



**WYVERN**  
BETTER EARTH, FROM SPACE


# NEXT GENERATION HYPERSPPECTRAL IMAGERY ✨

## SEE WHAT OTHERS CAN'T.

### UNDERSTAND WHAT OTHERS MISS.

Wyvern's Generation 2 satellites deliver ultra-rich hyperspectral imagery across both the visible and shortwave infrared spectrum with enough spectral depth to power AI models, detect subtle material changes, and scale across regions. **Wyvern imagery reveals the signals traditional imagery can't.**

### WYVERN'S GENERATION 2 SYSTEM SPECIFICATIONS

PARAMETER	SPECIFICATION	MORE INFORMATION
Spectral Range	440-2500 nm	
Spectral Band Centre Wavelength Range	442-882 nm (VNIR) 900-2500 nm (SWIR)	Bands are available in these spectral regions; exact band centres TBD.
Ground Sampling Distance	2.6 m (VNIR) 7.1 m (SWIR)	Represents the area covered by each pixel on the ground.
Spectral Bands	>110 bands total 31 bands (VNIR) >75 bands (SWIR)	The system captures light in 400+ bands, but delivers ~110 at a time. Bands are fixed across collections and not user-selectable. Exact band selections are TBD.
		
Spectral Bandwidth (FWHM)	17-40 nm (VNIR) 16 nm (SWIR)	FWHM = Full Width at Half Maximum. It defines the width of each spectral band.
Bit Depth	16 bits	
Estimated Signal-to-Noise Ratio	>100:1 @ 642 nm >100:1 @ 2250 nm	Analytical estimate using 0.3 Albedo, 30° SZA.
Estimated Geolocation Accuracy Over Land	<50 m CE90	Without GCPs.
Image Scene Swath Width	10 km (VNIR) 4.5 km (SWIR)	
Max Image Length	75 km	
Max Image Scene Size	750 km <sup>2</sup> (VNIR) 330 km <sup>2</sup> (SWIR)	
Off-Nadir Angle (ONA) Range	-20.0° to +20.0°	
Average Revisit Time at Equator	2.2 days	Estimate based on three satellites at 530 km in SSO orbits and equally phased, over a period of one year.
Maximum Gap Time at Equator	3.0 days	Average revisit time does not accounting for cloud cover, customer priority level, and other factors.
Maximum Imageable Latitude	+/- 84.deg	

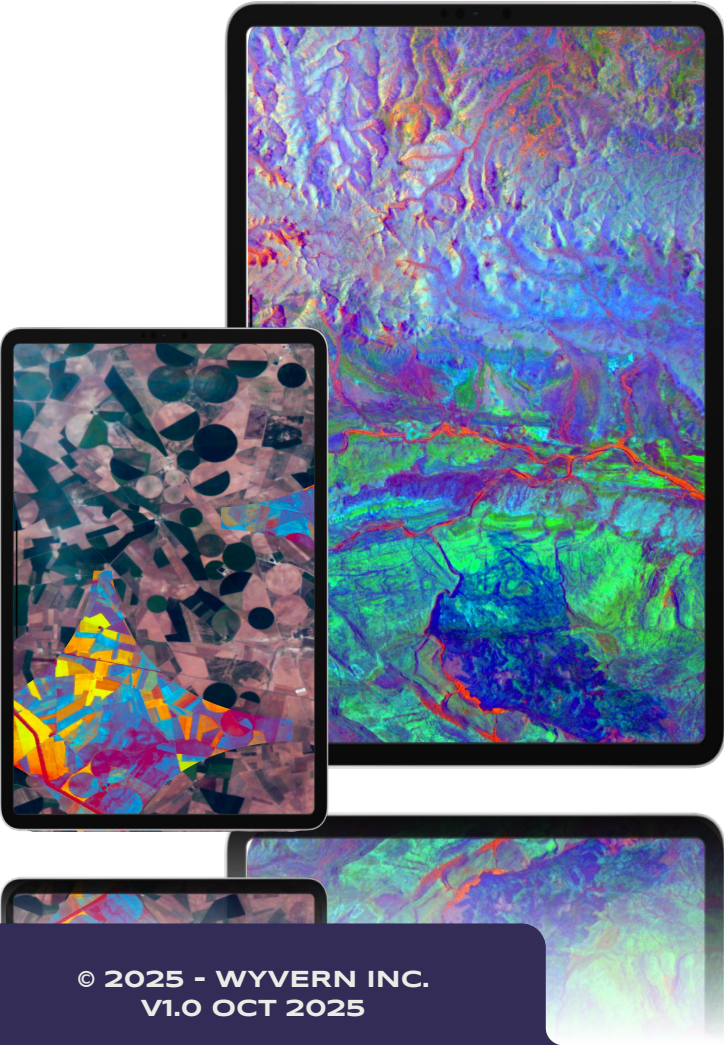
**Disclaimer:** All technical specifications are indicative and may change without notice as part of ongoing product development.

[www.wyvern.space](https://www.wyvern.space)

PARAMETER	SPECIFICATION	MORE INFORMATION
Radiometric Processing Level	Level 2	Bottom-of-atmosphere reflectance (atmospheric correction applied); not orthorectified.
Map Projection Coordinate System	UTM / WGS84	Users must reproject themselves if another CRS is needed.
Image Raster File Format	Cloud-optimized GeoTIFF (COG)	Enables direct use in most GIS and cloud platforms.
Metadata Sidecar File Format	STAC text (JSON)	Each image is accompanied by STAC-compliant JSON metadata for standardized search, cataloging, and interoperability.
Image Raster Data Type	16-bit unsigned integer (uint16)	Pixel values are stored as uint16 to preserve full radiometric precision for analysis.

PRACTICAL PURCHASING INFORMATION

- **Minimum Order Size:** 100 km<sup>2</sup>; minimum width restrictions
- **Cloud Cover:** Automatic re-task if image contains >20% clouds
- **Order Submission:** API-based ordering/fulfilment; web order desk available
- **Delivery:** Images are delivered via the web order desk, API, or to your Amazon S3 bucket.
- **Cancellation:** Orders may be cancelled up to 72 hours in advance
- **Exclusivity:** Optional upgrade for permanent image exclusivity
- **Licensing:** Internal Use (single org) or Public Release (CC-BY 4.0)



APPLICATIONS

Wyvern’s VNIR–SWIR hyperspectral system delivers detailed material signatures across 440–2500 nm, enabling advanced analytics that go beyond traditional imaging.

- **Agriculture:** Crop speciation, nutrient and moisture stress detection, soil characterization, and precision input management.
- **Mining & Energy:** Mineral mapping, GHG detection, tailings pond monitoring, and site reclamation tracking.
- **Forestry:** Tree species identification, forest health and pest monitoring, and fuel grid mapping.
- **Environmental Monitoring:** Water quality analysis (turbidity, algal blooms, pollutants), land degradation studies, and disaster response.
- **Defence & Intelligence:** Camouflage and concealment detection, anomaly identification, supply chain monitoring, and situational awareness.