SCS: MultiCam Rocket Dual Cam
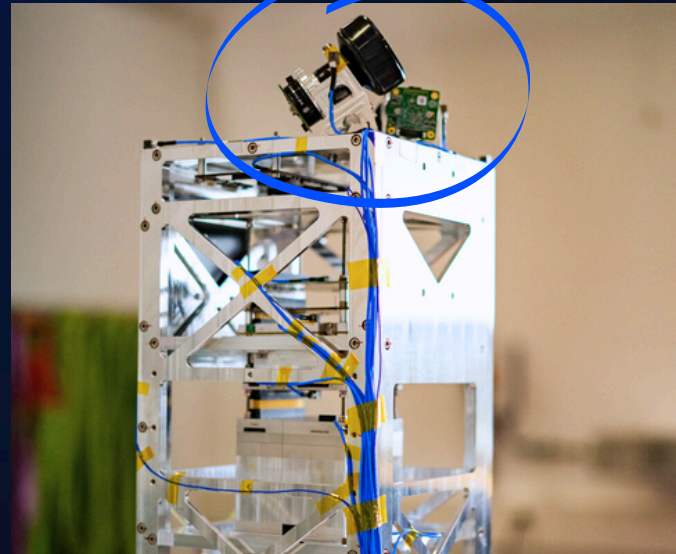
Scanway Camera System

Key highlights

The SCS MultiCam Rocket-2-Cam is a one of the available configurations of Scanway Camera System, consisting of 2 wide-angle cameras dedicated to monitoring of the spacecrafts processes. This kind of system was used on the first launch of the biggest European carrier rocket Ariane-6 on July 2024. The system provided the high quality imagery (photo and video) of the main fairing separation and satellites deployment processes.

2-cam system

Applications

The system allows the acquisition and processing of visual information of many key processes during the flight of the rocket, such as:

- Main Engine Ignition and Liftoff
- First and Second Stages Burn and Shutdown
- Stage Separation
- Second Stage Ignition
- Fairing Separation
- Payload Deployment

Customization

Product customization is possible, such as amount of the camera modules, processing modules, interfaces.

Flight heritage

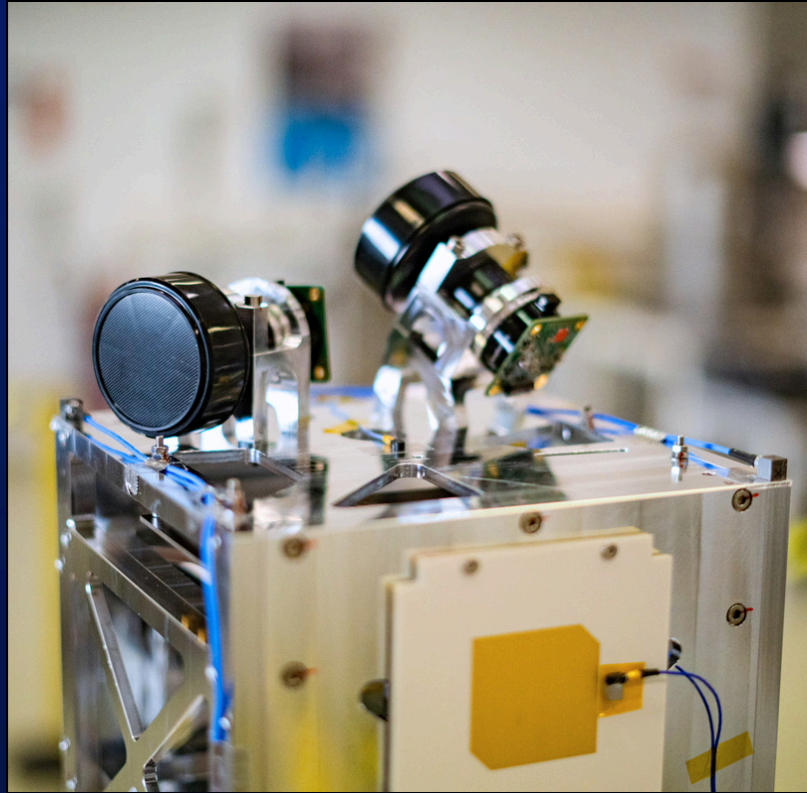The payload was tested during the first launch of the Ariane 6 rocket, July 2024.

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SCS

MultiCam Rocket Dual Cam

System parameters

Mechanical properties	
Mass	105 g
Dimensions	182 x 81.5 x 10 mm
Electronic properties	
Electricity supply	12 VDC (while two cameras are working)
Power consumption	2.2W @ 12 VDC (quiescent current) 3.2W @ 12VDC (During the work of 2 cameras) 6W @ 12 VDC (Maximum current
Interface	SPI / UART Ethernet
Processed video	H.265 (HEVC) (up to 4Kp60 decode), H.264 (up to 1080p60 decode, 1080p30 encode)
Pixel pitch	5.5 um

Camera parameters

Focal Length	2.7 mm
FoV	136˚ x 102˚
Minimum focus distance	200mm 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)

Interface features

- 2 inputs for CSI cameras,
- 6 temperature sensors PT1000,
- Hard disk NVMe M. 2 2030 with 128GB,
- Processor 4 cores x 1.5 GHz
- 2GB RAM LPDDR4
- Operating system LINUX
- 3 communication interfaces: SPI, UART, Ethernet,
- 2 digital inputs.