



COMPONENT NUMBER



DESCRIPTION



COMPONENT IMAGE

01

Structural Components

The primary aluminum chassis, fasteners, and removable side panels designed to withstand launch loads and maintain structural integrity.



02

Optical Terminal

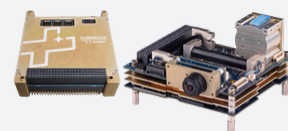
A laser-based transceiver system utilizing precision optics and a fine pointing assembly to achieve ultra-high data rates immune to RF interference.



03

ADCS System

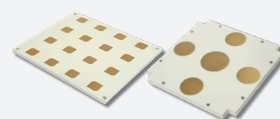
The orientation control suite using sensors (sun sensors, star trackers, GPS) and actuators (reaction wheels, magnetorquers) to physically execute control and pointing modes.



04

RF Communication Module

The main transceiver system handling commands, **S-Band** for mission control, and **X-Band** for high-rate payload data transfers.



05

On-Board Computer

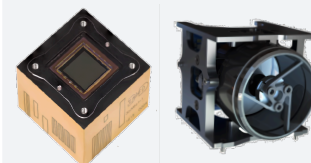
The central 32/64-bit ARM/x86 processor that handles flight software execution, telemetry processing, and health monitoring.



06

Camera Payload

An Earth observation imaging system featuring a 1–50 MP CMOS/CCD sensor and optical lens, optimized for space radiation environments.



07

Electrical Power System

The power hub containing high-efficiency GaAs solar panels, Li-ion battery storage, and multi-rail voltage regulation (3.3V, 5V, 12V).



08

RF Intersatellite Link (ISL)

A dedicated RF transceiver and patch antenna block enabling data relay and coordinated formation flying between constellation satellites.



09

European Hardened A-MS Library

IP library for rapid ASIC and SoC development. Accelerates space electronics design while reducing development, qualification costs, and technical risk.

10

High Performance Data Processor (HPDP)

Ultra-low-power, radiation-hardened processor delivering 40 GOPS with dynamic on-the-fly reconfiguration. Proven for demanding space missions with exceptional resistance to radiation and Single Event Effects (SEE).

11

Star Tracker

A high-precision optical attitude sensor that provides the fine three-axis attitude knowledge underpinning the mission's demanding pointing-accuracy requirements.