



# ATCOR FOR IMAGINE: HAZE REDUCTION, ATMOSPHERIC AND TOPOGRAPHIC CORRECTION

## MOTIVATION

Earth-observing satellite sensors map the Earth's surface properties. However, haze from water vapour and aerosol particles influences the recorded signal. In addition, in rugged terrain, varying illumination conditions (sunny and shady hills) modify the "true" spectral behaviour of surfaces. Haze reduction and atmospheric correction with ATCOR for IMAGINE eliminates haze, atmospheric and illumination effects.

ATCOR for IMAGINE is a professional tool for every user of satellite data, no matter whether the aim is to produce a brilliant image without haze or clouds or whether you have to analyse the real reflectance values of the surface. ATCOR for IMAGINE is your choice to get better results.

## KEY FEATURES

ATCOR for IMAGINE offers the two options de-hazing and atmospheric/topographic correction. The de-hazing algorithm can turn a hazy data set into a crisp and neat image. Atmospheric/topographic correction results in the output of true reflectance values, in the case of a mountainous relief with greatly reduced shading of the slopes.

## HAZE REDUCTION

- Automatic generation of a haze mask from Tasseled Cap Coefficients.
- Processing runs without user interaction.

## ATMOSPHERIC CORRECTION

- Determine atmospheric parameters (aerosol type, visibility) individually within the SPECTRA module.
- The atmospheric database includes a wide range of pre-calculated radiative transfer runs for different weather conditions and sun angles employing the MODTRAN-4 code.
- Generation of surface (brightness) maps for thermal band sensors.
- Supported Sensors: ALI-Advanced LI, ALOS AVNIR-2, ASTER, Cartosat PAN, DMC, Formosat-2, Formosat-2 PAN, GeoEye-1, IKONOS 2, IKONOS 2 PAN, IRS-1A/B LISS-2, IRS-1C/D LISS-3, IRS-1C/D PAN, IRS-P6 AWiFS, IRS-P6 LISS-3, IRS-P6 LISS-4, KOMPSAT-2, KOMPSAT-2 PAN, Landsat-4/5 MSS, Landsat-4/5 TM, Landsat-7 ETM+, Landsat-7 PAN, MOS-B, OrbView PAN, OrbView-3, QuickBird, QuickBird PAN, RapidEye, SAC-C / MMRS, SPOT-1/2/3 MS, SPOT-1/2/3 PAN, SPOT-4 MS, SPOT-5 MS, SPOT-5PAN, WorldView-2 MS, WorldView-2 PAN, THEOS, THEOS PAN, Landsat-8 OLI, Pléiades MS
- Calculation of value-added products (e.g. Soil Adjusted Vegetation Index or Leaf Area Index) and surface energy fluxes for thermal band sensors.



## APPLICATION

- Multi-temporal and multi-sensoral land cover classification
- Forest damage monitoring
- Surface temperature mapping
- Monitoring of changes over time

## USABILITY

- Streamlined and intuitive user interface.
- De-hazing default parameters produce sufficiently good results.
- User manual contains the scientific background and an explanation of all parameters.
- Once selected parameters are stored in a project file and ready for later processing.

## PRODUCT PACKAGING / SALES INFORMATION

ATCOR stands for Atmospheric CORrection and is an ERDAS IMAGINE® software solution. ATCOR was originally developed at DLR, the German Aerospace Centre. GEOSYSTEMS GmbH, the German Intergraph® Distributor, integrated ATCOR into IMAGINE.

ATCOR for IMAGINE is an add-on module for ERDAS IMAGINE. ATCOR for IMAGINE is distributed worldwide by GEOSYSTEMS, Germany and by Intergraph and its distributors in their specific regions.

## SYSTEM REQUIREMENTS

ATCOR for IMAGINE needs a running ERDAS IMAGINE license with IMAGINE Advantage® minimum. The current version of ATCOR is compatible with IMAGINE 2013. ATCOR is supported on the same platforms as ERDAS IMAGINE 2013.

## CONTACT:

GEOSYSTEMS GmbH  
Riesstrasse 10, D – 82110 Germering, GERMANY  
Phone: +49 – 89 – 89 43 43 0  
Fax: +49 – 89 – 89 43 43 99  
E-mail: [info@geosystems.de](mailto:info@geosystems.de)  
[www.geosystems.de](http://www.geosystems.de), [www.atcor.de](http://www.atcor.de)

The official ATCOR website provides a wide range of product details. Please visit [www.atcor.de](http://www.atcor.de) regularly.

# ABOUT HEXAGON GEOSPATIAL

Hexagon Geospatial helps you make sense of the dynamically changing world. Known globally as a maker of leading-edge technology, we enable our customers to easily transform their data into actionable information, shortening the lifecycle from the moment of change to action. Hexagon Geospatial provides the software products and platforms to a large variety of customers through direct sales, channel partners, and Hexagon businesses. For more information, visit [www.hexagongeospatial.com](http://www.hexagongeospatial.com) or contact us at [marketing@hexagongeospatial.com](mailto:marketing@hexagongeospatial.com).

Hexagon Geospatial is part of Hexagon, a leading global provider of information technologies that drive quality and productivity improvements across geospatial and industrial enterprise applications. Hexagon's solutions integrate sensors, software, domain knowledge and customer workflows into intelligent information ecosystems that deliver actionable information, automate business processes and improve productivity. They are used in a broad range of vital industries. Hexagon (Nasdaq Stockholm: HEXA B) has more than 15,000 employees in 46 countries and net sales of approximately 3.1bn USD. Learn more at [hexagon.com](http://hexagon.com).