

GEONA HYPERSPECTRAL

Software that provides an Accurately Radiometrically Calibrated and Geolocated Dataset from your Airborne SPECIM Hyperspectral Imaging Sensor

As the use of hyperspectral imaging cameras continues to uncover a wealth of information for applications ranging from environmental monitoring, precision agriculture, archaeology to geology, there is an increasing need for advances in accessible, affordable data processing solutions.

There is a range of sensors collecting data from satellite platforms that provide regular information on large spatial scales. However, for the highest spatial and spectral resolution data and the best flexibility over how and when data is collected, airborne data has a significant role to play. Atypically, it is the very flexibility offered by airborne data that means processing data into useful products is more difficult than processing satellite data, as it requires specialised software and expertise.

GEONA Hyperspectral software offers a suite of mature, stable, and reliable airborne processing tools, that require minimum inputs of raw sensor data, sensor calibration data, and technical details of the sensor, to produce a radiometrically calibrated, geo-corrected, and mapped output product that provides at-sensor radiance spectra for each pixel of the flight line. Developed with guidance from SPECIM on the software needs of their customers, GEONA Hyperspectral offers an intuitive user-friendly, web-based interface that guides you through the process of generating a validated processing configuration file, leading to consistently accurate and optimized results for onward use in your specific application. Therefore, a solution that enables user levels from beginner to expert to easily progress from data acquisition to precise actionable information.

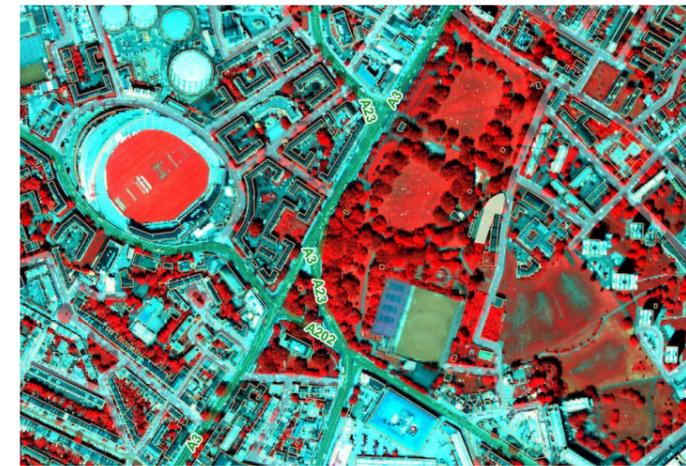


Automatic Boresight Calibration with GEONA Hyperspectral.

When processing airborne data, performing a boresight calibration to determine the exact pointing direction of the sensor is a necessary but often time-consuming task. GEONA Hyperspectral includes a tool for automatic boresight calibration which calculates the roll, pitch and yaw offset from vertical values to describe the exact data adjustment required to account for the mounting position of the instrument on the aircraft.

How is an investment in GEONA Hyperspectral, an investment in environmental science?

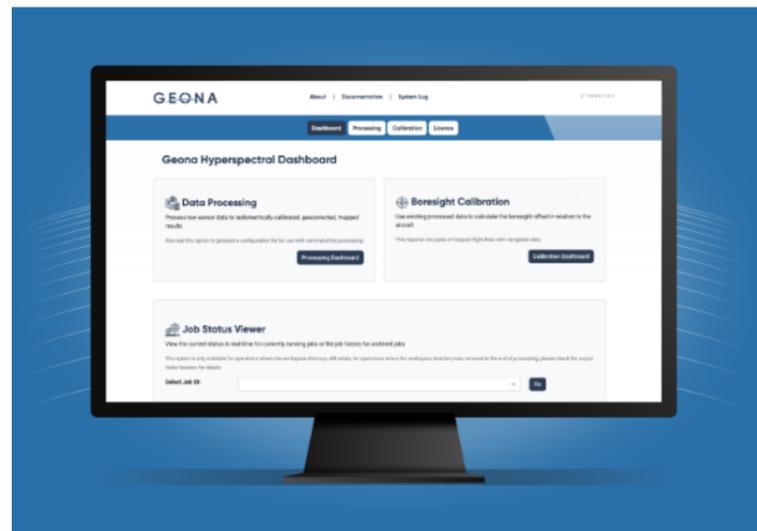
The GEONA software suite is developed by experts in Earth Observation underpinning the digital division of PML Applications that develop algorithms and software to produce data products from sensors aboard satellites, aircraft, and drones on a commercial, operational basis. PML Applications is the commercial arm of Plymouth Marine Laboratory (PML), which has developed an international reputation for providing results from precise and reliable tools for spatial data processing, visualisation, and analysis in Earth Observation, acting as the data processing node for the UK's Natural Environment Research Council (NERC's) airborne Earth Observation capability for over 15 years.



During this time, the team has supported UK based researchers to process data from over 400 campaigns, each with multiple flights, resulting in hundreds of high-quality research publications. To support data processing, the team developed their own suite of software (Warren et al, 2014) to radiometrically calibrate and georeference hyperspectral data from SPECIM sensors, and have delivered results for even the most challenging of flights.

In addition to GEONA Hyperspectral PML Applications provides an array of innovative digital products and data services with their foundations in world-leading research from Plymouth Marine Laboratory. PML Applications is proudly a truly social business, we give our profits back to society through funding PML's world-leading and cutting edge research. As a leading scientific research charity, PML has delivered impactful, innovative environmental and social science, directly addressing many of the UN Sustainable Development Goals, the European Marine Strategy Framework Directive and the UK Government's 25-year plan to improve the environment and support a healthy and sustainable ocean.

To find out how GEONA Hyperspectral can help your organisation and to access your 30-day free trial today, contact Natasha Lloyd, Business Development Manager at natasha@geona.io



GEONA Hyperspectral allows you to say goodbye to software which is dependent on expensive external providers to georeference your data, and removes the need to own expensive workstations.

GEONA Hyperspectral is a flexible software solution, designed specifically for use with cloud computing to enable high-volume, high-throughput data processing in an automated manner, without the need for capital investment in infrastructure. The software delivers the exact same results regardless of your operating system and running programmatically in a high-performance, distributed, or high-throughput computing environment without any further user interaction to produce a georeferenced product. The modular plug-in feature you can add capability for third party providers' tools, e.g. atmospheric correction, or deploy your own post-processing algorithms. Furthermore, GEONA Hyperspectral enables you to easily integrate with your existing data processing workflows using our API for fully automated start-to-finish data management.



Phone: +44 (0)1752 633209

Email: natasha@geona.io

Web: <https://geona.io/>

LinkedIn: <https://www.linkedin.com/company/geona-hyperspectral/>

