

## Automatic DEM ProPack

### AUTOMATIC DEM PROPACK

Extend the functionality of the PCI ProSDK through the Automatic DEM ProPack. The Automatic DEM ProPack enables flexible use and automation of PCI Geomatics' robust DEM generation technology.

The Automatic DEM ProPack allows you to create Digital Elevation Models (DEMs) from stereo aerial and satellite images. Image correlation is used to locate matching points in two overlapping images. The geometric model associated with each image and the coordinates of the points in both images are then used to compute the three-dimensional scene coordinates of the points. Finally, a regular raster DEM is computed from the irregularly spaced set of points.

The Automatic DEM ProPack consists of core PCI Pluggable Functions (PPFs) for generating epipolar image pairs (EPIPOLAR), performing the correlation and scene coordinates computation (AUTODEM, GEOCODEDEM), and exporting DEMs to a USGS file format (DEMWRIT). Other PPFs are included to provide complementary operations, as described below.

### SOME OF THE INCLUDED COMPLEMENTARY PPFs

#### *DEM and Vector Elevation Reference Transfer*

- DEMZREF
  - Transforms raster DEM elevation values from mean sea level to ellipsoidal.

- VECZREF
  - Transforms 3D vector elevation values from mean sea level to ellipsoidal.

#### *Image Management*

- IMERGE
  - Merges multiple geocoded rasters into a single file.
- REPROJ
  - Reprojects images, bitmap segments and vector layers to a specified projection.
- CLIP
  - Clips layers based on a user defined clip region.
- TILE
  - Creates multiple subset tiles from a single file.
- PYRAMID
  - Builds an image pyramid for one or more image layers in a data file.

#### For more information, contact

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