



ENVI

| IMAGERY BECOMES KNOWLEDGE |

# ENVI

The premier software for extracting information from geospatial imagery.

EXELIS

Visual Information Solutions



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Geospatial imagery is used more and more across industries because it provides up-to-date, accurate information about geographic areas of interest. Imagery is used to evaluate biodiversity, detect and identify targets, plan emergency response efforts, and a variety of other applications important to understanding the world around you. To meet the growing need for information, there are more imagery sensors available today than ever before, each with their own advantages. Because of this, you need advanced software technology that can effectively exploit the growing number of sensors and the increasingly large data sets they provide.

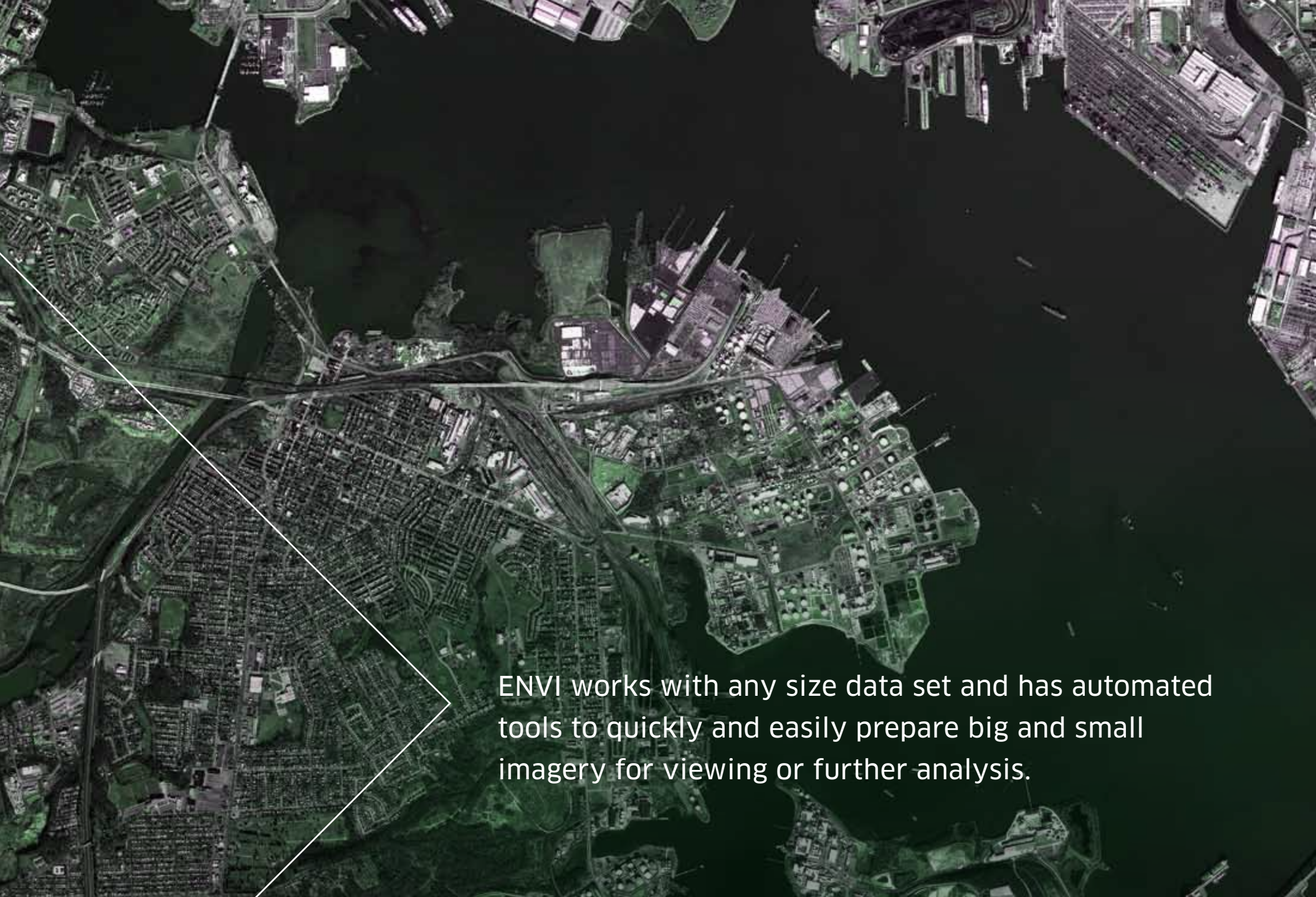
ENVI software enables you to easily extract information from geospatial imagery, providing you with the knowledge to make more informed decisions. Regardless of the image format you use, ENVI has the latest image processing and analysis tools to help you extract meaningful information from imagery. And, with an intuitive, customizable interface, ENVI is designed to be used by everyone from GIS professionals to image analysts and image scientists, regardless of prior experience with imagery.



ENVI software uses proven scientific methods and automated processes to help you turn geospatial imagery into knowledge.



ENVI



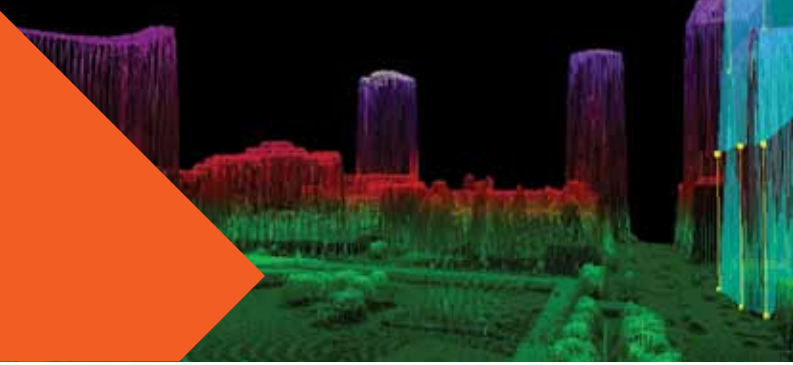
ENVI works with any size data set and has automated tools to quickly and easily prepare big and small imagery for viewing or further analysis.

Whether you're new to image analysis or an experienced image scientist, you need one software package that supports today's popular sensors, data formats, and platforms. This flexibility allows you to effectively collaborate with colleagues, business partners, and clients to generate results and create geospatial products that help you solve important problems.

ENVI allows you to accurately ingest, read, and extract information from a variety of sources, and can fuse multiple data modalities to exploit the strengths of each data type. Now you can use one software package to get meaningful, contextual information from your imagery.



# ONE SOLUTION FOR ALL OF THE DATA TYPES YOU USE



## EASILY PROCESS LARGE DATA SETS

The data collected by today's sensors contain more information than ever before. In order to effectively read and extract information from these large data sets, you need a software solution without file size limitations. ENVI works with any size data set and has automated tools to quickly and easily prepare big and small imagery for viewing or further analysis.

## EXPLOIT INFORMATION FROM DIFFERENT SENSOR TYPES

ENVI supports imagery gathered from today's popular satellite and airborne sensors, including panchromatic, multispectral, hyperspectral, radar, thermal, and LiDAR. These sensors include ASTER, AVIRIS, AVHRR, Landsat, Quickbird, RadarSat, SPOT, TMS, DTED, WorldView, and more.

## READ AND ANALYZE DIFFERENT DATA FORMATS

ENVI supports over 70 data formats, including scientific formats such as HDF and CDF, image types like GeoTIFF, and additionally provides JITC compliant NITF support. And, ENVI delivers enterprise capabilities that provide you quick and easy access to imagery from OGC and JPIP compliant servers within your organization or over the internet.

## FUSE MULTIPLE DATA MODALITIES

Because you may work with a number of imagery sources, ENVI allows you to fuse multiple data modalities to get a complete picture of a geographic area. Radar, LiDAR, SAR, optical, hyperspectral, multispectral, stereo, thermal, and acoustic can be fused to exploit the strengths of each sensor and create rich geospatial products for informed decision making.

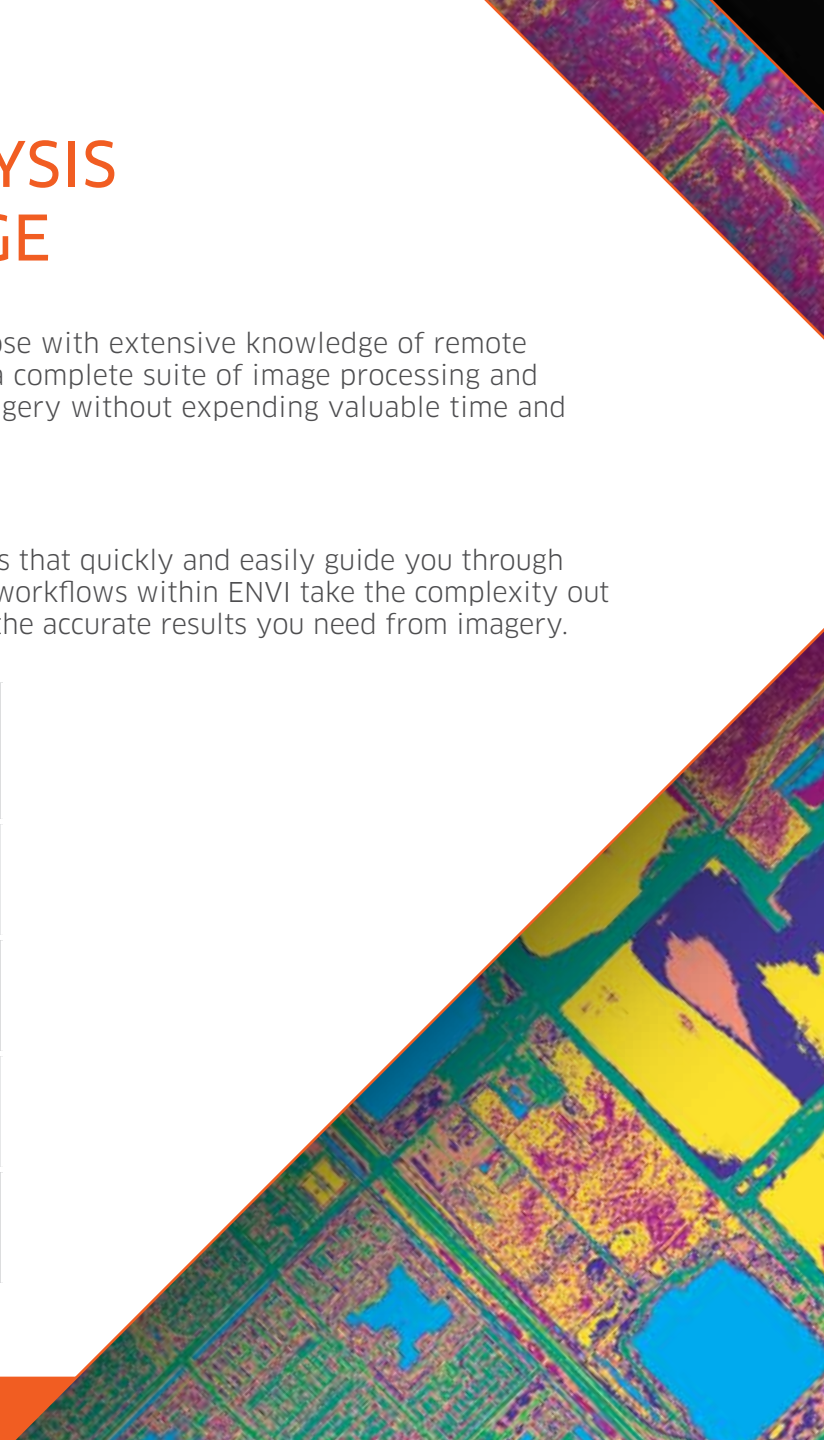
# COMPLETE SUITE OF IMAGE ANALYSIS TOOLS IN ONE SOFTWARE PACKAGE


Using imagery as a source of scientific information used to be reserved for those with extensive knowledge of remote sensing and image analysis methods. ENVI changes this paradigm by offering a complete suite of image processing and analysis tools that enable you to easily extract pertinent information from imagery without expending valuable time and effort learning advanced image analysis techniques.

## AUTOMATED WORKFLOWS TO GET ANSWERS FASTER

ENVI delivers accurate, scientifically proven processes in step-by-step workflows that quickly and easily guide you through advanced image analysis tasks, regardless of your experience level. Automated workflows within ENVI take the complexity out of popular image analysis methods, while saving you time and effort in getting the accurate results you need from imagery.

<b>Anomaly Detection</b> search an image for statistical and spectral distinctions from the background landscape	<b>Change Detection</b> look for areas of change by comparing two images from different dates using band ratio or feature index techniques
<b>Classification</b> classify terrain automatically or with user defined specifications	<b>Thematic Change</b> perform change detection between two classification results
<b>Feature Extraction</b> find objects of interest using parameters based on spatial, spectral, and textural characteristics	<b>RPC Orthorectification</b> correct imagery to account for terrain and sensor distortion
<b>Image Registration</b> improve the georeferencing of an image by tying it to an accurate base map	<b>Viewshed Analysis</b> perform a line of site analysis
<b>SPEAR Tools</b> a set of automated workflows designed to take advantage of multispectral imagery	<b>THOR Tools</b> a set of automated workflows designed to take advantage of hyperspectral imagery





Now you can easily create geospatial products to determine the extent of damage caused by natural disasters, identify the location of concealed targets, or measure the health of a forest.

ENVI tools are based on proven scientific methods, and many of the more common image analysis tasks can be performed with automated processes and procedures making image analysis accessible to users of all experience levels.

#### **SPECTRAL ANALYSIS TOOLS**

Spectral analysis allows you to use pixel responses at different wavelengths to obtain information about the materials within each pixel. ENVI is a leader in spectral image processing and has tools that give you access to established, scientific mapping methods for spectral analysis. These tools allow you to detect targets, calculate vegetation and forest health, map materials of interest, and much more.

#### **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, such as generate image statistics, measure features, and model topographic characteristics.

#### **ADVANCED IMAGE ANALYSIS TOOLS**

Many organizations perform highly specialized tasks that require advanced image analysis tools. With ENVI software, these sorts of tasks can also be accomplished within one software package. From rigorous orthorectification and feature extraction, to atmospheric correction and DEM extraction, you'll find that ENVI has all the tools you need to get the answers you need from imagery.

# INTEGRATION WITH YOUR EXISTING GEOSPATIAL WORKFLOW

Image analysis is just part of your overall geospatial workflow, which is why you need image analysis software that seamlessly integrates with your existing tools and streamlines the overall process. ENVI makes it easy for you to customize its features and functionality to fit your image analysis and geospatial workflow, update a GIS with valuable information from imagery, and collaborate and share results with others.

## INTEGRATION WITH ARCGIS®

Updating a GIS with valuable information from geospatial imagery increases your knowledge about the world around you and allows you to deliver a rich set of geospatial information to GIS maps and other GIS applications. ENVI image analysis capabilities are fully integrated with ArcGIS® from Esri, eliminating the need to switch between software packages. You can easily access ENVI image analysis tools directly from the ArcGIS desktop and server environments, send results from ENVI to a geodatabase, or push information from ENVI directly into ArcMap™.

## SHARE WITH OTHERS

Sharing your image analysis results with colleagues and customers is important. With ENVI, you can easily share maps, reports, presentations, and other geospatial products in virtually any environment. Information extracted from imagery with ENVI is easily saved directly to a local file, a geodatabase, or to another server environment as image files, shapefiles, or Microsoft® PowerPoint® files.



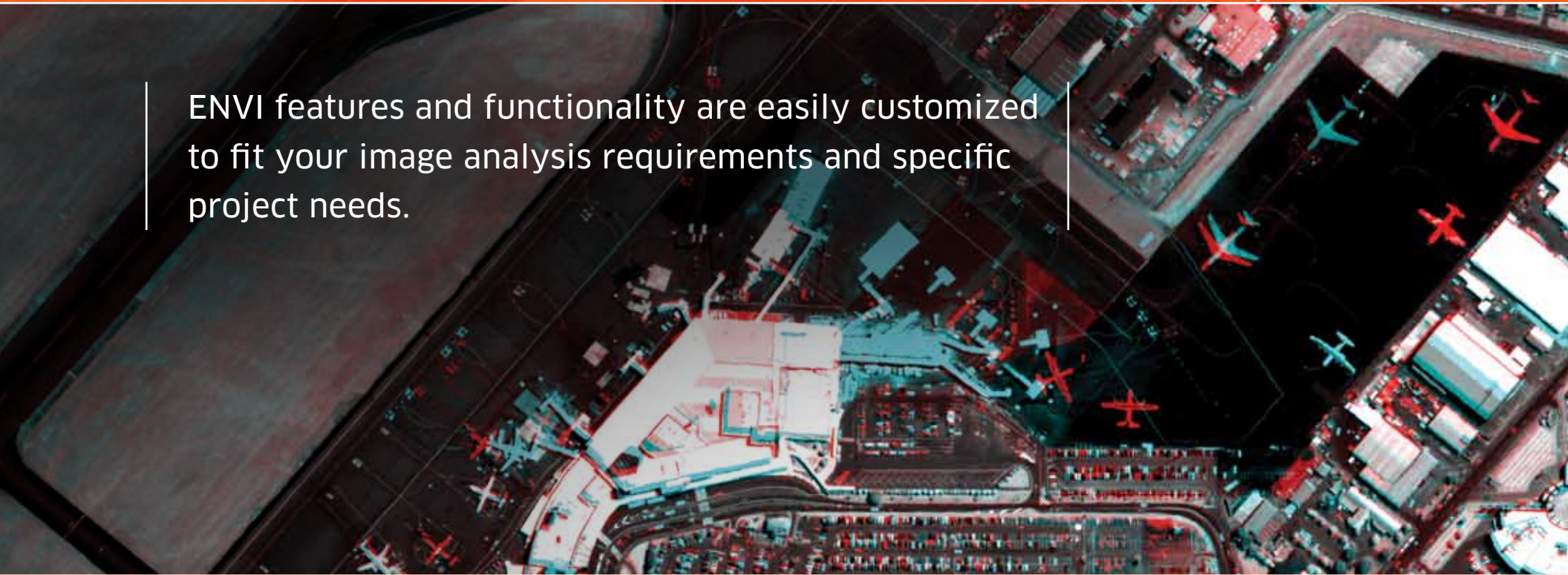


Today, imagery is not just a backdrop to your GIS. ENVI allows you to add rich contextual information to your GIS mapping applications.

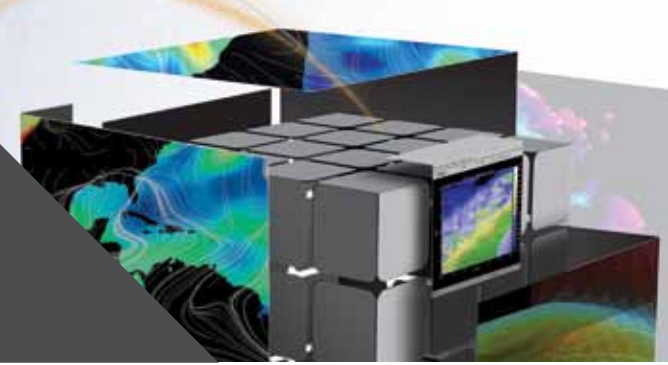


# ENVI

ENVI features and functionality are easily customized to fit your image analysis requirements and specific project needs.



# CUSTOMIZE ENVI FOR YOUR UNIQUE GEOSPATIAL NEEDS



Many off-the-shelf image analysis software packages cannot be customized, requiring you to work around the capabilities of the software. Your image analysis workflow should be based upon your project requirements and not software limitations. ENVI is developed using IDL, a powerful development language that allows you to extend or customize ENVI features and functionality to fit your image analysis requirements and specific project needs.

Because ENVI is customizable, you can add image analysis capabilities to your existing tools and models, combine multiple tools that include image analysis functionality, and create new custom image analysis tools based on your desired outcomes.

Create batch processes for common tasks

Customize ENVI menus

Add proprietary or custom algorithms

Integrate existing or new C++ and Java code

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## INTERNATIONAL SUPPORT

Exelis Visual Information Solutions is a global company with direct offices in North America, Europe and Asia. Combined with our extensive, worldwide distributor network, we can support your geospatial needs regardless of your location.

## LEARNING OPPORTUNITIES

### CLASSROOM TRAINING:

Whether you are just learning our products or an experienced pro, we have courses designed to take your abilities to the next level.

[www.exelisvis.com/EventsTraining](http://www.exelisvis.com/EventsTraining)

### ONLINE TRAINING:

Attend a live web seminar or watch a recorded web seminar - the perfect way to learn about the latest product developments right from your desk.

## TECHNICAL SUPPORT

All Exelis Visual Information Solutions products are backed by our world class technical support. Visit our support web page for information on how to receive help via the phone, email, or from our extensive online help articles.

[www.exelisvis.com/Support](http://www.exelisvis.com/Support)

## COMMUNITY CONNECTIONS

### SOCIAL NETWORKS:

[www.facebook.com/exelisvis](http://www.facebook.com/exelisvis)

[www.twitter.com/exelisvis](http://www.twitter.com/exelisvis)

[www.youtube.com/exelisvis](http://www.youtube.com/exelisvis)

### BLOGS:

[www.imageryspeaks.com](http://www.imageryspeaks.com)

[www.idldatapoint.com](http://www.idldatapoint.com)

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