

HYPERSPECTRAL REFLECTANCE IMAGER

Key Features

- ▶ Innovative high resolution handheld **hyperspectral imaging system** for reflectance scanning
- ▶ Lightweight, compact form factor ideal for **remote sensing** applications
- ▶ Large f/2.5 aperture and wide 50 μ m entrance slit maximize **light-gathering power** with the highest spectral resolution in its size class
- ▶ Proprietary HTVS™-based design (US 8,958,065) provides the highest **signal-to-background ratio**
- ▶ Active scanning head enables **fast pushbroom mapping** over a large FOV with a single click
- ▶ Factory-configurable to **select resolutions and spectral ranges**
- ▶ Onboard and user-uploadable **spectral libraries**
- ▶ Integrated color camera records an **RGB image** of the scanned area with **spectral image overlay**
- ▶ Includes high intensity twin **white light sources**

Compact Handheld System



Applications

- ▶ Clinical point-of-care rapid screening of skin conditions & disorders
- ▶ Solar-induced fluorescence and chlorophyll red edge monitoring of plant productivity
- ▶ Polymer, material and mineral ID

Preliminary Specifications

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|--------------------------------|---|
| Detection Method | Reflectance Spectral Imaging |
| Spectral Range | VNIR 400-1,000 nm (call for SWIR model details) |
| Spectral Resolution | ≥ 600 fully-resolved spectral channels |
| Detection Capabilities | Minerals, raw materials, pigments...anything with a distinctive reflectance signature |
| Field of View | Factory-configurable; typical 6.5° x 20° scanning FOV |
| Dimensions & Weight | 9 x 5.5 x 4" (L x W x H) with 6.5" handle; 2.3 kg |
| User interface | 5" capacitive touch screen display with onboard computer and spectral libraries |
| Power | AC power or rechargeable battery pack |

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Typical Configurations

| | | |
|----------------------------|--|----------------------------|
| Application | VNIR Remote Sensing | Solar-Induced Fluorescence |
| Model | Broadband | Narrowband |
| Spectral Range | 400 -1,000 nm | 650-800 nm |
| Spectral Resolution | ≤ 1.0 nm | ≤ 0.25 nm |
| Detector | 2.3 MP uncooled CMOS, 1/1.2" format, 12 bit, 75 fps, 6 e- read noise, 72 dB dynamic range | |
| Detector QE | 76% @ 525 nm, 50% @ 650 nm, 40% @ 700 nm, 22% @ 800 nm | |
| Working Distance | Standoff (1 m to ∞) | |
| Field of View | 6.5° static FOV along slit axis, up to 20° across slit axis with active scanning | |
| Imaging Engine | Hindsight OEM, < 0.7 kg | |
| Embedded Computer | Pentium Quad Core, 4 GB RAM, 250 GB SSD | |
| Display | 5" diagonal, 2.6 x 4.3", capacitive touchscreen | |
| Data Interface | 2 x USB 2 Type A, USB-Mini for computer control | |
| Software | Hyperspectral data cube assembly with image and spectral display FITS and other output file formats | |

Custom Spectral Ranges, Bandpasses and Resolutions Available—Call for Details

