

Trimble

eCognition® 8.64.0

Release Notes

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eCognition 8.64.0

Release Notes

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Contents

1	Overview	1
1.1	Overview	1
1.2	About eCognition 8.64.0	1
1.3	eCognition 8.64.0 Highlights	1
	Native 64-bit edition for optimal large data handling	1
	Support for latest operating system versions	1
	Further Improvements	1
1.4	Key Features	2
	Role-based eCognition clients for application developers and end users:	2
	eCognition Server®	2
2	Issues, Bug Fixes and Errata	3
2.1	New Features	3
	New Algorithms	3
	Changed Algorithms	4
	New Architect Functions	5
	Changed Architect Functions	6
	New Features	6
	Other Changes	7
2.2	Bug Fixes	8
2.3	Known Issues and Limitations	13
2.4	Errata	13
3	Additional Information	15
3.1	Additional Information	15
	Acknowledgments	17

1 Overview

1.1 Overview

eCognition 8.64.0 is a comprehensive image analysis platform for multi-dimensional image analysis. It contains all the client and server software needed to extract information from any digital image in a fully-automated or semi-automated way.

1.2 About eCognition 8.64.0

eCognition 8.64.0 is a major functional update to eCognition 8.0 and includes a significant number of new functionality and bug fixes. The major new feature of this release is the availability of both 32-bit and 64-bit editions of the eCognition software. The 64bit edition enables users to dramatically simplify ruleset development and processing of very large data sets. Trimble recommends updating to eCognition 8.64.0 for existing eCognition 8.0.x customers and for customers migrating from older eCognition versions.

1.3 eCognition 8.64.0 Highlights

Native 64-bit edition for optimal large data handling

- Improved large area production
- Generate billions of image objects
- Segment entire image mosaics in high detail
- No complex tiling and stitching routines
- No need to closely monitor the number of image objects in a project
- Be ready for large scale very high resolution datasets
- Effectively leverage combinations of high resolution datasets

Support for latest operating system versions

- Fully leverage your state of the art hardware

Further Improvements

- Client usability enhancements

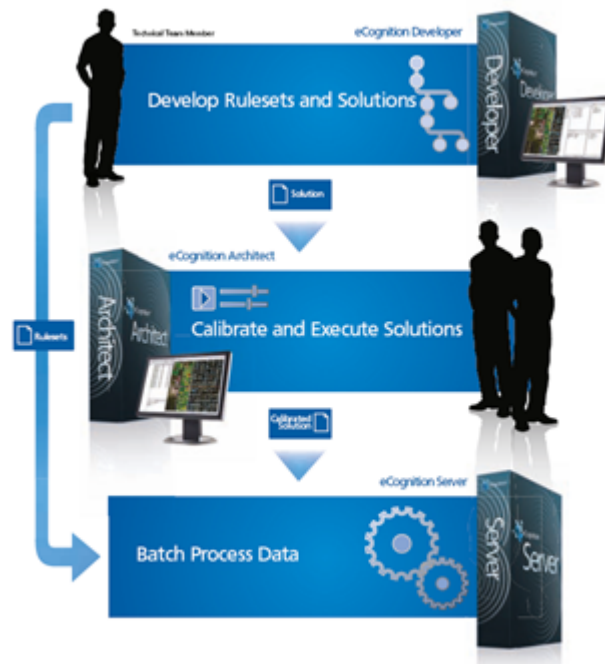


Figure 1.1. eCognition multi-dimensional image analysis software

- Application development improvements for Architect
- More flexible SDK
- Improved algorithms
- Bug fixes and patch rollup for improved stability and reliability.

1.4 Key Features

Role-based eCognition clients for application developers and end users:

- eCognition Developer
- eCognition Architect

eCognition Server®

- A scalable, server-based batch processing environment for multidimensional analysis.

2 Issues, Bug Fixes and Errata

2.1 New Features

The following lists describes the new features added to eCognition 8.64.0.

New Algorithms

Interactive Operations	
Polygon cut	Allows users to manually cut image objects.
Set custom view settings	Allows applying custom view settings to the active view
Change visible layers	Allows hiding layers for architect solutions
Show slide	Allows users to navigate through successive slides using next, previous and first
Ask question	Application can request user feedback, user can select between yes and no resulting in 1 and 0
Set project state	Allows disabling save project prompt on project closing
Save/restore project state	Allows saving and loading the project from within a rule set
Show html help	Allows developers to incorporate an HTML file into a rule set
Reset workspace	Allows resetting the workspace from within a rule set
Configure manual image equalization	Allows defining the manual image layer equalization
Show/hide class	Allows hiding classes
Text Operations	
Split string	Allows splitting a given string and putting the resulting parts into variables

Changed Algorithms

Changed Algorithm	Changes
Variables Operations	
Update feature list	New mode: add feature as variable
Basic Object Reshaping	
Remove objects	Advanced parameters: merge by parameter, Use threshold, use legacy mode
Map Operations	
Copy Map	New parameters: scale relative to main map (Y,N), Scale direction
Image Layer Operations	
Distance map	New parameter: output layer visible (Y,N)
Create temporary image layer	New parameter: output layer visible (Y,N)
Convolution filter	New parameter: output layer visible (Y,N)
Layer normalization	New parameter: output layer visible (Y,N)
Median filter	New parameter: output layer visible (Y,N)
Sobel operator filter	New parameter: output layer visible (Y,N)
Pixel freq. Filter	New parameter: output layer visible (Y,N)
Pixel min max filter	New parameter: output layer visible (Y,N)
Edge 3D filter	New parameter: output layer visible (Y,N)
Layer arithmetics	New parameter: output layer visible (Y,N)
Line extraction	New parameter: output layer visible (Y,N)
Abs. mean deviation filter	New parameter: output layer visible (Y,N)
Workspace Automation	
Delete scenes	New parameter: delete results (Y,N)
Read subscene statistics	Several new parameters

Interactive Operations

Create modify project	New parameter: metadata layer
Activate draw polygons	Renamed to start thematic editing mode, several new functions
End thematic edit mode	Renamed in finish thematic edit mode, file name parameter

Export

Export classification view	New parameters: customize path, export path
Export current view	New parameters: customize path, export path, view settings source
Export thematic raster files	New parameters: customize path, export path
Export domain statistics	New parameters: customize path, export path
Export project statistics	New parameters: customize path, export path
Export object statistics	New parameters: customize path, export path, create summary report
Export object statistics for report	New parameters: customize path, export path, create summary report
Export vector layers	New parameters: customize path, export path
Export image object view	New parameters: customize path, export path, image file name, settings
Export mask image	New parameters: customize path, export path
Export image	New parameters: customize path, export path

New Architect Functions

New Architect Function	Functionality
Select Multiple features	Allows filling a feature list
Select Image Layer	Allows selecting an image layer and assigning it to variable
Select Thematic Layer	Allows selecting a thematic layer and assigning it to variable
Edit Layer Names	Pops up edit layer names dialogue

Changed Architect Functions

Changed Function	Changes
Create new action library	New parameters: Version, GUID
Checkbox	New parameters: Description image, process on change
Drop-down list	New parameter: Description image
Button	New parameter: Description image
Radio button row	New parameter: Description image
Toolbar	New parameter: Description image
Editbox	New parameter: Description image
Editbox with Slider	New parameters: Description image, variables for min, max and tick
Select Class	New parameter: Description image
Select Feature	New parameters: Description image, process on change
Select File	New parameters: Description image, process on change
Select Level	New parameter: Description image
Select Folder	New parameters: Description image, process on change
Slider	New parameters: Description image, variables for min, max and tick
Layer drop-down	New parameter: Description image
Manual Classification Buttons	New parameter: Description image

New Features

Scene Features > Class Related

Area percentage of	Provides area relation in percent of two given classes
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Scene Features > Scene Related

Text Processing	Allows analyzing and extracting components of a string feature or variable based on user defined modifiers
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**Scene Features > Class
Related**

Is active vector layer changed	Checks if active vector layer is changed
Scene bit depth	Provides scene bit depth
Second level scene name	Provides the name of the first subset, tile etc of a scene within a workspace
Top Scene name	Provides top scene name

**Scene Features > Rule-Set
Related**

Number of feature in feature list	Allows checking if feature is in feature list
Number of specified feature in feature list	Allows checking if specified feature is in Feature list
File system	Allows checking if file exists
UI Related	Allows checking equalization mode and Other UI stats

**Scene Features >
Metadata**

Image Layer Metadata Item	Allows defining metadata for image layers
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Other Changes

Manual Editing Tools

Cut object tool	Can now cut partially into objects
Improved polygon editing	Allows editing vector polygons by adding removing and changing nodes.
Improved polygon display	Allows displaying polygons in associated class color

Edit Process

Loops & Cycles	“Loop while something changes only” now defined in checkbox
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Variables

Map value variables	A map value variable is effectively a scene variable specific to one map
Create variable dialogue	Group selection for variables

Customized Algorithms

Create Customized Algorithm	Added ability to add description for better documentation
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Create Customized Algorithm	Support of sorting of parameters
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Image Proxy Server

Proxy Server Monitor	New image proxy monitoring tool
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Import

JPEG2000 driver	Supports JPEG2000 files
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Skip GDAL native overview	Allow skipping of native GDAL overview
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New Options

Display default features in image object information	Allows defining whether default features are displayed in image object information
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Use right mouse button for adjusting image leveling	Allows adapting manual equalization when right mouse button is pressed on mouse move
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Show hidden layer names	Allows showing hidden layer names
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Show hidden map names	Allows showing hidden map names
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Display disconnected image objects with horizontal lines	Define display of disconnected objects
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Display 3D objects with diagonal lines	Defines display of 3D objects
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2.2 Bug Fixes

Bug fixes are listed in [table 2.1](#) on this page, *Bug Fixes in eCognition 8.64.0*.

Table 2.1. Bug Fixes in eCognition 8.64.0

Category	Reference	Description
Algorithm	14547	Multiresolution segmentation may crash in certain special cases.
Algorithm	14676	Problem with throw and catch processing when using multiple levels.

Continues...

Category	Reference	Description
Algorithm	14633	Performance of coating is poor in the circumstance that a super object has very large numbers of children.
Algorithm	14478	Subroutines: Cannot use “S” for naming because of shortcut
Algorithm	14678	In certain circumstances Quad tree segmentation crashes for 3D data sets due to over allocation of memory.
Algorithm	12704	Algorithm (Linux): WSP: submit scenes: process percentage of tiles: selection behaves differently on windows and Linux.
Algorithm	12764	Workspace Processing: Algorithm: create scene subset/copy is not executed in subroutine
Algorithm	13589	Algorithm: create scene copy: exclude other image objects is ignored
Algorithm	14396	Algorithm: Export Statistics: IOD is ignored for project statistics
Algorithm	14421	Mean Values for disconnected images objects with 2 pixels are computed wrong
Algorithm	14610	Writing to a temporary layer of a saved project is not possible.
Algorithm	14807	Synchronizing maps: can cause a no-object-border
Algorithm	14848	CRASH: When exchanging cust Algorithm
Algorithm	15423	Copy map: Scale direction: Plane only: does not work with Compatibility mode
Algorithm	15623	Algorithm: Contrast Split Segmentation: “Execute splitting: No” doesn’t work
Algorithm	15894	Crash: copy map in all directions with rescale 50% on 4D project
Algorithm	15913	Algorithm: Copy Map: uneven number of slices is treated differently as uneven number columns, rows upon rescale 50%
Algorithm	12694	Algorithm: submit scenes: cannot remove parameter set
Algorithm	14988	Region Cut algorithm doesn’t preserve 3D object, if used on non-pixel level
Algoritihm	13859	Ruleset development: Loop is only executed once, although while condition still holds.

Continues...

Category	Reference	Description
Algorithm	14438	Multiresolution segmentation changes objects not part of domain
Client	14483	Typo in the name of the Manage Server Dialog.
Client	14607	Crash when selecting new thematic layer from annotation
Client	14577	Crash when clicking in empty viewer after adding actions
Client	14609	GUI sorting problem mixes up thematic layer settings.
Client	14574	A client crash may occur when “customized algorithm” tab is active in process tree and project is being closed or rule set deleted
Client	14513	Memory leak in clients
Client	14880	Restore project state doesn’t restore assignment of layer aliases
Client	14982	Rendered 3D objects don’t update the Image Object Information
Client	15253	CRASH: Save Rule Set after deleting layer alias and/or layer variable
Client	15609	Sorting by remarks does not work
Client	15667	Crash: select MPR View
Client	15747	Crash while closing Developer
Customized Algorithm	14774	non-integer dimensions not supported in customized arithmetic calculation
Customized Algorithm	15629	Parameter Transfer to Customized Algorithm doesn’t work with Scene Features
Customized Feature	14972	Customized Feature YCenter (orMaxorMin)/Map Size in Y is not correct in 3D
Customized Import	14488	Improve error message for customized import when reimporting data again.
Customized Import	14846	Customized Import: cannot use ‘=’ in search string
Export	14453	Export view can crash when reading slice metadata.
Export	14683	Export not merging project statistics files correctly when merge is specified in the export template.

Continues...

Category	Reference	Description
Developer	15117	Classified as Class Variable does not work if unclassified is assigned to Class Variable
Developer	15191	CRASH: when opening project: eCognition Developer where project has multiple maps each with thematic layer.
Developer	15749	Non working space key in process comment box
Developer	15181	Process Tree: strange behavior when there is a DLL with algorithm without GUID
Export	14780	Export: Object Statistics report can cause unwanted files/folders to be created
Image Proxy Server	14593	Server jobs still use Image Proxy Server even after removing Image Proxy Server reference from the workspace.
Image Proxy Server	15038	Resource leaks in IPS can cause instability after running for long period.
Image Proxy Server	15041	IPS Tools missing from deployments.
Import	14449	las file converter creates black image layer
Import	14481	las import > asked for resolution when opening project
Import	14859	Wrong equalization for signed 16-bit images
Import	14923	Customized import with .las files doesn't work
Import	15122	.ecw is incorrectly listed in file format list.
Import	15540	LiDAR Files of Different Size are Shifted
Import	15711	eCognition Developer: las file import: error message
Import	15959	Not loading las files because not feasible las user ID interpretation
Import	16000	eCognition Developer: .las driver => .las unit "feet" not recognized
Import	16032	No resolution set up is possible when more than 1 .las file is loaded
Import	14632	Driver 8png is not loaded due to missing configuration file entry.
Installation	14492	Local Server installation can interfere with existing GRID when installed on the same machine.

Continues...

Category	Reference	Description
Installation	15049	Windows version of eCognition Cmd Client tools missing
Installation	15115	Problems with Virtual Store on Windows 7
Installation	15404	Confusing button name in save activation request dialog for license server installation
Installation	15960	Linux GRID has Windows package inside
Job Scheduler	14448	Rare crashes in 1 in 60 jobs.
Job Scheduler	14491	Disable local server does not stop the Job Scheduler.
Linux	14485	Linux DIAEngineService does not start due to missing shared libraries.
Licensing	15374	License borrowing tool crashes under Windows 7
Licensing	15995	Flexnet: License Checkout does not work with certain VPN connections on Windows 7.
Manual Editing	15029	Algorithm/Toolbar polygon cut/cut object manually gives wrong segmentation result
Maps	15610	Library dependent disappearance of map1
Processing	14567	Definiens eCognition Server is not compatible with the special Windows XP 3GB extension, which is deigned only to be used with servers running Exchange. This is now documented.
Processing	14813	Error reading locked .csv file
Processing	15340	Linux Suse 10.2 file size limit of 2GB using XFS file system
SDK	14817	SDK Samples do not compile on VS 2008
SDK	15266	DIAMkWksp.exe not working if folder contains additional files (not only the image data)
SDK	15547	SOAP API: C wrapper for SOAP SDK does not work
Thematic Layers	15984	Thematic raster data: value “value” can’t be used as feature
Vector Handling	14631	Polygon drawing: Wrong node is moved for polygon holes inside other polygons
Viewer	14618	Active Pixel: incorrect
Workspace	13633	Project statistics in workspace not displayed correctly

2.3 Known Issues and Limitations

None.

2.4 Errata

None.

3 Additional Information

3.1 Additional Information

None.

Acknowledgments

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