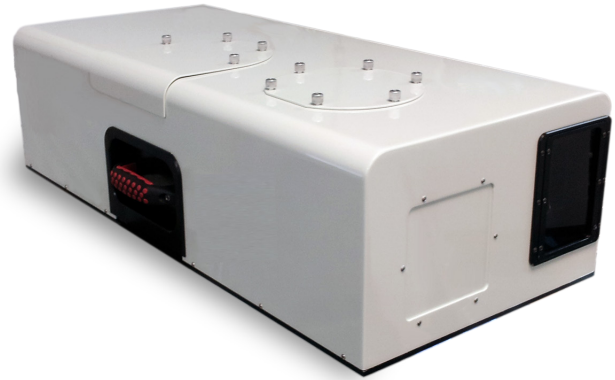


# SOC760

## HYPERSPECTRAL IMAGING SYSTEM



The SOC760 hyperspectral imaging system is uniquely suited for lab and ground-based applications requiring high-resolution spectral data collection for the full visible near-infrared (Vis-NIR) to short wavelength infrared (SWIR) range.



### APPLICATIONS

- Art and Antiquities
- Agriculture
- Food Processing
- Biomedical
- Cultural Heritage / Conservation Science
- Archeology
- Environmental Studies
- Forensics

### FOR ORDERING INFO

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The SOC760 is a portable dual-band, single field-of-view system that provides coverage from 0.4  $\mu\text{m}$  to 2.5  $\mu\text{m}$  and captures 650 bands registered images into a single data cube.

Each spectral image is 640 pixels along the slit of the spectrometers and 2048 pixels along the scan direction. The optical system consists of a whiskbroom scan mirror that directs light to a dichroic beam splitter that reflects the NIR and transmits the SWIR radiation. Each channel has its own fore optic and transmission grating spectrometer. The SWIR channel has a cooled InSb focal plane array (SBF178). The whiskbroom scan mirror steps are synchronized with the focal plane image captures while scanning the scene.

Delivered with mobile workstation laptop utilizing high-end mobile processor, high-end graphics adapter and 2 TB storage. Custom GUI software interface includes data acquisition, calibration, and data extraction functions. ENVI is recommended for additional high-level spectral processing functions such as Principal Component Analysis (PCA).

## SPECIFICATIONS

Spectral Regions	VNIR	SWIR
Spectral Range (nm)	400 - 1000	1000 - 2500
Spectral Resolution (nm)	2.5	5
Spectral Bands	650	
Spatial Resolution	640 pixels vertical, up to 2048 pixels horizontal	
Camera Resolution	640	
Pixel Size	20 $\mu$ m	
Lenses	Integrated VNIR and SWIR lens (one for each channel)	
Field of View	12.5° (Vertical)	
Instantaneous Field of View	340 $\mu$ r	
Max Frame Rate	120 Hz	
Cube Scan Rate	8 seconds to 5 minutes (2-3 min typical indoors)	
Scanning Method	Stepped mirror (one step per exposure)	
Minimum Step	< 0.01 mrad	
Cooling Method	Cryo-cooler (no liquid nitrogen)	
A/D Resolution	14-Bit	
Interface	USB 3.0	
Calibration Formats	Absolute spectral radiance, Absolute wavelength	
Output Formats	SOC, BIL, BSQ, BIP, ENVI	
Size	20.5" x 8.5" x 6.5"	
Weight	60 lb	
Power	50 Watts, 115 VAC	
Warranty	12 Months	
Accessories	Wheeled Pelican Case; optional Heavy Duty Tripod	