

SOCET GXP® Synthetic Aperture Radar (SAR) capabilities



The GXP ecosystem



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Amplitude Change Detection

- » Two-color multi-view (2CMV)

Anamorphic Correction

- » Toggles square pixels for Sensor Independent Complex Data (SICD)

Automatic Application of Enhancements Based on Image and Sensor Type

Coherent Change Detection

- » Automatic registration
- » Coherence image output
- » Goldstein filtering
- » Interferogram / phase interferogram generation
- » Spatial smoothing
- » Support for the following sensors:
 - » COSMO-SkyMed
 - » KOMPSAT-5
 - » NITF (CMETAA)
 - » RADARSAT-2
 - » Sentinel-1A
 - » SICD
 - » TanDEM-X
 - » TerraSAR-X

Colorization

- » Customizable look-up tables

Complex Data Visualization

- » Allow real-time switching to view phase, inphase (I), and quadrature (Q) data
- » Convert I and Q values to magnitude on the fly

Complex Data Visualization

(Continued)

- » COSMO-SkyMed complex (HDF5)
- » KOMPSAT-5 complex (HDF5)
- » PALSAR-2 complex (CEOS/TIFF)
- » RADARSAT-2 complex (TIFF)
- » RISAT-1 complex (CEOS)
- » Sentinel-1A complex (TIFF)
- » SICD
- » TanDEM-X complex (COSAR)
- » TerraSAR-X complex (COSAR)

Interferometric Pair Finder

- » Define matching collection geometry thresholds

Legend

- » On/off toggle showing relevant collection geometry for SAR images

Ortho On-the-Fly™

- » Works for complex, detected, and derived products

Orthophoto Generation

Polarimetric Color Composites

Polarimetric Decompositions

- » Accomplished using Band Math functionality
- » Pauli decompositions

Rigorous SAR Sensor Models

- » Capella
- » COSMO-SkyMed
- » COSMO-SkyMed complex
- » COSMO-SkyMed 2nd Generation

Rigorous SAR Sensor Models

(Continued)

- » KOMPSAT-5
- » KOMPSAT-5 complex
- » PALSAR-2
- » PALSAR-2 complex
- » RADARSAT-1
- » RADARSAT-2 complex
- » RADARSAT-2 north aligned
- » RADARSAT-2 orbit aligned
- » Sentinel-1A complex
- » Sentinel-1A GRD
- » SICD
- » Sensor Independent Derived Data (SIDD)
- » TanDEM-X
- » TanDEM-X complex
- » TerraSAR-X
- » TerraSAR-X complex

SAR Overlay

- » View important collection angles

Slant to Ground Plane Toggle

Sub-Aperture Stack

- » Anamorphic correction toggles square pixels for all output frames
- » Color composite sub-aperture stack generation
- » Configurable number of output frames
- » Customizable animation rates for visualizing stack as a movie

Terrain Extraction from Stereo SAR Imagery

- » RADARSAT strategy included
- » Bare earth terrain generation (DEM)
- » Surface model terrain generation (DSM)

Threshold Look Up Tables

- » Filters out low returns while highlighting high returns

Transparency Threshold

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