ERDAS IMAGINE®
Suite Comparison

A brief comparison of IMAGINE Essentials®, IMAGINE Advantage® and IMAGINE Professional®

erdas
The Earth to Business Company

Overview

This document provides a brief comparison of the main features and capabilities found within the three tiers of ERDAS IMAGINE, IMAGINE Essentials®, IMAGINE Advantage® and IMAGINE Professional®. ***Not all capabilities found within IMAGINE Essentials, IMAGINE Advantage and IMAGINE Professional, are presented in this document.*** See the current IMAGINE Essentials, IMAGINE Advantage and IMAGINE Professional Product Descriptions for a complete examination of product capabilities.

Executive Summary

IMAGINE Essentials is the entry level ERDAS IMAGINE product, with IMAGINE Advantage building upon IMAGINE Essentials, and IMAGINE Professional building upon both IMAGINE Essentials and IMAGINE Advantage. The tiered design allows customers to expand processing capability as their remote sensing and GIS needs and budget change.

Top 5 reasons to upgrade to IMAGINE Advantage:

- A powerful orthorectification capability provides precise adjustments of sensor, image orientation, and elevation displacements inherent in all imagery to make geo-location as accurate as possible; all while using less ground control than with other methods.
- Add the capability to mosaic many hundreds of images together into a single color-balanced and seamless image, or into customer defined map tiles. The customer can output to both GeoTIFF and ERDAS IMAGINE formats. If the customer has purchased the IMAGINE MrSID Encoders they can output to the MrSID file format as well.
- Options to enhance imagery with spatial, spectral, and radiometric tools through multiple filter options, resolution merge algorithms, contrast stretches, haze reductions, indices and much more are made available through the IMAGINE Image Interpreter.
- Add the capability to perform topographic analysis, such as surface creation from points, contours and LIDAR, create anaglyph stereo images, create shaded and painted relief, perform viewshed analysis, and more.
- Add the ability to perform GIS analysis, change detections and more on both remotely sensed and other GIS to provide decision support from a geographic perspective.

Top 5 reasons to upgrade to IMAGINE Professional:

- Add the remote sensing standard among the extractive industries, and the ability to mosaic terabytes of imagery with ERDAS ERMapper®. With the purchase of Earth Resource Mapping Ltd in May 2007, ERDAS obtained the powerful ER Mapper geospatial processing engine. With the release of ERDAS IMAGINE 9.3 & ERDAS ER Mapper 7.2, both products are available to either IMAGINE Professional 9.3 or ERDAS ER Mapper 7.2 customers.
- Add the most extensive multispectral classification tools available today. IMAGINE Professional adds onto IMAGINE Advantage's unsupervised classification capability with supervised classification, fuzzy classification, fuzzy recode, expert classification, image segmentation, subpixel classification, and much more.

- IMAGINE Model Maker was the world's first graphical geospatial modeling engine. Lately, software companies have tried to copy Model Maker, but for the blending of remote sensing and GIS data, Model Maker remains without peer. Model Maker builds upon IMAGINE Spatial Modeler's capability in IMAGINE Advantage by adding a graphical model building environment to assist in the development of custom spatial analysis, tuned to your remote sensing and GIS data. This capability allows the customer to maximize the value of their data, for fraction of the cost of the data.
- IMAGINE Radar Interpreter provides fundamental tools to pre-process radar images or enhance them for visual interpretation. Because it is data source independent, IMAGINE Radar Interpreter allows you to work with any SAR imagery.
- Spectral Analysis tools are added to enable processing of hyperspectral imagery to quickly extract material mapping information with minimum user interaction (and without the need for costly training in hyperspectral image processing theory).

Table of selected capabilities found within the three tiers of ERDAS IMAGINE

Feature	Capability	IMAGINE Essentials	IMAGINE Advantage	IMAGINE Professional
Data Preparation	Subset Image	●	●	●
	Reproject raster	●	●	●
	Recalculate Elevation Values	●	●	●
	RPC Generation	●	●	●
	Batch recording wizard	●	●	●
	Batch command wizard	●	●	●
Data Direct (no translation needed)	ERDAS IMAGINE® .img	●	●	●
	Shapefile / Arc Coverage	●	●	●
	Oracle Spatial / Oracle Feature	●	●	●
	Personal / Enterprise GeoDatabase	●	●	●
	ESRI SDE	●	●	●
	TIFF / BigTIFF	●	●	●
	NITF 2.0 / 2.1	●	●	●
	JFIF (JPEG)	●	●	●
	JPEG2000	●	●	●
	ERDAS ECW / ECWP	●	●	●
	MrSID	●	●	●
	CIB, ADRG, CADRG, ECRG, A/USRP	●	●	●
	DTED / SRTM	●	●	●
	Binary (BIL, BSQ, BIP)	●	●	●
	ITTVIS ENVI (.hdr)	●	●	●
	ERDAS LAN / GIS / ERS	●	●	●
	ESRI GRID / Stack / Stack 7.x	●	●	●
	TFRD / NTM NITF	●	●	●
	Web Coverage Service	●	●	●
	Web Mapping Service	●	●	●

Feature	Capability	IMAGINE Essentials	IMAGINE Advantage	IMAGINE Professional
Mosaic	Brightness / Contrast	●	●	●
	Histogram Matching		●	●
	Wallace Filter (Dodging)		●	●
	Overlap Handling		●	●
	Hot Spot Removal		●	●
	Exclude Area		●	●
	Auto-Seam Line		●	●
	Tiled Output		●	●
Image Geometric Correction	Affine	●	●	●
	Polynomial	●	●	●
	Rubber Sheeting	●	●	●
	Metric accuracy assessment tools		●	●
Single Image Ortho	Frame / digital camera		●	●
	ALOS PRISM		●	●
	CARTOSAT		●	●
	Direct Linear Transform (DLT)		●	●
	CSM (all models)		●	●
	EROS A / B		●	●
	FORMOSAT2		●	●
	IKONOS / GeoEye-1 / OrbView3		●	●
	IRS-1C / 1D		●	●
	Landsat 1, 2, 3, 4, 5 and 7		●	●
	NITF RPC / DPPDB		●	●
	Projective Transform		●	●
	QuickBird		●	●
	RESOURCESAT		●	●
	RSM		●	●
	SPOT Pan, XS, XI, 5		●	●
	THEOS1		●	●
	WorldView		●	●
Landcover Classification	Unsupervised	●	●	●
	Supervised			●
	Calculate and edit signatures			●
	Threshold			●
	Accuracy Assessment			●
	Feature Space Image / Thematic			●
	Knowledge Classifier		●	●
	Knowledge Engineer			●
	Frame Sampling Tool			●
	Class Grouping Tool			●
	Fuzzy Convolution			●
	Fuzzy Recode			●

Feature	Capability	IMAGINE Essentials	IMAGINE Advantage	IMAGINE Professional
Landcover Classification (cont.)	Image Segmentation			●
	Subpixel Classification			●
	Hyperspectral Analysis Workstation			●
	Hyperspectral Target Detection			●
	Hyperspectral Material Mapping			●
	Hyperspectral Anomaly Detection			●
Spatial Enhancement	Convolution Filtering	●	●	●
	Non-Directional Edge		●	●
	Focal Analysis	●	●	●
	Texture		●	●
	Adaptive Filter		●	●
	Statistical Filter		●	●
	PC Resolution Merge		●	●
	Multiplicative Resolution Merge		●	●
	Brovey Transform Resolution Merge		●	●
	HPF Resolution Merge		●	●
	Modified HIS Resolution Merge		●	●
	Wavelet Resolution Merge		●	●
	Subtractive Resolution Merge		●	●
	Ehlers Fusion Resolution Merge		●	●
	Crisp		●	●
Radiometric Enhancement	LUT Stretch	●	●	●
	Histogram Equalization	●	●	●
	Histogram Match		●	●
	Brightness Inversion	●	●	●
	Haze Reduction		●	●
	Noise Reduction		●	●
	Destripe TM Data		●	●
Spectral Enhancement	Principal Components Analysis (PC)		●	●
	Inv. Principal Components		●	●
	Decorrelation Stretch		●	●
	Independent Components Analysis		●	●
	Tasseled Cap		●	●
	RGB to IHS		●	●
	IHS to RGB		●	●
	Indices (NDVI, TNDVI, Iron Oxide, etc.)		●	●
	Natural Color		●	●
	Landsat 7 Reflectance		●	●
	Spectral Mixer		●	●

Feature	Capability	IMAGINE Essentials	IMAGINE Advantage	IMAGINE Professional
Topographic Analysis	Slope		●	●
	Aspect		●	●
	Level Slice	●	●	●
	Shaded Relief	●	●	●
	Painted Relief		●	●
	Topographic Normalize		●	●
	Raster Contour		●	●
	Surface Creation (shp. dwg, dgn, las, etc.)		●	●
	Surface Merge (Mosaic)		●	●
	Viewshed		●	●
	Anaglyph		●	●
	DEM Height Conversion		●	●
	Route Intervisibility		●	●
GIS Analysis	Neighborhood		●	●
	Clump		●	●
	Sieve		●	●
	Eliminate		●	●
	Perimeter		●	●
	Search		●	●
	Index		●	●
	Overlay		●	●
	Matrix		●	●
	Recode	●	●	●
	Summary		●	●
	Zonal Analysis		●	●
Utilities	Change Detection		●	●
	Functions / Operators		●	●
	RGB / Advanced RGB Clustering		●	●
	Random Class Colors		●	●
	Layer Stack		●	●
	Rescale		●	●
	Mask		●	●
	Degrade		●	●
	Replace Bad Lines		●	●
	Vector to Raster		●	●
	GIS Aggregation (Aggie)		●	●
	Thematic to RGB		●	●
	Morphological		●	●
	Convert pixels to ASCII / ASCII to pixels	●	●	●
	Compare images	●	●	●

Feature	Capability	IMAGINE Essentials	IMAGINE Advantage	IMAGINE Professional
Modeler	Model Maker (Graphical Spatial Modeler)			●
	Spatial Modeler (Script Spatial Modeler)		●	●
Radar Analysis	Speckle Suppression			●
	Edge Enhancement			●
	Texture Analysis			●
	Brightness Adjustment			●
	Radar Conversions			●
	Radiometric Corrections			●
	Luminance Modification			●
General Display Environment	Multi-Document Views	●	●	●
	Image Drape	●	●	●
	Swipe	●	●	●
	Virtual Roaming	●	●	●
	Dynamic Range Adjustment	●	●	●
	In-View (Bubble) Magnifier	●	●	●
	Polygon Region Growing	●	●	●
	Create Image Footprints	●	●	●
	Link viewers geographically & spectrally	●	●	●
ERDAS ER Mapper	License to use ERDAS ER Mapper			●
	Mosaic to a terabyte dataset			●
	ECW Compression			●

About ERDAS

ERDAS – The Earth to Business Company – helps organizations harness the information of the changing earth for greater advantage.

ERDAS creates geospatial business systems that transform our earth's data into business information, enabling individuals, businesses and public agencies to quickly access, manage, process and share that information from anywhere.

Using secure geospatial information, ERDAS solutions improve employee, customer and partner visibility to information, enabling them to respond faster and collaborate better. It also means better decision-making, increased productivity and new revenue streams.

ERDAS is a part of the Hexagon Group, Sweden. For more information about ERDAS or its products and services, please call +1 770 776 3400, toll free +1 866 534 2286, or visit www.erdas.com.