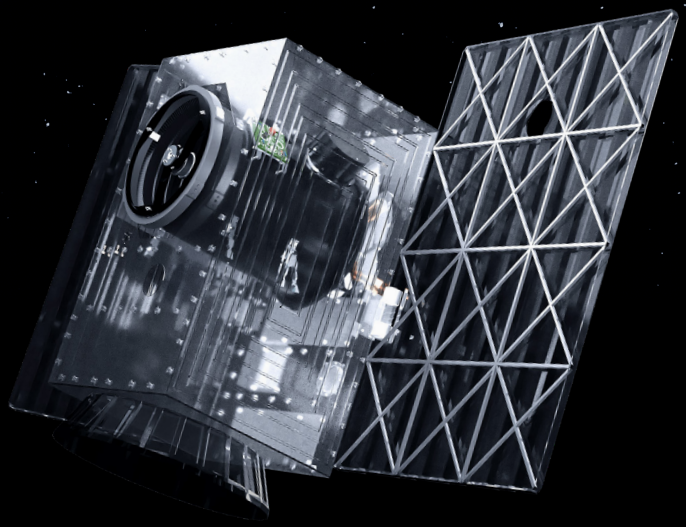
Scanway space

Optical Payloads

for space applications



Imagers for EO

Telescopes for EO characterized by modularity, the possibility of imaging in different spectral bands, high resolution, scalability, and adaptability for small satellites of all types.

Camera Systems

Multifunctional modules allowing self-diagnostics and self-inspection of space infrastructure during missions, detecting degradation levels, faults, and anomalies in space equipment. Used for in-space manufacturing, servicing, and operation observation.

Our service includes:

1. Design, development and manufacturing.
2. Testing, calibration, and integration.
3. Help with the payload operation on orbit.

About Scanway Space:

US & Polish New Space company with 60+ employees	**TRL 9** 5 payloads in space, 4 more in 2024	**Public company** part of Polish stock market since 2023	**8 years** of experience in industry

Scanway Optical Payload

TRL 9

A product line of telescopes for Earth Observation. These telescopes are designed in a specific way, so they can be integrated with small satellites, both nano and micro. The product is available in different configurations depending on the mission requirements.

Key features:

customizable **modular** **athermal**

Applications:

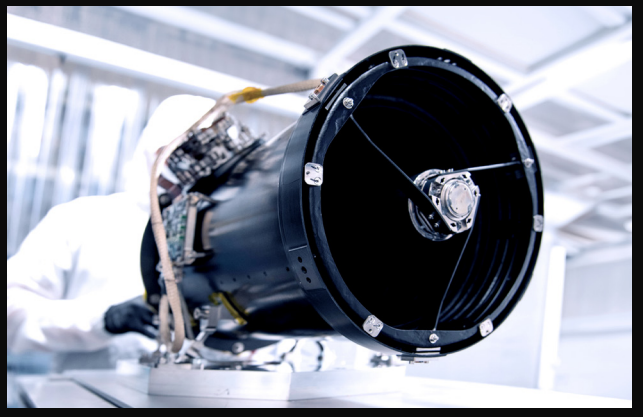
- Monitoring of natural disasters, climate change
- Supporting agriculture and urban development
- Object classification and military applications

Key parameters:

GSD	<1 - 25 m
Aperture	50 - 200+ mm
Spectral bands	RGB / PAN / NIR/SWIR
Data interfaces	SPI, LVDS, ETH, SpW
Size	1U - microsat

Example: SOP 200

Its optics will allow support for agriculture (e.g. crop condition and yield assessment), observation of urban development and classification of facilities.
Object classification can, for example, support national security, especially in border areas.



SOP 200 Technical details

Spatial bands	4 (NIR + RGB)
Orbital height	500 km
Spatial resolution	1.75 m
FOV	7.2 x 5.3 km
Images resolution	12 Mpix
Aperture	198 mm
Focal length	1.6 m
Focal ratio	8
Mass	8 kg
Size	430 x 350 x 300 mm
Data format	8, 10 or 12 bits
Required power at imagining	5 W
Required voltage	12 V or 5 V

Scanway Camera System

TRL 9

Camera systems able to observe and control the state of space infrastructure through operations and in-space processes. The product is available in different configurations and can be equipped with cameras, a variety of sensors, data processing and transmission modules.

Key features:

- **customizable**
- **modular**
- **AI algorithms**

Applications:

- Self-diagnosis and self-inspection of space infrastructure during missions
- Detecting degradation levels, faults, and anomalies using AI
- In-space manufacturing, servicing, and operation observation

Key parameters:

Image modes	video / photo
Power consumption	2.2 – 6 W
Electricity supply	12 VDC
Interface	SPI, UART, ETH
Integration	satellite / rocket

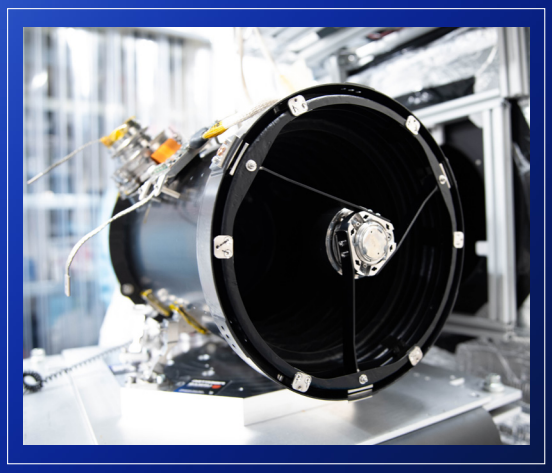
Example: VIBE

Camera system dedicated to a small satellite (6U CubeSat). The system consists of a long mechanical arm, a compact deployment and locking mechanism, a space camera with a wide FOV lens, and a data processing unit inside the satellite structure.

VIBE technical details

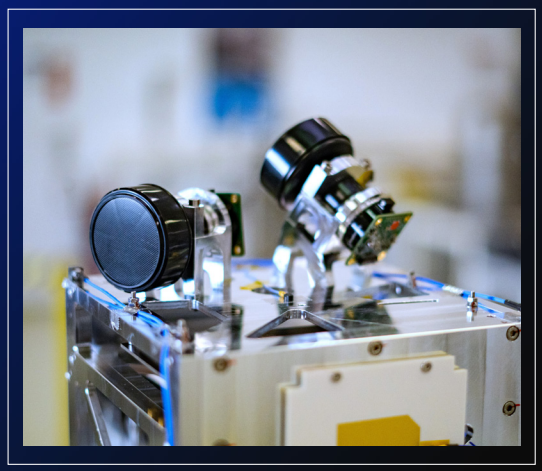
Mass	105 g
Dimensions	182 x 81.5 x 10 mm
Focal Length	2.7 mm
FOV	136 x 102
Minimum focus distance	200 mm from the front
Fixed Focus	Manual Iris
Image size	4056 x 3040 pixels
Exposure time	from 20 microseconds to 1 second in standard mode; possible long exposure time up to 10 seconds
Bit modes	8 or 10 bits
Image modes	video (up to 1080p @ 30 fps; 720p @ 60 fps), photo (12.3 Mpix or less)
Possible versions	with IR or without IR filter

Our 2024 top missions:



Imager for EagleEye mission

The biggest Polish microsatellite mission for Earth Observation. Scanway delivered the optical system with an aperture of 200 mm for imaging the Earth surface in VIS and NIR with a GSD of 1 m/pixel. The mission launch is scheduled to H1/H2 2024.



Camera system for Ariane 6

The first flight of the European rocket Ariane 6. As a part of the YPSAT mission, Scanway delivered the camera system placed on the top of the satellite's surface, will record the moments of the fairing separation and the deployment of the CubeSats. Launch H1/H2 2024.

Benefits:

1

Competitive pricing

cheaper based
on competitors pricing

2

Tailored to requirements

design tailored to customer requirements
with adaptation of our existing solutions

3

Missions support

support of on-orbit operations
of telescopes: use and tasking

4

Tried and tested

solutions have passed all environmental
tests and are successfully working on orbit

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space

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