



# OASIS EGSE

## Test mocked-up satellite components from the initial stage of the mission development

### ABOUT OASIS

Oasis is a single-board, CubeSat PC-104 compatible **electrical ground support equipment** that serves as an interface between the PC-running satellite systems simulators and the hardware engineering model. It **enables the running of a complete flight version of on-board computer software on actual hardware before the subsystems are physically present.**

**Safety** is crucial while developing space missions. Thanks to Oasis, it is possible to **integrate and validate the work of satellite subsystems before launch** and guarantee their smooth operation in orbit. Testing a mocked-up satellite and continuous integration at the initial stage of the mission development is crucial to ensure faster spacecraft integration – saving time and money.

Oasis is part of the **Smart Mission Ecosystem** – hardware, software and AI-powered algorithms designed to complete your mission.

### KEY BENEFITS:



Speed up your mission development with off-the-shelf components instead of designing from scratch.

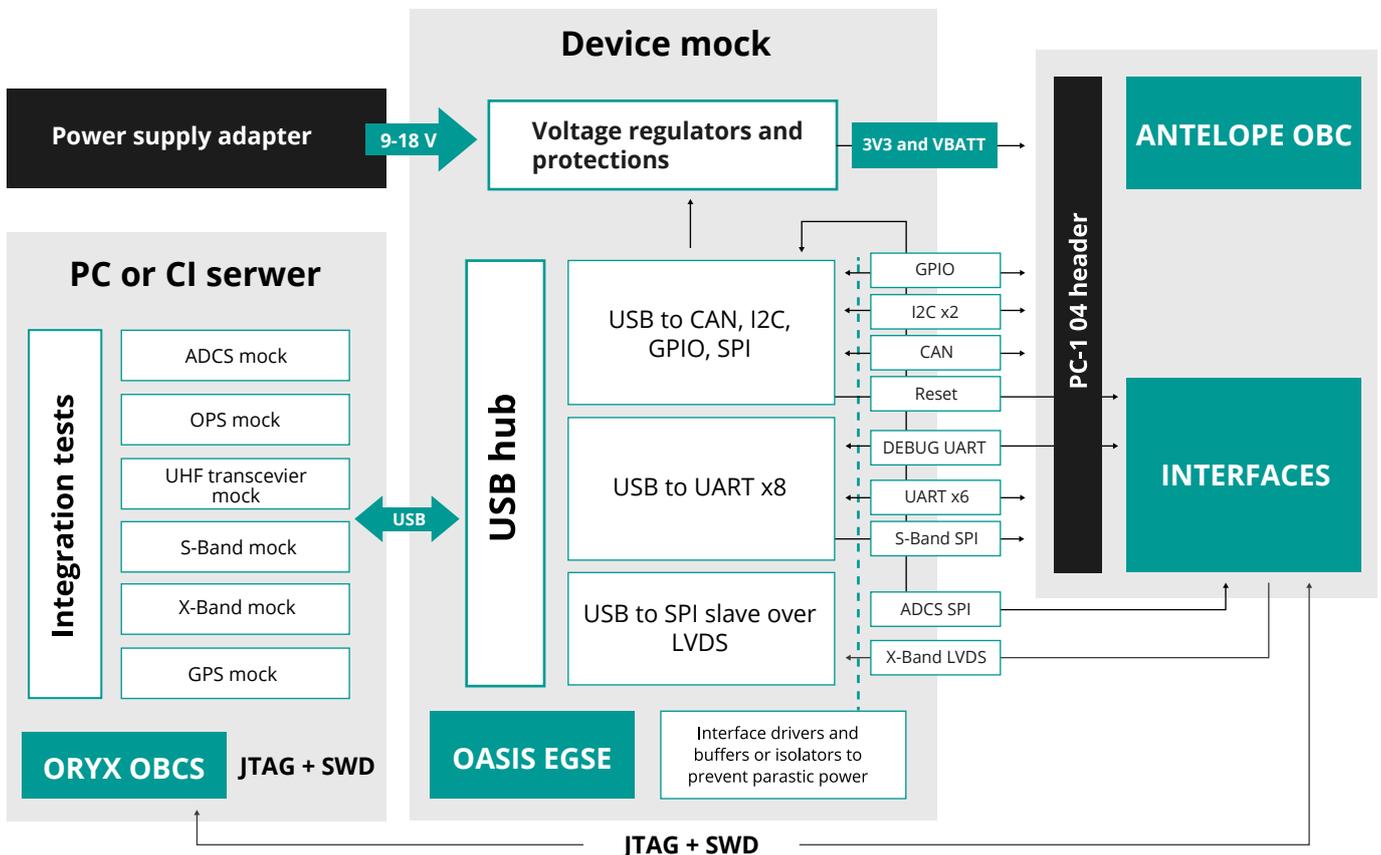


Save time & money by testing mocked-up satellite components from the early days of the mission development.

### OASIS SETUP:

Oasis can be setup with other KP Labs' subsystems – **Antelope OBC** and **Oryx OBCs**:

- ◆ Oryx is a modular flight software tool developed for the mission control of small satellites allowing the creation of OBC software using existing or customized blocks.
- ◆ Antelope is the combination of an on-board computer and data processing unit (160 GOPS).



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## TECHNICAL SPECIFICATION

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### SUPPORTED PHYSICAL INTERFACES

I2C, CAN, UART, RS422, SPI, GPIO, LVDS, SpaceWire

### AVAILABLE CONTROLLED SUPPLY LINES FOR A TESTED BOARD

CubeSat PC-104 compatible: 3.3V, 5V, VBAT

### DEVELOPMENT PLATFORM

- ◆ Open-source, cross-platform tools: CMake, GCC, Python
- ◆ Modern technologies: C++17

### SUPPORTED OFF-THE-SHELF SUBSYSTEMS

- ◆ Leopard DPU by KP Labs
- ◆ Antelope OBC by KP Labs
- ◆ Kryten M3 by AAC Clyde Space
- ◆ EPS (STARBUCK) + Batteries by AAC Clyde Space
- ◆ ADCS by AAC Clyde Space
- ◆ VHF/UHF Transceiver by CPUT
- ◆ UVTRX by ISIS
- ◆ IMTQ by ISIS
- ◆ ANT module by ISIS
- ◆ uCam II camera module by 4D Systems
- ◆ Q20 HD GPS by QinetiQ and all NMEA-based receivers
- ◆ EWC27-SRX X/S Transceiver by Syrlinks
- ◆ Easy to add support for any subsystem using supported physical interfaces.
- ◆ Additional mock-ups might be delivered upon request or written by a final user

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## PW-SAT3 CASE STUDY

Coupled with the Antelope on-board computer, Oasis will be utilized to develop the PW-Sat3 mission. Oasis will support testing mocked-up satellite components from the very early stages of the mission development and Antelope will be responsible for satellite management and the mission safety. PW-Sat3 is an in-orbit demonstrator of a new cold gas propulsion and is planned to be launched at the beginning of 2023.

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## ABOUT US

KP Labs is a NewSpace company based in Poland. We deliver AI computers and software to bring autonomy into demanding space missions. We are a team of more than 50 space enthusiasts who do not think that the sky is the limit.

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## SOUNDS GOOD?

Contact us at [sales@kplabs.pl](mailto:sales@kplabs.pl) to attain the benefits your organization deserves!

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