

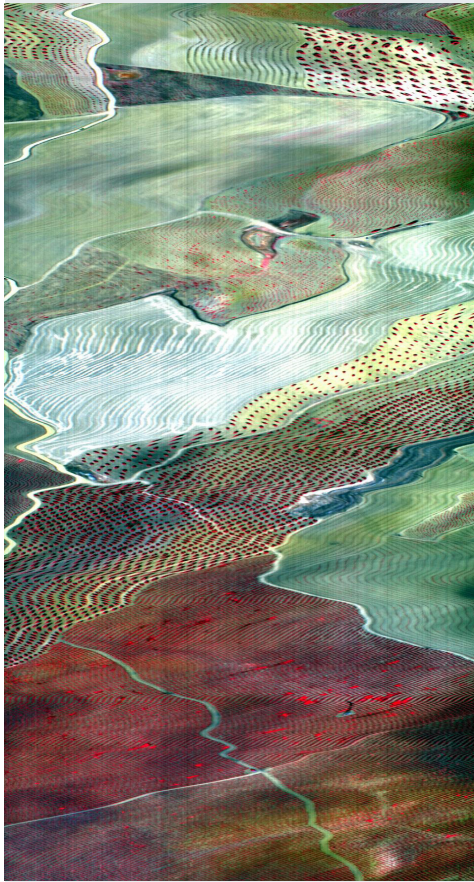
Hyperspectral imaging, also known as chemical sensing, affords researchers and biologists unique opportunities to conduct both airborne and stationary spectral analysis for remote sensing applications. Airborne hyperspectral imaging represents an established remote sensing technique for capturing important spectral data critical to remote sensing applications.

Within the field of view of the sensor, hyperspectral imaging simultaneously yields precise information for all wavelengths across the complete spectral range available. With the creation of the hyperspectral datacube, a data set that includes all of the spatial and spectral information, researchers are able to generate and analyze in-depth environmental spectral imaging data. Imaging performance is optimized with Headwall’s patented, aberration-corrected sensor. Key advantages of hyperspectral imaging for environmental researchers and engineers include:

- Derive the spectral signature for every point within the field of view of the Hyperspec[®] sensor
- Color render the image within the field of view based on an established library of known spectral signatures
- Rapidly scan the scene or interrogate the datacube for specific threshold values for key wavelengths of interest

The utilization of custom-designed diffraction optics within the Hyperspec[®] sensor enables the configuration of highly optimized hyperspectral imagers covering broad spectral regions required by the remote sensing application. With Headwall’s Hyperspec[®] imaging product family, remote sensing spectral analysis can be conducted via airborne platforms or from Headwall’s stationary “pan & tilt” sensors or “point & stare” configurations.

Airborne Monitoring	Petroleum
Pollution Detection	Forestry Management
Precision Agriculture	Mineral Exploration



Headwall Photonics offers the broadest range of spectral imaging instrumentation for demanding applications.

Hyperspectral Sensors	Spectral Range
Hyperspec® VIS	380 - 825 nm
Hyperspec® VNIR	380 - 1000 nm
Hyperspec® Extended VNIR	550 - 1700 nm
Hyperspec® NIR	900 - 1700 nm
Hyperspec® SWIR	1000 - 2500 nm
Micro-Hyperspec® VNIR	380 - 1000 nm
Micro-Hyperspec® NIR	900 - 1700 nm
High Efficiency Hyperspec® NIR	900 - 1700 nm
High Efficiency Hyperspec® SWIR	1000 - 2500 nm



Information on UV, MWIR, and LWIR Hyperspec® sensors are available upon request.



Earth observation

Precision Agriculture

Minerals & Mining



About Headwall Photonics:

Headwall Photonics is the leading designer and manufacturer of imaging spectrometers and spectral instrumentation for industrial, commercial, and government markets. Headwall's high performance spectrometers, spectral engines, and holographic diffraction gratings have been selected by OEM and end-user customers around the world for use in critical application environments. As a pioneer in the development of innovative spectrographs and imaging spectrometers based on optical technologies, Headwall enjoys a market leadership position through the design and manufacture of patented spectral instrumentation that is customized for application-specific performance. Headwall Photonics was formed in 2003 as the result of a management buy-out from Agilent Technologies. **For more information please call 978.353.4100 or email us at information@headwallphotonics.com.**

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