

## Atmospheric Correction ProPack

### ATMOSPHERIC CORRECTION PROPACK

Extend the functionality of the PCI ProSDK through the Atmospheric Correction ProPack. The Atmospheric Correction ProPack enables flexible use and automation of PCI Geomatics' robust, atmospheric correction technology.

#### Overview

The data obtained by optical satellite sensors with high spatial resolution is often obscured by atmospheric effects such as haze. Atmospheric effects such as haze are a result of conditions in the atmosphere at the time that the image was captured. Atmospheric correction is a process used to reduce or eliminate atmospheric effects and reveal more accurate surface reflectance values.

Two atmospheric correction processes are available:

- ATCOR2 which is used to correcting satellite imagery over flat terrain
- ATCOR3 which is used for correcting satellite imagery over rugged terrain.

Both algorithms work with a database of atmospheric correction functions which are stored in look-up-tables.

#### INCLUDED ALGORITHMS

The algorithms in this ProPack have been developed mainly for satellite sensors with small swath angles (Landsat, SPOT) but some wide field-of-view sensors (IRS-WiFS) are also supported.

Included with the Atmospheric Correction ProPack are the following algorithms:

- ATCOR2 – Calculates an atmospheric correction for flat areas that apply a constant or varying atmosphere.
- ATCOR2\_T – Calculates a Surface Temperature for Flat Area given Thermal Sensor
- ATCOR3 – Calculates a ground-reflectance image using elevation data.
- ATCOR3\_T – Creates surface temperature maps from the given thermal sensor band and elevation data
- FPAR – Calculates the fraction of absorbed, photosynthetically-active radiation
- LAI – Calculates a leaf area index model value.
- MASKING – Calculates a Haze and Cloud mask given the threshold value
- SAVI – Calculates a Soil Adjusted Vegetation Index
- TASSEL – Calculates the tasseled cap transformation for Landsat MSS, TM, and Landsat (L7) bands.

#### For more information, contact

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