An integrated solution for remote sensing...
Brought to you by Headwall and ALAVA Ingenieros

ALAVA Remote Sensing Spectral Solution (ARS³) is a seamlessly integrated solution for airborne remote sensing that combines a hyperspectral sensor from Headwall Photonics with all other necessary hardware, software and training. From hyperspectral data acquisition to processing, this solution includes everything needed to generate a spectral reflectance cube. Flight data acquisition is obtained using UAV/UAS or manned general aviation flights.

ARS³ is the right tool for remote sensing in precision agriculture, forestry, vegetation stress detection, geology, and terrain analysis. One of the key features of ARS³ is that it can be implemented in UAVs with payloads as small as 2-3 Kg, assuring easy deployment and ability to land on any kind of terrain. Alava Ingenieros has integrated this solution together with Headwall and the Institute for Sustainable Agriculture (CSIC, Spain). ARS³ integrates all the steps needed to generate hyperspectral reflectance cubes and their corresponding mosaics in a simple, straightforward way.
**SOLUTION COMPONENTS**

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**Hardware Package Includes**
- Micro Hyperspec® spectral imager from Headwall Photonics covering available ranges such as VIS, VNIR, NIR, Extended VNIR, SWIR.
- Inertial Measurement Unit (IMU) with embedded GPS.
- Onboard processing unit based on PC104 for the control and synchronization of all airborne instruments.
- Solid-state hard drive for onboard storage of images and associated data.

**Software Package Includes**
- Pre-installed synchronization & acquisition routines within PC104 device.
- Complete post-processing software suite to obtain hyperspectral reflectance cubes and mosaics from the raw binary data.

**Service Package Includes**
- Radiometric calibration of the hyperspectral camera.
- Full training on:
  - Equipment and pre-flight procedures
  - Ground-field instrumentation
  - Diverse measurements taken during flight operation
- Optional onsite installation and startup.
- Optional data post-processing service