eCognition
ESSENTIALS SOFTWARE

POWERFUL OUT-OF-THE-BOX LAND COVER MAPPING SOLUTION

All-In-One Image Analysis Solution

Built on core eCognition software technology, Trimble® eCognition® Essentials offers users a complete out-of-the-box solution for object-based image analysis. With a focus on quickly obtaining quality results and actionable data, eCognition Essentials allows users to easily analyze and transfer image data into intelligent geospatial information - for example, creating land cover maps to be exported into a GIS database.

Intuitive Graphical Interface

For anyone wishing to utilize remote sensing data, Trimble eCognition Essentials offers an easy-to-use, intuitive graphical user interface. With immediate access to automated segmentation and classification tasks, the software puts a sample-based image classification workflow right at the hand of a production-oriented user.

Save Time With Automated Functions and Batch Processing

Users can achieve professional results with minimal turnaround times thanks to automated image analysis functions and batch processing capabilities. These functions include image segmentation, sample-based classification, and change detection alongside a set of interactive tools for quality control. To analyze several datasets without manual interventions or to execute the analysis on dedicated server hardware, eCognition Essentials users can submit analysis jobs to an eCognition Server which will then automatically process all submitted data in batch mode. These automated features allow GIS and Image Analysts to quickly create high quality deliverables, freeing their time to focus on the interpretation of results and decision-making.

Less Complexity, More Capability

Powered by proven eCognition technology, eCognition Essentials is a stand-alone application that covers all steps of supervised image analysis to efficiently extract high-quality information from remote sensing data for applications within environmental, urban and agricultural landcover; as well as change detection mapping. By applying predefined and structured rules to image analysis tasks, eCognition Essentials offers a streamlined workflow to quickly extract geospatial information from raw image data. At any moment, only the most relevant actions will be displayed on the screen, while the sequence of components follows a pre-defined format to guide users towards optimal results.

Access The InSphere Data Marketplace

With the Trimble InSphere Data Marketplace plug in for eCognition Essentials you can easily access remote sensing imagery and begin generating results immediately. The platform will be expanded constantly, with the following sets currently available:

The Landsat 8 library features about thousands clear sky images, automatically added to the library for eCognition available free of charge.

Benefits

► Intuitive, graphical user interface to perform land cover mapping from satellite imagery

► Guided workflows for effectively transforming image data into actionable intelligence

► Improve productivity across the organization by reducing the time needed for geospatial image analysis

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Technical Specifications

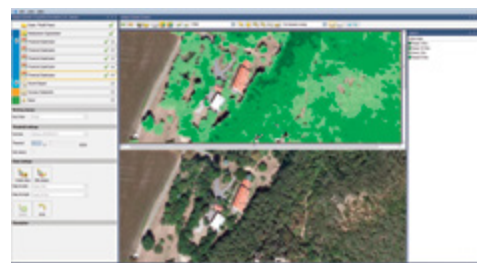| Feature	Details
Easy-to-use graphical interface	▶ Get right to work without long ramp-up times or prerequisite programming skills. With a minimum of training effort, the graphical user interface offers direct access to actions including: – Image object creation – Supervised object-based classification – Object-based change detection (image to image & image to vector) – Object smoothing – Accuracy assessment – Manual editing – Export results (GIS layer, raster layer, report)
Faster analysis using predefined, structured workflow blocks	▶ Predefined workflow blocks allow users to quickly handle tasks such as: – One-step project creation based on image data – Formulation of sample-based classification rules based on SVM, DecisionTree, Nearest-Neighbor, RandomTrees, or Bayes – Setup of change detection routines between two images or between image and GIS objects – Export of GIS-ready vector (SHP, FileGBD), raster (TIF), and report (CSV, HTML) layers
Guided analysis workflow	▶ At any step in the process, only a specific, relevant set of components is displayed for the particular purpose. The sequence of components is also predefined ▶ Workflow steps are calibrated to the corresponding image data sets using simple sliders or buttons
Customize Predefined Actions	▶ Simply add, remove or replace Predefined Actions according to your needs in the Analysis Builder Window
Support for a variety of use cases	▶ Quickly and efficiently handle a variety of use cases, including: – Forest cover and forest change mapping for carbon sequestering assessment on REDD++ projects and Kyoto Protocol reports – Urban cover and urban change mapping for environmental monitoring and urban planning – Agricultural land mapping and change detection for crop health analysis and agricultural subsidies on country level – Basic land cover and change mapping for monitoring of land degradations
Support for multiple data types	▶ Officially supported image data types: – Rasters (TIF, IMG, JP2) – Vectors (SHP, FileGDB)
Control a complete analysis workflow in one analysis suite	▶ All-in-one collection of required workflow steps for sample-based classification and/or change detection solutions, powered by eCognition engine ▶ Increase throughput by leveraging batch and parallel processing with optional eCognition Server environment

System Requirements

Trimble eCognition Essentials requires an Intel x86_64 hardware platform (64 bit). The recommended hardware requirements are:

▶ Intel Dual Core
▶ 8 GB RAM
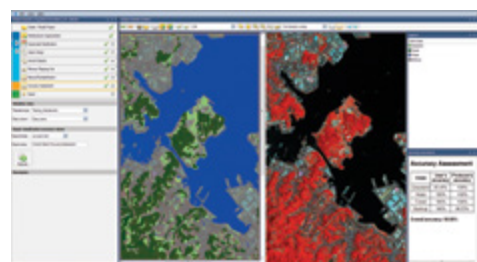▶ 200 GB available hard disk space
▶ 1920 x 1080 display

The software has been validated for the following Microsoft® Windows® operation systems: 7, 8.1, and 10.

eCognition Essentials Change Detection Mapping

eCognition Essentials Forest Mapping

eCognition Essentials Land Cover Mapping

Educational Discount Available.
Contact your Trimble representative to secure your exclusive EDU discount for eCognition Essentials.

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