Model 4450
1000-1700nm SWIR

SUMMARY: Hinalea's Model 4450 is the next generation system in its series of award-winning intelligent hyperspectral imaging solutions. The Model 4450 covers the shortwave-infrared (SWIR) spectral range from 1000 to 1700 nm and combines high spectral and spatial performance, with affordability and portability. The 4400 model utilizes a front-staring approach to hyperspectral imaging that does not require mechanical scanning.

HIGHLIGHTS

- High spatial and spectral resolution
- Real-time imaging and classification
- SWIR (1000 - 1700 nm)
- 108 spectral bands
- 10-45 nm (FWHM)
- Sensor spatial resolution 640 x 512 pixels

The major features and benefits of the 4450 system over push-broom systems include:

- **Image uniformity**: Line-scanning systems rely on constant conditions for optimum performance and are susceptible to subtle environmental changes that can adversely impact image uniformity. Because the 4400 images the entire area of interest at once, it can capture highly uniform images even in dynamic conditions.
- **Application flexibility**: Front-staring systems offer other advantages over line-scanning technologies for environmental monitoring applications, most notably more versatile viewing geometry options. Such systems can not only be mounted statically, but they can also be used by externally in mounted on airborne platforms.
- **Real-time classification**: One of the unique attributes of the 4450 system is its wavelength selectivity which can be dynamically controlled based on the application and object to be imaged. The system allows a range of operational modes from high spectral resolution static image capture with hundreds of bands to near real-time image capture and classification.
- **Complete solution**: The 4450 systems includes application software for not only acquisition but also image exploration and classification. Our software includes easy to use tools allow the easy and intuitive application of sophisticated segmentation algorithms that are presented immediately to the user.
- **Cost**: HinaLea's systems are designed with mass manufacturability in mind. As such, our systems typically cost a fraction of competitive solutions with similar levels of performance

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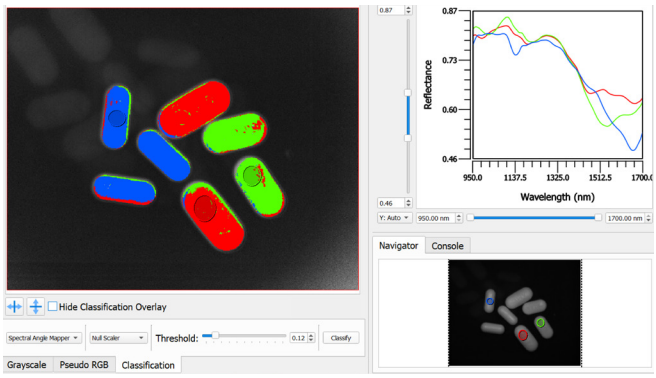
CLASSIFICATION EXAMPLE



4450 TECHNICAL SPECIFICATIONS

MECHANICAL	
Dimensions (LxWxH)	76.4mm x 76.1mm x 240mm
Weight (Mass)	1.60 Kg (3.52 lb.)
ELECTRICAL	
Input voltage	100-240V, 50-60 Hz
Data interfaces	USB 2.0 Micro, CameraLink
NOTE: CameraLink Framegrabber PCIe card required on PC	
ENVIRONMENTAL	
Operating temperature	Operating Ambient Temperature 15C° to 30C°
Humidity	65%, non-condensing

SCAN PERFORMANCE	
Standard lens	100 mm FL, 31 to 35 degree FOV. Please consult us for other lens options.
Sensor spatial resolution	640 x 512 pixel (optional 1280 x 1024)
Spectral range	1000-1700 nm
Spectral bands	108 nominal
Spectral resolution	15 nm (FWHM)
Dynamic range	User selectable: 8- or 16-bit
Illumination	Optional

The material in this document is accurate at time of publication. HinaLea Imaging reserves the right to modify this information as it incrementally improves the product.

Contact us!
2200 Powell Street, Suite 1035
Emeryville, CA 94608 USA
+1 (808) 878-8247
www.hinaleaimaging.com