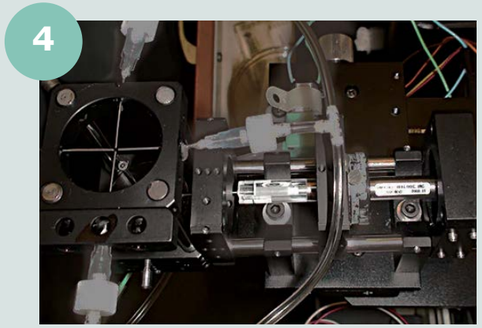
Automatic solution exchange system for cell culture Mark-1 : Auto-Ex1 for JAXA experiment in ISS

3



Ultra-small diaphragm valve used in Micro Gas Chromatography Instruments

4



Small pumps used by NASA Glenn Research Center for their experimental unit.

TAMRON

“Innovative Optical Technologies for Space Missions”

Space Imaging Systems

Laser Communication Technologies

About Us

Tamron is a company that has been involved in all aspects of optics for over 70 years, including optical design, product development, and the production and sales of both commercial and industrial products. Now We leverage our unique optical technologies to develop innovative solutions and products for various space applications.

Key Features

- High Precision Optics
- Space Heritage
- Low SWaP

Core Competence

Optical Design: High resolution and miniaturization possible
Mechanical Design: Complex cam mechanisms, reproducing designed image
Actuator Design: Achieving various movements and miniaturization
Control Design: Realizing high-precision movements

Partners

Thales Alenia Space
National Institution of Communication Technology
and more

Space Environment Ready

We have thermal cycling, vacuum bake–out and top-grade optical performance check facilities in-house. We collaborate with external partners for vibration, shock and radiation tests in Japan.

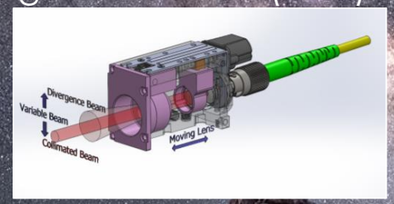
1. Space Imaging Systems — TRL 9

✓ Compact Space Environment Qualified Lens
✓ Shorten Development Time with Versatile Lens
✓ Designed for Use in a Wide Range of Application

Target applications
Satellite Monitoring
Optical Navigation
Lunar and Planetary Exploration Rover
Robot Arm Camera
and more

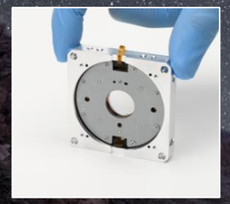
2. Laser Communication Technologies

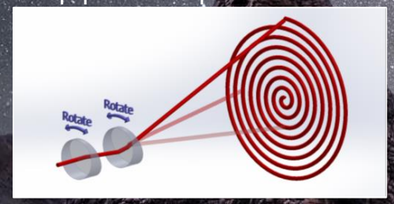
2-1. Beam Divergence Control (BDC)Unit — TRL 7

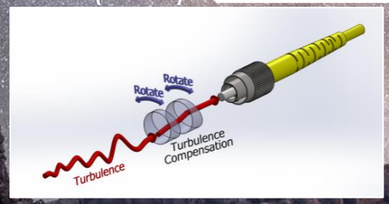


✓ Able to control the beam divergence using zooming lens
✓ Co-developed with National Institute of Information and Communications Technology (NICT)

2-2. Transmissive Applied-optical Mechanism(TAM) — Under Development

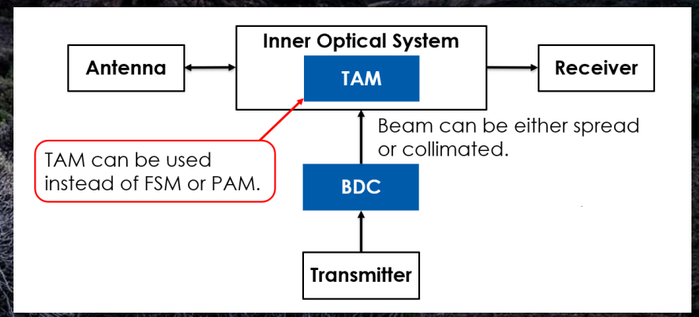






✓ The optical axis of the beam can be adjusted quickly and accurately by rotating multiple prisms with high-precision actuators and control systems.
✓ Depending on the number of prism sets, TAM can be used for different kinds of applications from beam steering to beam fine pointing.

An example of optical head schematic diagram using our laser comm. technologies



Key Benefits of Our Technology

✓ Miniaturization
✓ Increased efficiency
✓ Greater design flexibility

Contact

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New Business Development Section
Tamron Co., Ltd.
1385 Hasunuma, Minuma, Saitama, Saitama Pref. 337-8556, JAPAN

UACJ Corporation

Aerospace and Defense Materials Business Division

- UACJ boasts some of the most advanced aluminum sheet and forging manufacturing capabilities in the industry, including one of the world's largest rolling mills and forging press. This technological prowess enables us to supply the best products to a wide range of industries.

- In the aerospace field, we manufacture plate materials and forged products used in the structures of aircraft, rockets, etc. Utilizing our own facilities, we have established a consistent production system that covers everything from research and development of aluminum materials to ingot making, heat treatment, and finishing, and we supply high-quality products.

- Please see here for details :
  https://www.uacj.co.jp/english/index.htm

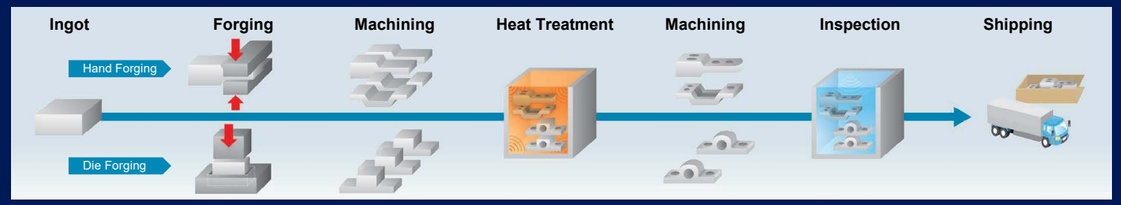
Business Summary

Group Companies and Japan Bases

Forging Process

UACJ can provide forged products up to 6 tons of products using a large forging press.

Manufacturing Process



15,000-ton Forging Press


Double-column machining center

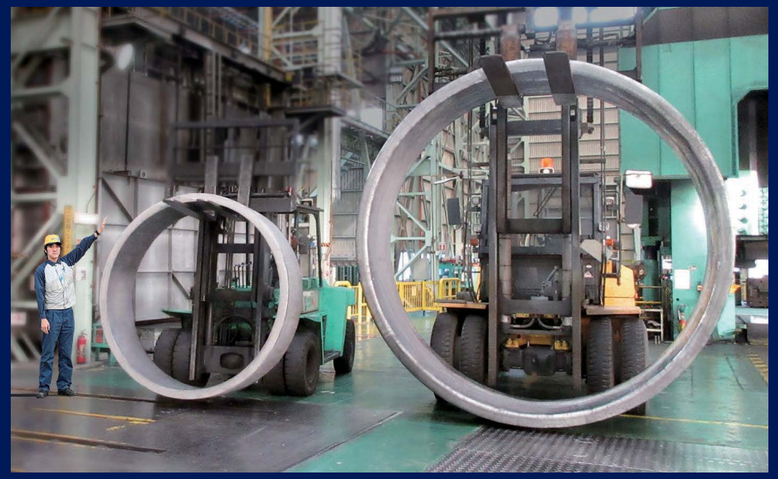
Gate width	4,500 mm
Pressure	2,000–15,000 tons (147MN)
Open height	3,300 mm
Stroke	2,500 mm
Table size	4,000 mm x 3,000 mm

UACJ also handle machining of complex shapes.

UACJ
Aluminum lightens the world

Our large forged products are used for strength members in the aerospace and defense fields.

Forged Rings



UACJ can provide forged products of various aluminum alloys in accordance with public standards.

Forged Cylinder

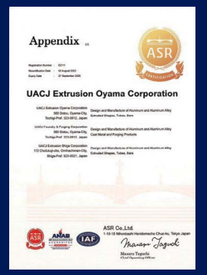
Hand Forged Products

Quality Assurance

UACJ provide aluminum products of the highest quality.

Nadcap NDT (Non-Destructive Test) certificate

ISO14001 certificate



ISO14001 appendix

ISO9001/AS9100 certificate

Nadcap HT (Heat Treatment) certificate

UACJ can perform various inspections and tests required by public standards.


Ultrasonic flaw inspection

Coordinate measuring

Alliance Coordinated By Japan Space Systems

JAPAN BOOTH