SISIR RADAR

SATSAR-ALPHA-LP

WORLD'S HIGHEST RESOLUTION L BAND SYNTHETIC APERTURE RADAR

Sisir Radar is developing a constellation of L & P band Synthetic Aperture Radar Satellites - SATSAR-Alpha-LP - boasting the highest resolution achievable within the L band frequency range. This advanced system offers exceptional foliage penetration (FOPEN) capabilities, a feature that sets it apart from higher frequency bands like C and X, which are less effective in this regard. The payload design is optimized for SWaP (Size, Weight, and Power) considerations, ensuring it can be seamlessly integrated into a variety of satellite platforms.

The data collected by SATSAR-Alpha-LP are processed using Sisir Radar's proprietary SAR Processor which is equipped with advanced processing algorithms tailored to achieve sub-metric resolution. The system supports a wide range of Polarimetric (including single, dual and full) and Interferometric data processing methods. This versatility makes SATSAR-Alpha-LP an ideal solution for a broad spectrum of satellite-based remote sensing, earth observation, and surveillance applications.

TECHNICAL SPECIFICATIONS

Azimuth Resolution	0.75 m (L band), 5 m (P band)	Imaging Modes	Stripmap with Spotlight resolution; Wideswath ScanSAR; Stripmap
Range Resolution	1 m (L band), 5 m (P band)	Antenna Type	Unfurlable L and P band reflector antenna
Swath	25 km-128 km (L band), 62 km (P band)	Altitude of Operation	300-500 km
Polarimetry	Single/Dual/Full Polarimetry	Power Consumption	210-1080 W
Interferometry	Repeat-Pass	EOL	5 years

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