

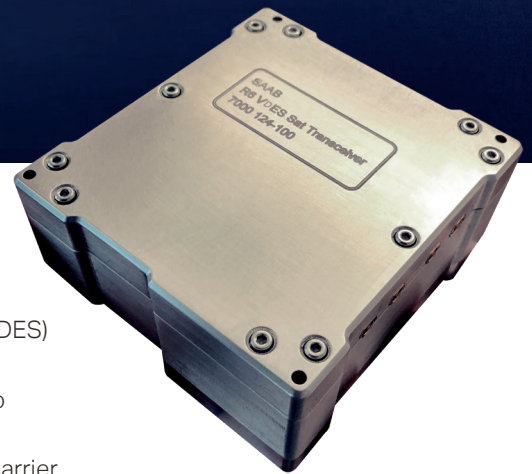


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R6 VDES PAYLOAD

Connecting Everything Maritime



The R6 VDES PAYLOAD, a satellite-based VHF Data Exchange System (VDES) In-Orbit Demonstrator (IOD), is currently in the development phase. It is undergoing trials through various testbed projects and is scheduled to embark on its maiden flight in November 2023. The launch is set to utilize SpaceX's Falcon-9 rocket, specifically the Transporter-9 mission launch carrier.

Advancing Maritime Communications with Satellite-Based VDES

We are delighted to present the In-Orbit-Demonstrator – R6 VDES PAYLOAD. It is a satellite-based VDES transponder, marking a pivotal initiative towards "Connecting Everything Maritime" and strengthening the communication infrastructure within the maritime domain – providing for a safe, secure and green global communication network.

An Insight into the R6 PAYLOAD Development

Embarking on a journey of technological excellence, the R6 VDES PAYLOAD is under rigorous development, incorporating an advanced VDES transponder designed to meet CubeSat parameters. The technology is being developed to significantly improve maritime communication by enabling secure and strong data transmissions between ships at sea and shore-based entities. It is designed to fulfill future needs concerning sensitivity, bidirectional authentication, and system interoperability.

Benefits of Integrating VDES Transponder

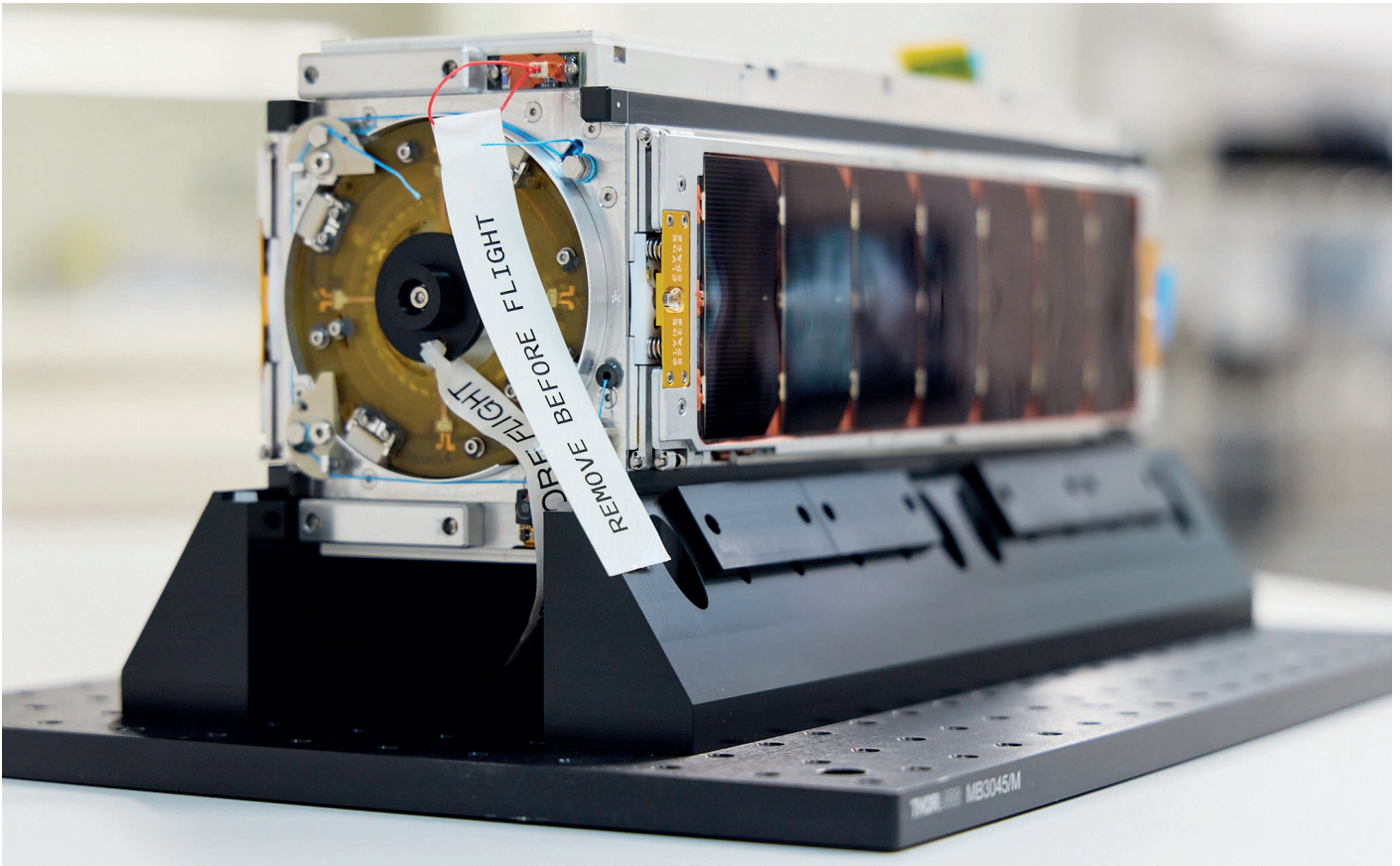
Satellite-based VDES brings several advantages:

- **Enhanced Data Communication:** Managing larger data volumes efficiently to optimize maritime communicative processes.
- **Safety Communication Assurance:** Providing a reliable channel for critical navigational and safety-related data transmission.
- **Operational Security:** Ensuring secure and reliable data transmissions, thereby reinforcing operational capacities.
- **AOS testbed:** Synergizing Innovative Forces

The R6 VDES PAYLOAD is being tested together with AAC Clyde Space and ORBCOMM. Our unique capabilities meet under the testbed brand AOS, shaping a comprehensive skills platform covering all aspects of satellite-based VDES communication, its different interfaces, and application services.



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Future Development and Data Harvesting: A Strategic Outlook

Saab TransponderTech maintains a resolute commitment to the ongoing refinement and development of the VDES standard in the forthcoming years. The R6 VDES PAYLOAD is more than a milestone – it is a research tool. Data extracted from the satellite transponder will provide insights adding to the refinement of VDES when it is ultimately introduced to the market.

Join us as we navigate towards a future where maritime communications are not just streamlined and secure, but are also intricately and effectively interconnected, truly "Connecting Everything Maritime".



Key features

- **Enhanced Maritime Communication:** VDES (VHF Data Exchange System) enhances maritime communication by enabling the exchange of data among vessels, ship-to-shore, and in satellite-based communication, which improves navigational safety and maritime domain awareness.
- **Robust Data Transfer:** Satellite-based VDES ensures robust data transfer even in remote and open sea areas, facilitating smooth and reliable communication and navigation information sharing among the maritime community.
- **AIS Integration:** VDES integrates with AIS (Automatic Identification System), providing improved location tracking, status, and other essential vessel information. This integrated approach enhances maritime situational awareness and safety.
- **Support for E-Navigation:** VDES supports e-Navigation by providing a stable, high-capacity, and globally available data communication system, facilitating safer and more efficient maritime navigation and operations.

About CubeSats

CubeSats are small, cube-shaped satellites used in space for different kinds of research and projects. They are like mini space labs that are both less expensive and less complicated to send to space than big satellites. With CubeSats it is much easier to deploy space with satellite-based VDES, providing exceptional benefits to mariners around the globe.

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