SpaceBD

Mac Kanazawa

Director General, Satellite Launch Services

SpaceBD

Accelerate Industrialization of Space as a Professional Business Development Team

Founded: 2017

Offices: Tokyo

Belgium

Capital: USD 5.5m

SpaceBD

Make “Access to Space” Easier as JAXA’s Official Partner

Satellite Deployment Service From ISS Kibo

In-Orbit Demonstration Service on ISS Kibo External Platform

Rideshare Launch Service

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Satellite Deployment Service from ISS Kibo
✓ Reliability
✓ Cost-effective
✓ Flexibility in schedule
✓ WITHOUT debris concern
17
Launch Service Agreements were signed
©JAXA/NASA

Satellite Deployment Flow

Satellite Installation

Packing in a Cargo Transfer Bag

Transportation to the ISS (H-IIB/Falcon9/Antares)

Transportation to the ISS (HTV/Dragon/Cygnus)

J-SSOD Installation

Satellite Deployment

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ISS Nanosatellite Deployment

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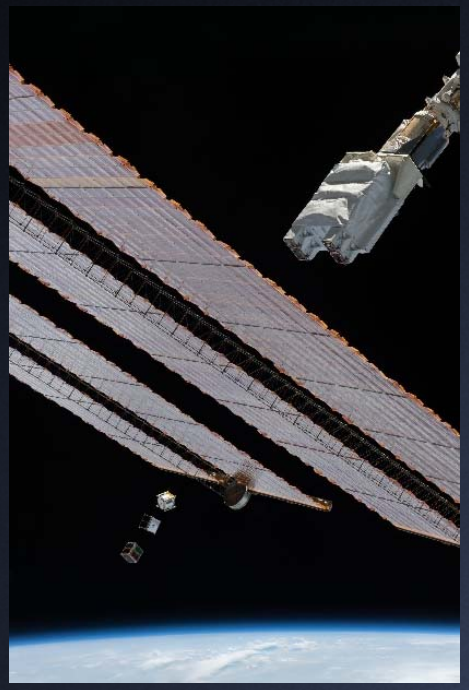


Item	Specification
Orbit	Altitude 380-420km Inclination 51.6°
Satellite Mass	CubeSat : 1.33kg or less per U 50kg class : 50kg or less
Satellite Size	1U, 2U, 3U and 6U 50kg class : 55 x 55 x 35cm
Deployment Direction	Nadir-aft 45 degree from the ISS nadir side

東京大学 THE UNIVERSITY OF TOKYO

National University Corporation Shizuoka University

福井工業大学 Fukui University of Technology

CREST

CUAVA

WARPSPACE

ISS Kibo External Platform Utilization Service

- ✓ *The end-to-end in orbit demonstration platform*
- ✓ *Low risk, cost-effective*

©JAXA/NASA

ISS External Platform

SpaceBD

- ✓ **The end-to-end IOD (in-orbit demonstration) service at ISS external platform "i-SEEP".**
- ✓ **<u>Safe, Easy, and Affordable</u> IOD opportunity in space.**
- ✓ **Users only need to prepare the mission part hardware.**

5 Advantages for User5 Advantages of Our Service				
Wide Range of Sizes	**Broad Field of View**	**Flexible Schedule**	**Safe and Stable IOD**	**Nice Launch Environment**
From <1kg to 30kg sized equipment, various P/Ls can be installed.	Suitable for observation of the earth, deep space, and the ISS forward direction.	P/L installation & recovery opportunities available every 6 months.	Reduced risk of mission failure due to on-board power/ communication.	Low vibration during the launch; shock Testing is not required.

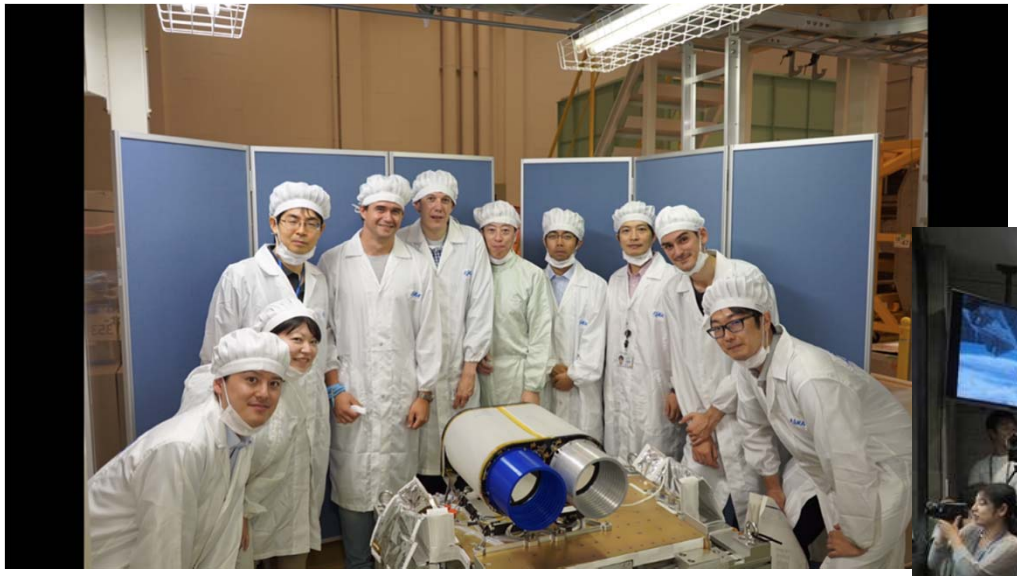
Item	Specification
Size & Weight	Max. Size: 36cm x 50cm x 39cm * Smallest P/L size is 1U
Power	28V DC (1ch), Max. 200W
Communications	Ethernet, Ethernet II, or IEEE 802.3m (1ch) Wireless LAN: IEEE 802.11n MIL-STD-1553B (1 line) USB, USB2.0 (1 line)
Downlink Capability	Nominal 1 Mbps (Max. 27 Mbps)

SATLANTIS

The first mission with our Spanish partner Satlantis for IOD of their optical devices for the small satellite.

As the Best Partner to Provide “Access to Space”

- ✓ Taking hands-on approach through the launch campaign
- ✓ Standardizing (simplifying) the safety requirements
- ✓ Taking commercial/financial risk to accommodate more users



Diversifying “Access to Space”

ISS Kibo Utilization

400km/51.6°

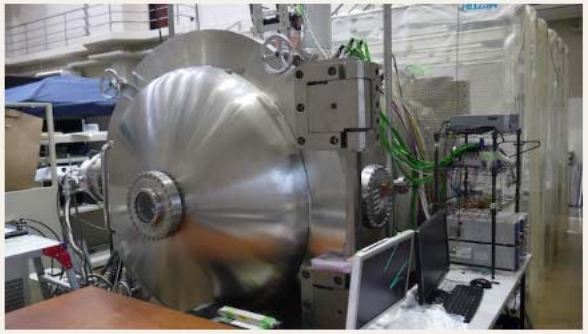
SpaceBD

Dedicated or Rideshare of Launch Vehicles

- SSO
- LEO
- GTO/GEO
- Moon/Deep Space

Website Portal “Space for Space”

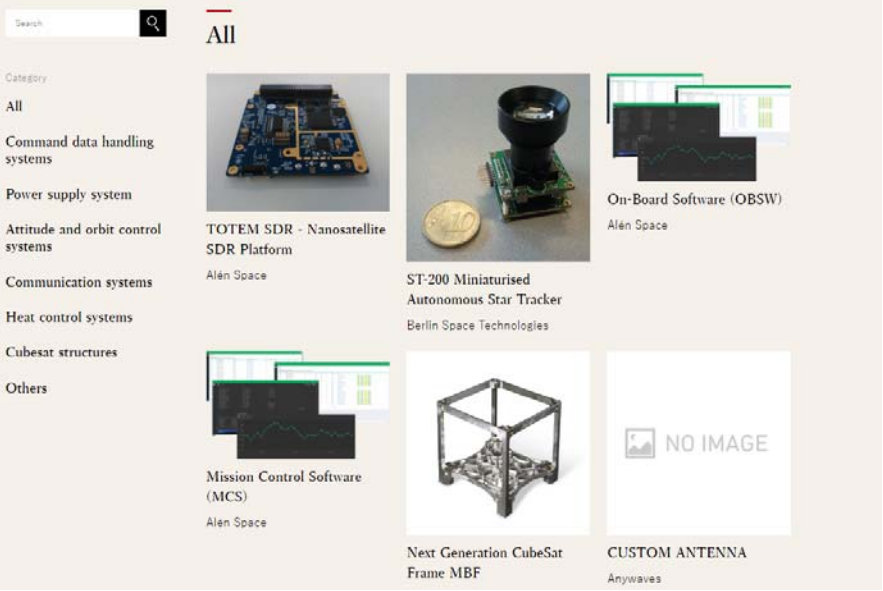
Available environmental testing facility



Center for Nanosatellite Testing (CeNT) , Kyushu Institute of Technology

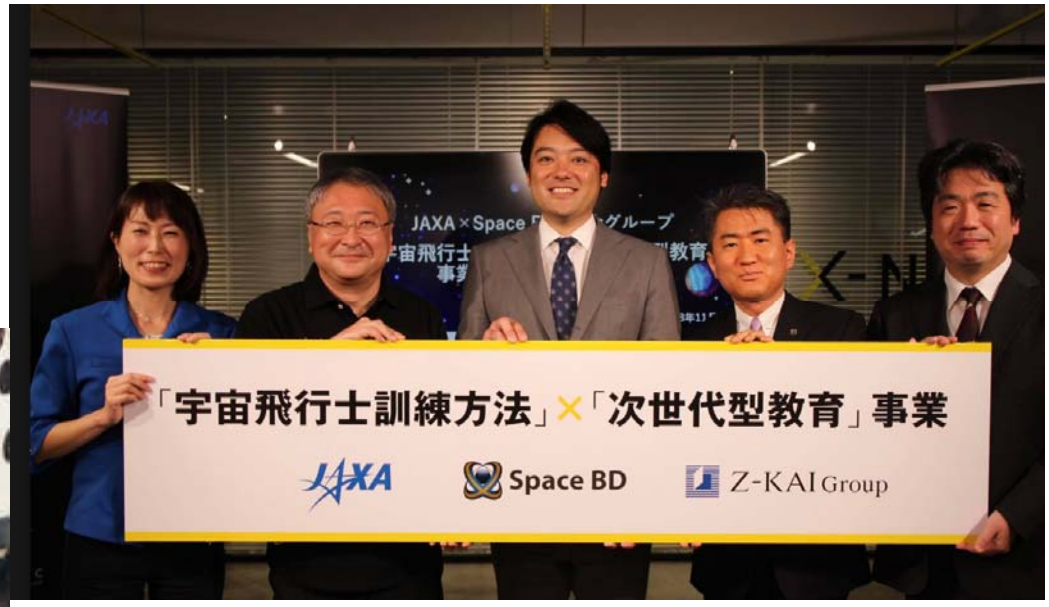
Established on July 7, 2010, CeNT is made of facilities specialized in the space environmental testing for a nanosatellite up to 50cm and 50kg.

HARDWARE AND COMPONENT



Example of new biz came out from space

- **Joint initiative with JAXA in education industry**
- **Astronaut training and evaluation methods for general public**




Thank you!
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SpaceBD
Japanese leading company in satellite launch and the ISS utilization service
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