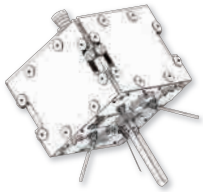


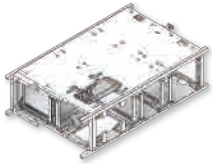
PLATFORMS



SUP (Small Universal Platform)

Small Universal Platform for space use with a dimension of 27U. It was developed for use in all areas of science and technology in near-Earth space from communication and science to remote sensing. The ratio of the net weight to the total weight is 54%.

Has a flight qualification since 2014.



Platforms

Our CubeSat platform is designed according to the architecture and form factor of CubeSat standards. It is equipped with an advanced attitude control system and UHF/VHF transceiver allowing a wider range of applications.

DEPLOYING SYSTEM



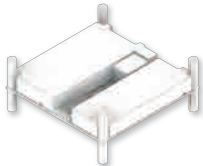
- 6U
- Twin 3U (3U+3U)
- 3U available

Deployer

Our Deployer is designed and manufactured for the purpose to mount and protect the satellite during the launch into space, and to deploy it on orbit by the command from the launcher.

Has flight heritage since 2015.

SATELLITE PARTS



UHF/VHF Transceiver

The KAIROSPACE UHF downlink/VHF uplink transceiver is a full-duplex communication system for CubeSat TT&C applications. It is low power, low mass, and highly configurable, offering the flexibility of changing data rates and frequencies in flight.

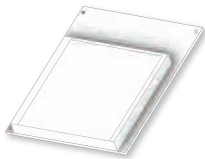
Flight has proven since 2006.



Star Tracker

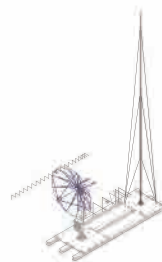
Fully autonomous and equipped with an on-orbit, self-calibration system for increased performance when required. All lenses are made of glass approved for space and coated with anti-reflection compositions capable of withstanding up to 100kRad of dose without decreasing the transmissive capacity.

Flight has proven since 2019.



UHF Patch Antenna

Ultra-small patch antenna for CubeSat that overcame the vulnerability of monopole antenna. The advantages of a compact light-weight, low cost, high reliability, and simplicity of structure provide flexibility in design with the miniaturization and non-projection of antenna systems. Users can obtain high gain value.



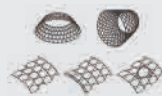
Ground Station

With its Ground Station, we provide a turnkey solution that is specifically designed for small satellites in LEO using UHF/VHF and S-band radio frequencies. The Ground Station can autonomously track selected satellites by using a steerable antenna system.



Deorbit System

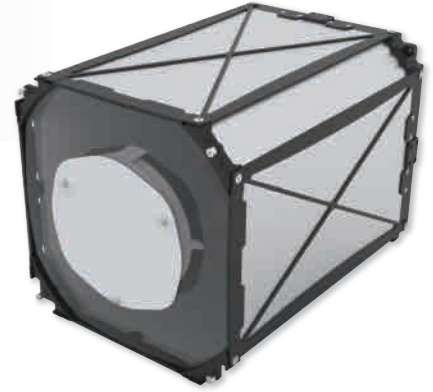
Hydrogen Deorbit System provides a simple solution to CubeSat that needs to be removed from orbit after a lifetime. It does not require an onboard power supply to function, it is lightweight and consists of analog components which are reliable and easy to implement.



3D Printing

We offer 3D printing services using carbon composite materials that are stronger than steel but are 7 times lighter than continuous fiber. It also prints the lattice anisogrid structure with high weight efficiency. This production method can be used for major industrial parts of satellites or projectiles.

OPTICS



250mm Camera

250mm camera is capable of in-orbit configurable GSD up to 2.5m and spectral bands up to 12 bands at a 50km swath. The capacities of its collection and rapid revisit provide repeated images of large areas to conduct automated change detection data. TDI and CMOS sensor can be used and the camera is optimized for high-resolution change detection.

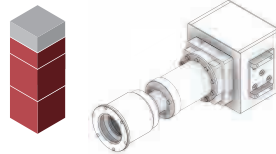
22mm Optical system and Camera

Wide temperature high-performance **passive self-focusing** optical system, one eye camera and four eye cluster camera for solving agriculture, civilian and scientific tasks of remote sensing. This optical system has the possibility to work with stable MTF in range of temperature from -60 ~ +60°C. It can be monochrome and RGB types.



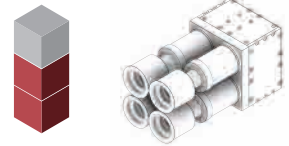
22mm Optical System

- Volume : 1.5U
- Deep space mission
- Spectral range: 200~900nm



22mm Camera

- Volume : 2.5U
- Combined with CMOS sensor
- Optimized for NDVI/Weather

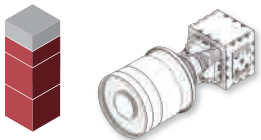


22mm Cluster Camera

- Volume : 2U
- Combined with CMOS sensor
- Up to 32 bands

90mm Optical system and Camera

High-aperture optics for solving any commercial and scientific tasks of remote sensing. This camera has been specially optimized in terms of size, weight, and data rate for use on space platforms such as CubeSat. Optimized for change detection. Operation temperature from -40 ~ +60°C.



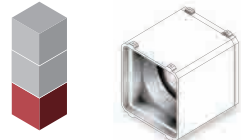
90mm Camera (HR)

- Volume : 2.5U
- Combined with CMOS sensor
- High Resolution



90mm Camera (MR)

- Volume : 2U
- Medium Resolution
- 1.5° FOV

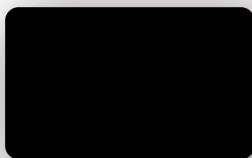


1U Camera

- Volume : 1U
- Ultra-small, Ultra-compact
- 80mm aperture

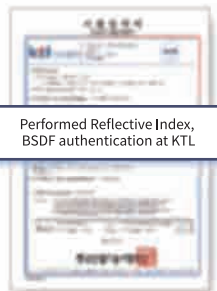
Ultra-small Camera

It is a 1U-sized ultra-small camera that can operate simultaneously in up to 6 spectral ranges and is fully compatible with most major CubeSat platform manufacturers.



Black Coating

Black Coating applies to a variety of areas, such as satellite and ground-based optical systems, to bring out the highest quality of the optical system. Black coating applies to all-optical systems in KAIROSPACE Co., Ltd. You can minimize the amount of unnecessary light that touches the sensor with low reflectivity. We provide world-class coating.



Performed Reflective Index,
BSDF authentication at KTL



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