

## Hyperspec® Co-Aligned VNIR/SWIR Sensor

### Product Datasheet



- Smallest and lightest instrument in its class
- 400–2,500nm wavelength range
- Dual VNIR & SWIR sensors with co-aligned pixels
- 640 spatial pixels / 270 VNIR and 267 SWIR spectral pixels
- Suitable for airborne or ground use
- All-reflective, concentric optical design
- Integrated high-performance GPS/IMU
- Solid-state internal data storage
- Optional 16-channel LiDAR



## PREMIUM PERFORMANCE IN A SIZE, WEIGHT, AND POWER EFFICIENT PACKAGE

The Headwall Hyperspec<sup>®</sup> Co-Aligned VNIR/SWIR Sensor is designed for airborne or ground-based hyperspectral imaging. As the smallest and lightest instrument in its class, the sensor can be purchased as part of an integrated turnkey system with a DJI Matrice 600 Pro UAV and other sensor modalities such as LiDAR, as a factory data- and flight-tested payload component for integration onto a customized airborne imaging system, or as a ground-based hyperspectral imaging system with a Field Rotary Kit (part number 1007A-10412 sold separately).

| Co-Aligned VNIR-SWIR Sensor          |  |                     |
|--------------------------------------|--|---------------------|
| Spectral range (nm)                  | VNIR (400–1000)  | SWIR (900–2500)     |
| Spectrograph design                  | High-throughput aberration-corrected concentric imager |                     |
| Spectral pixels                      | 270  | 267                 |
| Spatial pixels                       | 640  |                     |
| Detector pixel pitch (μ)             | 7.4  | 15                  |
| Dispersion per Pixel (nm/pixel)      | 2.2  | 6                   |
| FWHM Slit Image (nm)                 | 6  | 8                   |
| F/#                                  | 2.5  |                     |
| Slit width (μ)                       | 20   |                     |
| Slit length (mm)                     | 6  | 10.4                |
| Camera technology                    | CMOS   | Stirling-cooled MCT |
| Max frame rate (Hz)                  | 350  | 200                 |
| Bit depth                            | 12   | 16                  |
| Size (inches / mm)                   | 10.7 x 8.3 x 6.5 / 272 x 211 x 165                     |                     |
| Weight / Weight including LiDAR (kg) | 2.83 / 3.63  |                     |
| Data storage                         | Internal solid-state drive: 480GB per sensor           |                     |
| IO connectivity                      | GigE   |                     |
| GPS/IMU                              | Integrated High-Performance model                      |                     |
| Mounting Options (sold separately)   | UAV hard-mount / Field Rotary Kit                      |                     |
| LiDAR (16-channel)                   | Optional for UAV configurations                        |                     |
| Power requirement Typical / Max (W)  | 26 / 30  |                     |
| Operational temperature range (°C)   | 0–40   |                     |
| Storage temperature range (°C)       | -30–60   |                     |

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Manufactured by Headwall Photonics, distributed in the UK and Ireland by **analytik**.