

Headwall's Starter Kits provide a simple and rapid means of collecting hyperspectral images that can be used for reflective spectroscopic analysis in the VNIR-SWIR spectral ranges. Gantry, linear stage, reflectance reference standard, and illumination represent the basic elements of the Starter Kit. Two versions of the Starter Kit are available, standard and large-format. The large-format Starter Kit features a wider translation stage with longer travel and can accommodate two sensors capable of working at different spectral ranges (one VNIR and one SWIR, for example). Headwall's fully reflective, patented spectrometer design eliminates image aberrations while offering high resolution with a wide field of view. This represents a major advantage where spectral and spatial imaging performance are critical success factors.



Standard UV-VIS

High Quantum-Efficiency (QE) detection electronics and 100% fill-factor mean high signal-to-noise characteristics for maximized sensitivity and dynamic range. Depending on the sensor chosen, a design-optimized objective lens provides excellent chromatic compensation and imaging results over the VNIR, NIR or SWIR spectral ranges. High intensity QTH illumination provided on the VNIR/NIR/SWIR Starter Kit is optimized for wavelengths between 380-2500nm. Starter Kits designed for UV-VIS use a combination of QTH and pulsed Xenon illumination.



Large-format (VNIR/SWIR)

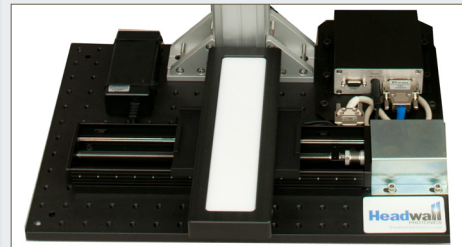
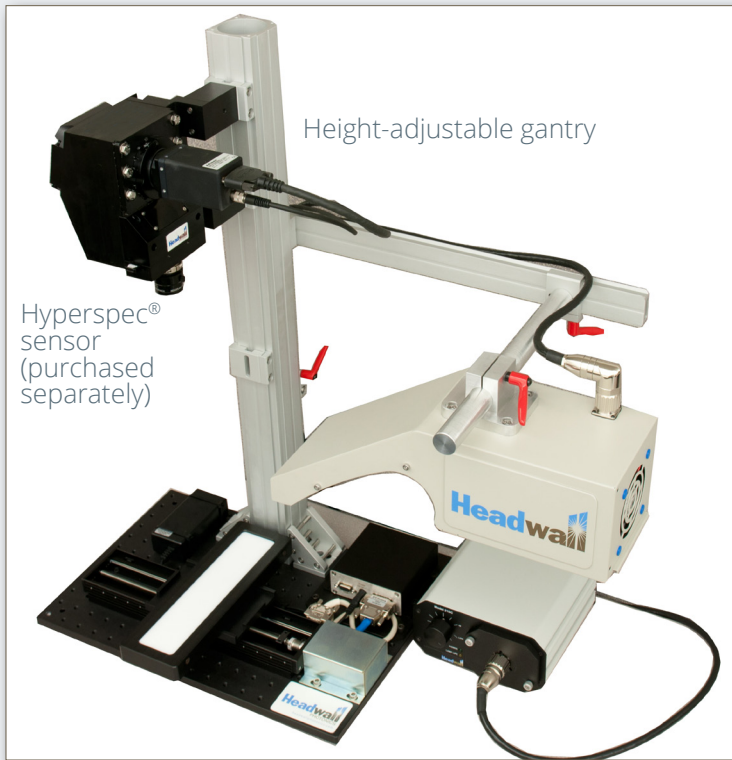
Headwall's Hyperspectral Data Processing Unit (HDPU) and Hyperspec III software are options that can be added to any Starter Kit. The HDPU contains a high-speed processor and high-capacity solid-state storage to deliver extremely fast capture, transfer and processing of the hyperspectral image data. Depending on the sensor, either USB 2.0 or CameraLink connectivity can be used; the HDPU contains ports for both. Hyperspec® III software allows the user to analyze the data more effectively and efficiently than any other comparable platform.

Application-Specific Solutions For Critical Environments

APPLICATION AREAS

- Fruit, seafood, grains, other foods
- Minerals
- Documents & artifacts
- Paintings





Moving stage with reflectance reference standard



elliptical light source

Key Benefits:

- Instantly scan sample materials & display hyperspectral results
- Determine spectral band differentiators
- Increased user productivity
- Cost-effective deployment
- Simple to set up, simple to use
- Flexibility to quickly modify configurations
- Quickly run multiple experiments
- Rapid development of spectral libraries

Key Features:

- Adjustable mounting stage and gantry
- Precision DC Servo linear stage and controller with 250mm travel distance (optional 300mm travel distance available)
- Lighting: Adjustable high-intensity QTH lamps or pulsed Xenon (depending on sensor and spectral range).

About Headwall Photonics: Headwall 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 advanced, patented optics technology, Headwall enjoys a market-leading position through the design and manufacture of spectral instrumentation that is customized for application-specific performance.

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