

OrthoSAR™

ORTHO-RECTIFICATION PROCESSOR

PRODUCT OVERVIEW

SeaSpace's OrthoSAR Level 2 processor is a high-performance high-throughput ortho-rectification processor for synthetic aperture radar (SAR) satellite sensors including: Envisat-ASAR, ALOS-PALSAR, Radarsat-1/2, TerraSAR-X, COSMO-SkyMed, ERS-1/2 and JERS-1. As a disk-to-disk processor, OrthoSAR imports standard Level 1 formats (mostly CEOS) and produces standard Level 2 formats (also mostly CEOS).

OrthoSAR can produce systematic geocoded Level 2A imagery without operator intervention. The user can also collect ground control points (GCP's) using the integrated view++ image viewer to further improve the geolocation accuracy of the output imagery. If a digital elevation model (DEM) is available, OrthoSAR can perform terrain correction to remove terrain-induced distortion from the output Level 2B image.

A user-friendly graphical user interface (GUI) allows for quick production of standard products while still providing absolute control over all ortho processing parameters. An integrated batch processor facilitates the handling of large volume processing jobs.

KEY FEATURES

- Full resolution, orthorectification processor for Envisat-ASAR, ALOS-PALSAR, RADARSAT-1/2, TerraSAR-X, COSMO-SkyMed, ERS-1/2, and JERS-1
- RSI-certified RADARSAT processor
- Ingests Space Agency standard (CEOS) Level 1 formats; produces Space Agency standard (CEOS) Level 2 output formats
- User maintainable ASCII list of many supported Datums, including non earth-centered ellipsoids, like WGS84, GEM6, International, Tokyo, and many more
- Horizontal and vertical Datum selectable
- Output image projections available include Mercator, Transverse Mercator, Oblique Mercator, UTM, Geo, Polar Stereo-graphic, Lambert Conformal, Cassini Soldner, Polyconic, and Rectified Skew Orthomorphic
- Produces systematic geocoded imagery, or precision ortho-rectified imagery using Ground Control Points (GCP) and/or Digital Elevation Models (DEM)
- User-friendly .NET GUI for full control over all orthorectification processing parameters
- Effectively utilizes multiple CPU's for maximum processing performance
- Sophisticated earth intersection algorithm uses range and Doppler information

ENVISAT

ERS-1/2

ALOS

RADARSAT-1/2

JERS-1

TERRASAR-X

COSMO-SKYMED



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EARTH ON DEMAND



OrthoSAR™ ORTHO-RECTIFICATION PROCESSOR

SYSTEM SPECIFICATIONS

Hardware Platform

- Intel Linux and Windows Platforms

RADARSAT

- Input: RSI CEOS SGC, SGF, SGX, and SLC
- Output: RSI CEOS SSG and SPG

ERS-1/2

- Input: ESA CEOS PRI and SLC
- Output: ESA CEOS GEC and GTC

JERS-1

- Input: ESA CEOS PRI and SLC
- Output: ESA CEOS GEC and GTC

ALOS-PALSAR

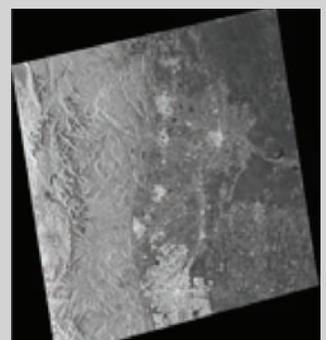
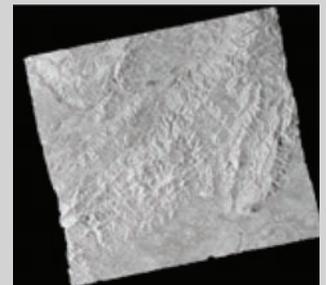
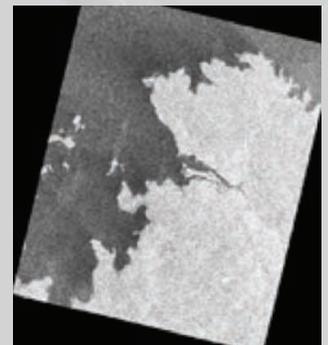
- Input: CEOS L1
- Output: CEOS L2A and L2B

Envisat-ASAR

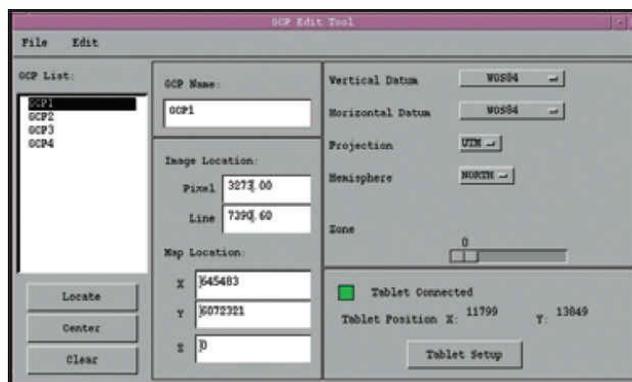
- Input: ESA L1B – PRI
- Output: ESA LIB – GEC

All satellites and sensors

- Input: GLI Format
- Output: Ortho Format



RADARSAT fine beam image of Australia (top), standard beam image of Columbia (middle), and fine beam image of Colorado Front Range (bottom).



OrthoSAR Ground Control Point (GCP) collection tool GUI interface