



ITT

ENVI. Get the Information You Need from Imagery.

ENVI® is the premier software solution to quickly, easily, and accurately extract information from geospatial imagery.



Engineered for life

Easy to Use Tools. Proven Functionality. Fast Results.



The growing reliance on geospatial information makes it increasingly important for you to quickly find and define features in imagery. Tools and processes that help you easily and accurately extract information from imagery are essential for commercial, government, and research applications.

Today's imagery analysts, scientists, and GIS professionals in a wide variety of disciplines choose products from the ENVI® line of premier software solutions for extracting information from geospatial imagery. ENVI provides advanced, user-friendly tools to read, explore, prepare, analyze and share information extracted from all types of imagery.

Read



Prepare



Explore



Analyze



Share



Customize

Developed by the experts in image processing and data visualization, ENVI is built on an extensible platform that allows you to easily expand and customize ENVI to suit your needs. A robust suite of add-on modules also allows you to expand your image processing capabilities to address your specific needs. And, with its broad cross platform support, ENVI is your solution regardless of whether you are in a Windows®, Macintosh, Linux or UNIX environment.

Learn more about how ENVI can be your solution for extracting information from geospatial imagery.



Read Virtually Any Imagery Type and Format

ENVI supports imagery types gathered from today's popular satellite and airborne sensors including panchromatic, multispectral, hyperspectral, radar, thermal, lidar, and more. ENVI can read over 70 data formats and includes HDF, GeoTIFF and JITC compliant NITF support. ENVI also allows you to easily drag and drop files from Windows Explorer, search results, and ArcGIS® making it easy to access and integrate information into ENVI from other desktop applications. And, ENVI also delivers enterprise capabilities that allow you to quickly and easily access imagery from OGC and JPIP compliant servers within your organization or over the internet.



Prepare Your Imagery

ENVI provides automated pre-processing tools that allow you to quickly and easily prepare your imagery for viewing or additional analysis. With ENVI you can:

- Orthorectify imagery
- Register two or more images
- Calibrate imagery
- Correct imagery for atmospheric distortions
- Create vector overlays
- Identify regions of interest (ROIs)
- Create digital elevation models (DEMs)
- Perform pan sharpening, masking, and mosaicking
- Resize, rotate, or convert the data type

Explore Your Imagery

ENVI gives you an intuitive user interface and easy-to-use tools that allow you to quickly and easily view and explore your imagery. You can use ENVI to view large datasets and metadata, visually compare imagery, create powerful 3D visualizations, create scatter plots, explore pixel signatures, and more. ENVI also allows you to display ArcGIS layers with your imagery, giving you the ability to view vector information with the same styling, symbology and rendering as your GIS applications.

Process & Analyze Your Imagery

ENVI provides the leading image processing and analysis functionality you need to extract information for your research, intelligence or planning purposes. ENVI provides a complete suite of tools based on proven scientific methods to help you analyze your imagery. And, ENVI provides unique, automated processes and procedures to make processing and analyzing your imagery easier than ever.



Data Analysis Tools

Understanding your imagery often involves discerning information about your image. ENVI includes a comprehensive suite of data analysis tools that allow you to access proven algorithms to quickly, easily and accurately analyze imagery.

- Create geospatial statistics such as autocorrelation and semi-variance
- Calculate image statistics such as mean, min/max, standard deviation
- Extract linear features
- Synthesize radar imagery
- Calculate principal components
- Detect change
- Measure features
- Model topographic characteristics
- Apply common and user-defined filters
- Perform custom band and spectral math functions

Automated Workflows

ENVI gives you automated workflows that step you through today's popular image processing functions. This unique automation takes the complexity out of common image analysis methods and makes advanced image analysis accessible regardless of your experience level.

ENVI's automated workflows give you step by step windows with instructions and recommended settings, based on proven scientific methods, for each step of the process. Subsequent steps automatically update while prompting you for required information. ENVI includes workflows that automate a wide range of image exploitation tasks that include preparing imagery, finding features, detecting change over time, and classifying similar materials. Whether you are new to ENVI or an experienced user, ENVI's automated workflows will save you time and effort in getting the results you need from imagery.

Spectral Analysis Tools

Spectral analysis allows you to use pixel responses at different wavelengths to obtain information about the materials within each pixel. ENVI has the most advanced yet easy-to-use spectral analysis tools that give you access to established, scientific methods for imagery analyses. ENVI's spectral analysis tools allow you to:

- Classify your imagery using supervised and unsupervised methods
- Identify spectral signatures using robust libraries
- Detect and identify targets
- Identify features of interest
- Analyze & map materials of interest
- Perform whole-pixel and sub-pixel analyses
- Use a suite of post classification tools to refine your results
- Calculate forest health with vegetation analysis tools

Share Your Information

ENVI easily integrates into your existing workflow, allowing you to share maps, reports and presentations with colleagues in virtually any environment. Information extracted from imagery in ENVI can be easily saved directly to your computer, your geodatabase, or other server environment as image files, shapefiles or Microsoft® PowerPoint® files. And, with its tight integration with ArcGIS, ENVI outcomes can also be output as map products, using the popular ArcGIS map templates and printing dialogs directly from the ENVI interface.

Customize Your Geospatial Image Application

ENVI is built on a powerful development language, IDL, allowing its features and functionality to be easily extended or customized to fit your specific application. This powerful and flexible platform allows you to create batch processes, customize menus, add your own algorithms and tools, integrate C++ and Java code into your tools, and much more.

Extend Your ENVI Functionality

ENVI's image processing and analysis functionality is robust, and can be even further extended by adding any one of these modules to expand its core capabilities:

ENVI Orthorectification Module – provides geospatial imagery users with simple but robust tools to accurately register imagery to ground coordinates and remove geometric distortions.

ENVI NITF Module – allows you to access, read, write, process, and share imagery in the government standard NITF file format.

ENVI DEM Extraction Module – improves the image analysis workflow by allowing you to create spatially accurate 3-D data representations directly within ENVI.

SARscape Modules for ENVI – provide a unique set of functionality to read, process, analyze and output SAR data and integrate results with other remotely sensed data and geospatial tools.

ENVI Atmospheric Correction Module – removes challenging atmospheric conditions from imagery using both the proven FLAASH and QUAC algorithms.

Easy-to-use tools. Proven functionality. Fast results.

ENVI provides all this, in an easy to use solution. From reading and preparing, to exploring, analyzing and sharing — you'll find what you need in ENVI to get information from your imagery quickly and easily.



Get started using ENVI at
www.itvis.com/ENVI.

ITT Visual Information Solutions

www.ittvis.com



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