

# IMAGINE AutoSync™ Product Description



- when it has to be **right**

**Leica**  
Geosystems

# IMAGINE AutoSync™

## Overview

Want to perform change detection; mosaic images; perform a resolution merge? These processes require images to be tightly aligned so that you do not have artifacts from poor image registration as a byproduct of processing.

IMAGINE AutoSync™, a new add-on for ERDAS IMAGINE® V9.0, takes two or more images of potentially dissimilar type (different sensors or different resolutions) automatically generates thousands of tie points between the images and produces a geometric model which ties the two images together accurately. This can be used to improve the registration between two already georeferenced data sets so that change detection or resolution merge could be applied, or it could be used to correlate new raw imagery to an existing georeferenced image base in order to quickly georeference the new imagery.

A second workflow, Edge Matching, allows for a localized model to be applied in the overlap region of image pairs. Using a process similar to the first, tie points are generated in the region of overlap to pull misaligned features into alignment.

IMAGINE AutoSync also offers project-based workflows. Project files hold information on location of all input and reference images, stored Automatic Point Measurement (APM) and output settings and all control points generated by APM or manually measured.

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## Key Features

### IMAGINE AutoSync Wizards

Two wizard workflows, Georeferencing and Edge Matching, allow users to set up a process and run it unattended. Processes can also be batched to run at a later time. The project file created in the wizard can be opened in the workstation after processing for a quick review of all automatically generated points and results.

### IMAGINE AutoSync Workstation

- Create new projects or open existing projects created in wizard.
- Project Explorer window lists all associated input images and reference images for project.
  - Right click dropdowns give fast access to common processes performed.
- Double-clicking an image in the Project Explorer automatically loads the image in the input frame and displays any existing tie points.
- Global commands allow you to set processes on all active images:
  - Run APM on all
  - Solve All Models
  - Resample or Calibrate All
- Viewer Controls:
  - Hex-View and Bi-View display options
    - Hex-View embedded viewer display has 2 main windows with small overview and zoom windows associated with each main window.
    - Bi-View embedded viewer display has 2 main windows.
  - Zoom: Standard ERDAS IMAGINE Zoom Tools
  - Pan
  - Scale tools:
    - View Extent
    - Frame Scale Tool
    - Set Same Scale tool for data with projection will display the current input and reference images at the same scale in the views
  - Onscreen resampling support for Nearest Neighbor, Bilinear Interpolation, Cubic Convolution and Bicubic Spline
  - Rotate tool
  - Data Scaling Tool
- Raster Tools:
  - Raster Undo
  - Adjust Band Combinations
  - Toggle Pixel Transparency
  - Contrast Adjustment
  - Image Filter Tools
- GCP Cell Array:
  - Create GCP tool
  - GCP Auto Correlator
  - Undo/Redo
  - Ability to show only selected GCPs
  - Auto Solve Model Option
  - Display of X and Y Residuals, RMSE, Contribution and Match values
  - Error Threshold Selector for rapid removal of points that fall outside of desired RMSE value
  - Keyboard Shortcuts for driving through GCPs
- Summary Report Generation:
  - Info on inputs to process
  - All individual point and overall RMSE information
- Preview Output Option:
  - Loads onscreen calibrated input over reference in a single view
  - Blend, Swipe and Flicker tools available for rapid review
  - Option to display error vectors for points

