

Aerial Photography Model Propack

AERIAL PHOTOGRAPHY MODEL PROPACK

Extend the functionality of the PCI ProSDK through the Aerial Photography Model Propack. The Aerial Photography Model Propack enables flexible use and automation of PCI Geomatics' robust airphoto orthorectification technology.

The Aerial Photography Model Propack uses interior and exterior orientation data and a bundle adjustment to compute geometric models for vertical images acquired with analogue and digital frame cameras. The orthorectification model compensates for the effects of varying terrain, camera position and orientation, and distortions caused by the camera optics.

The Aerial Photography Model Propack consist of core PCI Pluggable Functions (PPFs) for importing and exporting interior and exterior orientation parameters and performing the bundle adjustment (CAMIMPORT, CAMEXPORT, EOIMPORT, EOEXPORT, and APMODEL, respectively), plus other PPFs that provide complementary operations as described below.

SOME OF THE INCLUDED COMPLEMENTARY PPFs

Project Management

- CRPROJ
 - Creates an OrthoEngine project file based on a list of input images and optionally GCP segments.
- MERGPROJ
 - Merges multiple OrthoEngine project files.

- SUBPROJ
 - Subsets a project file based on a given set of images or area.

Ground Control Point (GCP) and Tie Point (TP) Management

- GCPIMPORT
 - Imports GCP data from a GCP segment in a PCIDSK file into an OrthoEngine project file.
- GCPELV
 - Obtains elevations for GCPs from a DEM
- GCPREAD
 - Imports GCP data from a text file into a GCP segment in a PCIDSK file.
- GCPWRIT
 - Exports GCP data from a GCP segment in a PCIDSK file to a text file.
- GCPPRO
 - Converts input ground control points (GCPs) to the specified output units.
- GCPEXPORT
 - Exports GCP data from an OrthoEngine project file into a GCP segment in a PCIDSK file.
- TPIMPORT
 - Imports tie point data from a text file into an OrthoEngine project file.
- TPEXPORT
 - Exports tie point data from an OrthoEngine project file to a text file.

DEM and Vector Elevation Reference Transfer

- DEMZREF
 - Transforms raster DEM elevation values from mean sea level to ellipsoidal or vice versa.
- VECZREF
 - Transforms 3D vector elevation values from mean sea level to ellipsoidal or vice versa.

Image Normalization

- HOTSPOT
 - Performs a correction for hotspot effects in an image channel.

Orthorectification

- ORTHO
 - Orthorectifies an image using an existing geometric model and, optionally, a digital elevation model.

Image Management

- IMERGE
 - Merges multiple geocoded rasters into a single raster 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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