

Headwall's Hyperspec® Data Processing Unit (HDPU) manages hyperspectral image acquisition and analysis using high-speed processing and high-capacity storage.

Datacube acquisition and analysis is integral to effective hyperspectral imaging. Headwall's Hyperspec Data Processing Unit (HDPU) is a Modified Commercial Off-The-Shelf (MCOTS) system that provides high-speed data processing and storage for applications ranging from the laboratory to advanced in-line machine-vision systems and even fixed-wing aircraft. Headwall also offers a compact version of the HDPU which is designed for smaller aircraft and UAVs. The HDPU supports both Windows and Linux operating systems and is pre-loaded with Headwall's advanced Hyperspec III software.

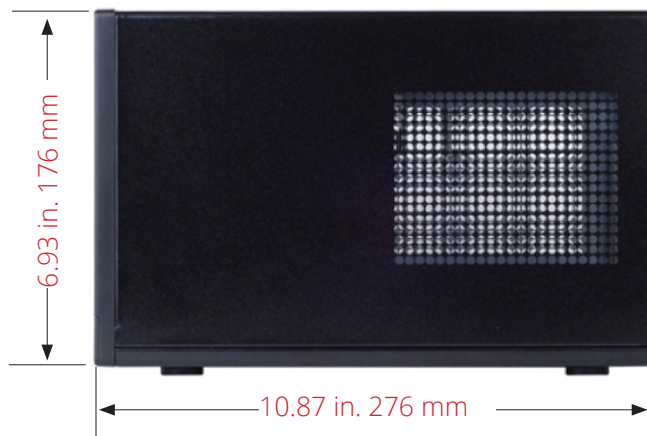
Because hyperspectral imaging involves high-speed scanning across a wide or continuous field of view, large data files (often several gigabytes in size) need to be collected and managed. In critical hyperspectral imaging applications, continuous streams of incoming data represent the chemical or spectral 'fingerprint' within the field of view. Collecting and processing this data rapidly assures outstanding spectral imaging performance across virtually any application.

Processor	Intel 3.5 GHz quad-core i7
Software	Hyperspec® III (Linux and Windows compatible)
Memory	8 GB DDR3-DRAM
Storage	2.5" SATA6 Solid-State-Drive (>500MB/s write speed)
	240GB, 480GB, or 960GB (usable space)
Power	60Hz AC 120V (175w max; 80w Avg)
Wi-Fi	802.11N



Application-Specific Solutions For Critical Environments

Hyperspec® Data Processing Unit



Ports	
4 ea. USB 2.0/3.0	Ethernet
eSATA	CameraLink
HDMI Out	VGA Out
Display Port Out	Trigger
Power (60Hz AC; 120V; 80w avg)	802.11N wireless

The number of CameraLink connectors and the speed of the connection is dictated by the camera/sensor. The Trigger or Serial connector is dictated by the needs of the customer. Headwall will provide a DB9 connector that is a serial port (RS232) connected to the motherboard, or a DB9 connector that is a trigger port (TTL) connected to the frame grabber. This trigger port can also support Differential TTL via a converter module.

DEPLOYING HDPU

Hyperspec® sensor

HDPU



Advanced Machine Vision



Biotechnology & Medicine



Fixed-wing aircraft & large UAVs

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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