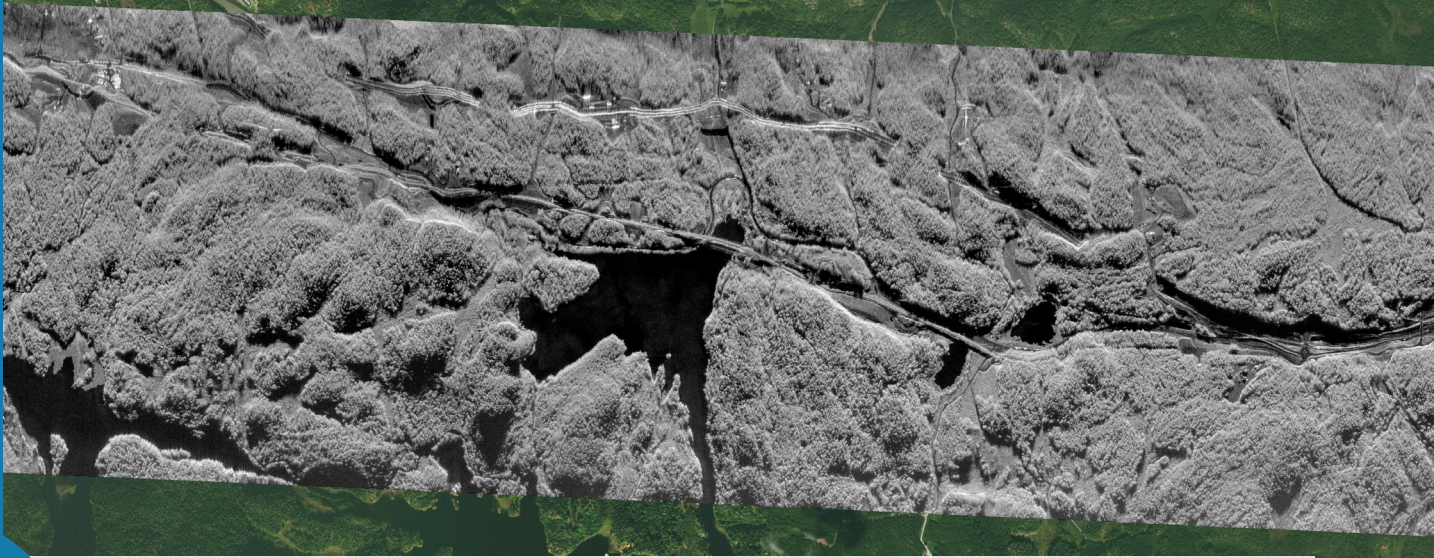




METASENSING
Radar Solutions



MetaSAR-C Airborne SAR

The MetaSAR-C is an advanced multi-channel airborne Synthetic Aperture Radar (SAR) operating at C-band radio frequencies. It provides high-resolution SAR imaging, useful for topographic and monitoring applications such as vegetation and forest mapping, ocean mapping, agriculture, terrain subsidence and glacier analysis.

We provide a compact radar sensor that combines high-quality C-band radar performance with flexibility in swath size and resolution. The radar allows for all-weather observations of the scene to be monitored, and the system enclosure can be easily installed on multiple types of aircraft. It is the culmination of a decade of experience in creating and developing radar solutions that MetaSensing offers.

The collected airborne SAR data are processed with the MetaSAR-PRO application, MetaSensing's proprietary airborne SAR processor. This application uses the Polarimetric Interferometric SAR (PolInSAR) technique to generate georeferenced GeoTiff images, the standard used by professionals worldwide.

The high-resolution images, along with Coherent Change Detection techniques, can resolve even the smallest variations in an area over time, providing information invisible to the human eye.

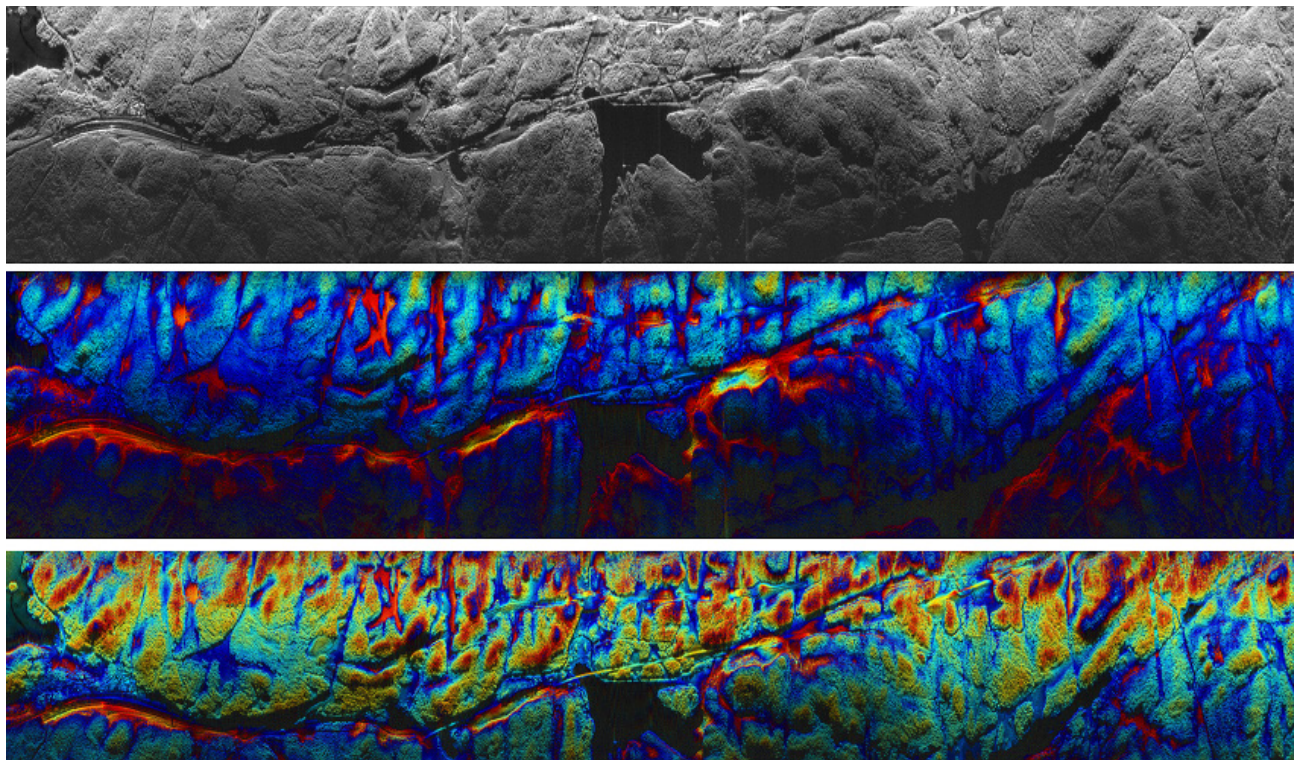
The MetaSAR-C system consists of a radar electronic box, characterized by its compact size and light weight as well as low power consumption, along with dual-polarimetric flat-panel antennas and mounting fixtures as required. Details are provided in the technical specifications table.



The MetaSAR-C enclosure is compact and light-weight, allowing for quick and flexible mounting on different aircraft.

MetaSAR-C TECHNICAL SPECIFICATIONS	
Frequency	$f_c = 5.3$ GHz
Bandwidth	300 MHz
Antenna type	Microstrip patch
Antenna gain	18 dBi
Azimuth beamwidth	10 degrees
Elevation beamwidth	38 degrees
Polarization	Dual Linear: Vertical and Horizontal
Resolution	max 0.5 m
Total weight	< 18 Kg
Power consumption	< 200 W @ 18 - 30 V DC
Dimensions	Enclosure: 320x320x370 mm

The MetaSAR-C acquired data are suitable for comparison and integration with data acquired from the ESA Sentinel-1 satellite C-band SAR for Land and Ocean monitoring.



SAR images acquired with the single-pass multi-baseline interferometric MetaSAR-C over forest. The top image is a SAR amplitude image, the middle image is a flattened, with SRTM DEM, interferogram with 33 cm baseline, the lower image is a flattened interferogram with 66 cm baseline. It is clearly visible that the lower image, with the longer baseline, is more sensitive and two times more fringes appear.

MetaSensing BV
Huygensstraat 44
2201DK Noordwijk
The Netherlands

+31 71 751 5960
info@metasensing.com
www.metasensing.com

