



HYPERSENSPECTRAL IMAGERY DATA SHEET



Wyvern hyperspectral sensors on the Dragonette satellites will capture data across many narrow spectral bands, allowing for the specific identification of unique chemical and physical properties of the Earth's surface.

This positions hyperspectral imagery as a valuable tool for remote site monitoring, mapping, and geospatial intelligence (GEOINT) use-case applications.

With a spatial resolution of 5.3 metres, hyperspectral imagery delivered from the Dragonette constellation will provide detailed information about the Earth's surface.

Processed to Level 1B and delivered in GeoTIFF format, Wyvern Dragonette imagery data is directly compatible within common geospatial systems, workflows, and processes.



IMAGERY PRODUCT SPECIFICATIONS

Wyvern's three-satellite Dragonette constellation collects high-quality 5.3 metre GSD hyperspectral imagery data from low earth orbit (LEO). The visible to near-infrared (VNIR) spectral bands in Wyvern's hyperspectral imagery data products are delivered in Level-1B processing level for use in a variety of geospatial software tools and EO data systems.

Property	Description	
Wyvern Satellite Name	Dragonette-1	Dragonette-2/3
Spatial Ground Sample Distance Resolution At Nadir	5.3 m GSD	
Number Of Spectral Bands	23 Bands	32 Bands
Spectral Band Center Wavelength Range (VNIR)	503 nm – 799 nm	445 nm – 880 nm
Spectral Sampling – Band Center-to-Centre	7 nm – 21 nm	10 nm – 20 nm
Spectral Resolution – Bandwidth (FWHM)	20 nm – 32 nm	16 nm – 31 nm
Constellation Average Revisit Time At Equator	2.1 Days	
Constellation Average Revisit Time At 20° Latitude	1.9 Days	
Constellation Average Revisit Time At 40° Latitude	1.5 Days	
Constellation Average Revisit Time At 60° Latitude	1.0 Days	
Minimum Sun Elevation Angle (SEA)	+15° Above Horizon	
Imageable Latitude Range	+82°N to -82°S	
Imaging Sensor Bit Depth	12-Bit	
Estimated Average Signal-to-Noise (SNR) At Nadir	60:1 (Wavelength Dependent)	
Product Processing Levels	Level-1B	
Radiometric Image Pixel Units	At-Sensor Radiance	
Geospatial Image Orientation	Map-Projected North-Up	
Map Projection Coordinate System	Geographic WGS84 (EPSG 4326)	
Image Raster File Format	Cloud-Optimized GeoTIFF (COG)	
Metadata Sidecar File Format	STAC Text (JSON)	
Image Raster Data Type	32-Bit Floating Point (Float32)	
Geolocation Accuracy Over Land (CE90)	25 m to 100 m Dependent Upon Location	
Image Scene Swath Width At Nadir	20 km	
Off-Nadir Angle (ONA) Range	0° – 20°	
Standard Image Scene Size	400 km ²	
Minimum Image Scene Size	300 km ²	
Maximum Extended Scene Length	Up To 200 km	Up To 150 km

For more detailed information on Wyvern's hyperspectral imagery data products such as please contact your Wyvern representative (sales@wyvern.space) or authorized reseller.