

SATELLITE SYSTEMS

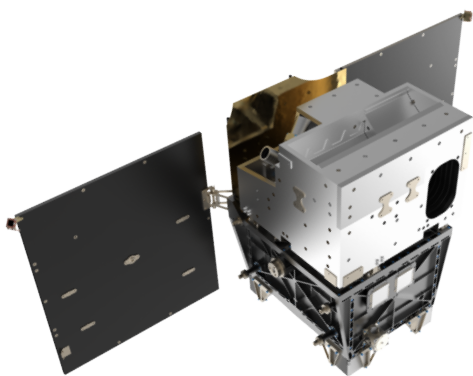
INNOSAT platform

Micro Satellite Platform from Sweden

OHB Sweden's InnoSat microsatellite platform solutions offer a highly integrated, capable satellite platform intended for a wide range of LEO applications such as earth observation, telecom and scientific research. It is designed to provide high performance in pointing, power and data downlink for the lowest cost/reliability ratio and builds upon a long-standing heritage of 3 decades mission experience. The platform is designed to interface with multiple types of payloads and can easily be tailored to the customers' requirements.

All InnoSat platforms are built and designed around a set of re-usable core elements both in hardware and software and are mission tuned to maximize our customers' values. Volume and power is always easily scalable and the platform can accommodate both body mounted as deployable solar arrays depending on the orbit and CONOPS.

The InnoSat platform stands out due to its high flexibility to adapt to different accommodation needs, its ability to accommodate different actuators and communication links depending on the performance and reliability need and the combined experience from the team with a core expertise in AOCS, effective software development and decades of small satellite hands-on experience from various missions.

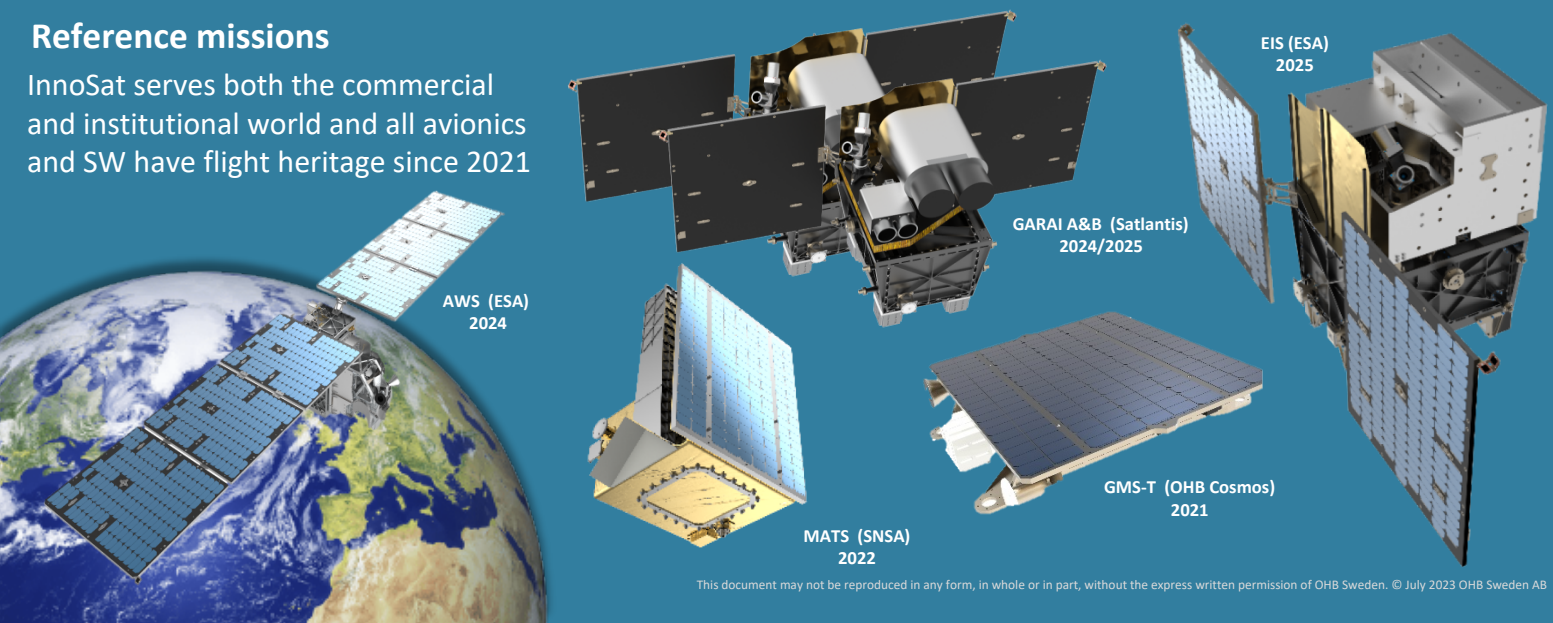


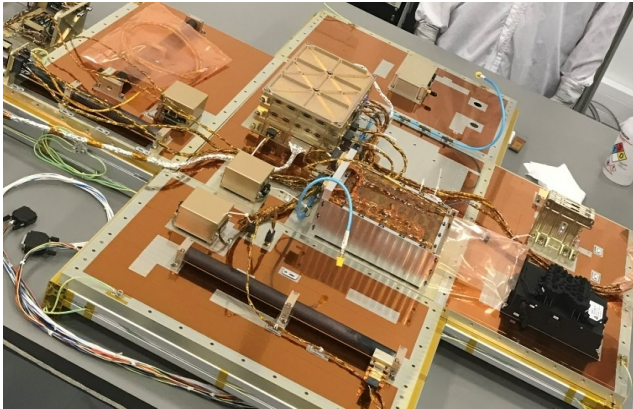
InnoSat (EIS) with a high perf. EO sensor from AMOS

General	Orbit	LEO+
	Launch vehicles	F9, Electron, PSLV, V-C/A-6
	Launch mass	30 - 300kg
	Design lifetime	3-7 years (redundancy dependent)
	Delivery time	~24 months (PFM)
Payload	Type	Telecom, EO, Science
	Mass	up to 150kg
	Power (EOL OA)	up to 120W
	Supply	28V unregulated
	Peak	1.5kW
	Downlink	up to 800 Mbps in X-band
	Interfaces	CAN, RS422/485, SpaceWire
	Data rate (write)	up to 200 Mbps
	Storage	up to 128 GB
AOCS	Pointing	APE > 20" (2σ) (any axis) AKE > 5" (2σ) (any axis)
	Stability	up to 0.4"/s (2σ) RPE
	Positioning	< 10 m
	Agility	up to 2 deg/s
	Orbit control	EP and CP options
Functionality	Autonomy	CAM, station keeping, phasing, downlink (PUS22)
	Agility	CMG option for increased agility
	Latency	ISL (LEO-GEO) option
	Modes	RNDZ and prox. formation flight Motion compensation

Reference missions

InnoSat serves both the commercial and institutional world and all avionics and SW have flight heritage since 2021





InnoSat - Platform integration

InnoSat philosophy

- Low-cost and high reliability with rad-tolerant avionics
- In-house responsibility for all subsystems
- Redundancy tuned per mission
- Unobstructed payload accommodation volume providing maximum operational envelope
- Envelope optimized for rideshare launches (F9 halfport!)
- Fault Tolerant COTS approach
- Fully qualified and flight proven equipment
- CCSDS compliant communications
- ITAR free

OHBSweden

Close to Stockholm, OHB Sweden hosts over 100 skilled employees with experience from LEO to the Moon, from subsystems to mission prime, and from commercial to institutional business. Furthermore, through its large worldwide trusted supplier base, OHB Sweden is able to deliver a large variety of performances matching all our customers' requests providing unprecedented flexibility. Small agile teams ensure a fast and efficient delivery to our clients.



OHB Sweden cleanroom in Kista



OHB Sweden MCC with RAMSES operating system

RAMSES

The baseline for all InnoSats is the re-use of OHB Sweden's RAMSES control system with full lifecycle support from the development and testing phases of the spacecraft to the actual operations resulting in an efficient transition between AIT and ops.

The system architecture is designed for multi-satellite missions and is scalable. OHB Sweden's operation center is located at the OHB Sweden offices in Kista, Sweden. RAMSES is ECSS PUS based.

InnoSat as a service

in the following versions

- Avionics
- Platform + Platform AIT
- Satellite + System AIT
- Satellite + LEOP/IOC
- Mission + Operations
- Mission + PDC

MATS

"Mesospheric Airglow/Aerosol Tomography and Spectroscopy" (MATS) will use optical measurement techniques to study the mesosphere.



InnoSat - MATS during TVAC 2020

AWS

"Arctic Weather Satellite" (AWS) will use a passive microwave radiometer providing global measurements of the atmosphere.



InnoSat - AWS constellation artist impression





SATELLITE SYSTEMS

About OH B Sweden AB

OH B Sweden AB is a subsidiary of OH B SE, one of the three leading space companies in Europe. At OH B SE around 3000 specialists and system engineers work on key European space programs.

OH B Sweden AB specializes in high-tech solutions for satellite systems. These include amongst others small satellites, AOCS and propulsion subsystems.

Certified against ISO 9001:2015

Visit us for more info

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