



Introduction to Geomatica® 10.3.1

PCI Geomatics is a leader in the provision of advanced satellite image processing tools and services. With over 28 years of experience in remote sensing and image processing – we have raised the bar with our Geomatica 10.3 release to include imaging tools for GIS. By adding on to our existing capabilities and functionality within Geomatica, we are providing our users the best technology available to turn spatial data into useful information.

Supported Platforms

Windows 7

PCI Geomatics is proud to announce that Geomatica version 10.3.1 now includes support for the Windows 7® Operating System.

Geomatica now supports the following platforms:

- Microsoft® 2000 Server, 2003 Server, Windows XP, Vista and Windows 7
- Linux® SUSE 9.3, Red Hat® Workstation 4 (Requires Open Motif 2.2)

Sensor Support

PCI Geomatics is an industry leader in supporting sensors, and with each Geomatica release our list grows, allowing you to take advantage of the newest and best sensors available.

Below is a summary of notable sensors newly supported by Geomatica Version 10.3.1:

- THEOS - Thailand Earth Observation Satellite
- GOSAT - Greenhouse gases Observing Satellite
- WorldView-2 - Latest satellite from Digital Globe
- ADS 40/80 - Leica push-broom airborne digital sensor

In addition, Geomatica Version 10.3.1 includes improved support for:

- CBERS - Chinese and Brazilian satellite series
- DMC - Intergraph DMC (Digital Mapping Camera)

Generic Database Updates

Support for the following formats has been added in Version 10.3.1:

- BigTIFF support addresses 4 GB file size limits. Users will now be able to create TIFF files with no inherent size limit.

Accelerated Processing

PCI Geomatics has been a pioneer in implementing accelerated processing capability; this will be made available in Geomatica through the use of Open MP - making full use of multi-core processing for computationally intensive algorithms. For Version 10.3.1 the following functions will include OpenMP support:

- SAR Polarimetry functions
- Pan Sharpening (PANSHARP2)

Improved Mosaicking

OrthoEngine

Further colour balancing techniques have been added to the OrthoEngine automatic mosaicking tool, specifically:

- Look-up table - Colour balances each input image based on pre-created look up tables that have been saved back to the image files.
- Neighbourhood - This method determines a set of model coefficients that change each image pixel based on the pixel values of the intersecting (neighboring) pixels.

Functions

An improved automatic mosaicking process flow has been added to the EASI environment. These functions improve on the single AUTOMOS function that existed in previous versions of Geomatica. This means the exposure of the following new functions:

- **MOSDEF** Generates a mosaic definition XML file given a source image list file, created by the MOSPREP algorithm.
- **MOSPREP** Performs all of the necessary pre-processing of the scenes that are to be mosaicked. It computes reduced-resolution files, determines hotspot or adaptive correction coefficients, performs tonal balancing, and computes cutlines. The output is a mosaic source image list file and a directory that will contain all the necessary information to manipulate the images before they are added to the mosaic.
- **MOSRUN** Uses the cutlines that define the data to be added to the mosaic, applies the radiometric correction and the color balancing coefficients, and adds the images to the output mosaic as defined by MOSDEF.
- **MOSPVIEW** Generates a low-resolution preview of a mosaic from a given list of source images.