6X Multispectral

## The ultimate solution for high-res RGB and accurate radiometric multispectral imagery

The 6X captures synchronized, radiometric multispectral imagery at 3cm GSD and high-resolution RGB imagery at 1cm GSD, suitable for advanced analytics, all in a single sensor and flight session. Leveraging a gimbal for stabilization, high-dynamic range, low-noise sensors with premium-quality optics, and an optimized reflectance calibration process, the 6X maintains performance across diverse environmental conditions and across various use cases.

Key Benefits

- **Maximize Productivity:** Light weight, fast capture rate, synchronized image capture, and gimbal allow for faster & longer flights without sacrificing data quality
- **Ease-of-use:** Plug and play integration, rig processing support, time of capture geo-tagging, and large internal storage streamline your workflow
- **Easy Integration:** 6X is already compatible with many popular UAS platforms and is easy to integrate with other systems using the common interfaces and I/O options
- **Accuracy:** Paired with an incident light sensor, calibrated reflectance panel, and gimbal, 6X is ready to produce radiometrically accurate data out of the box

Key Features

- Five 3.2MP global shutter multispectral imagers and one 20MP RGB imager
- Synchronized image capture for all channels; supports rig processing
- Full metadata tagging with geolocation and image characteristics
- Open and standardized data formats
- Incident light sensor & calibrated reflectance panel included
- NDAA and Blue UAS Compliant
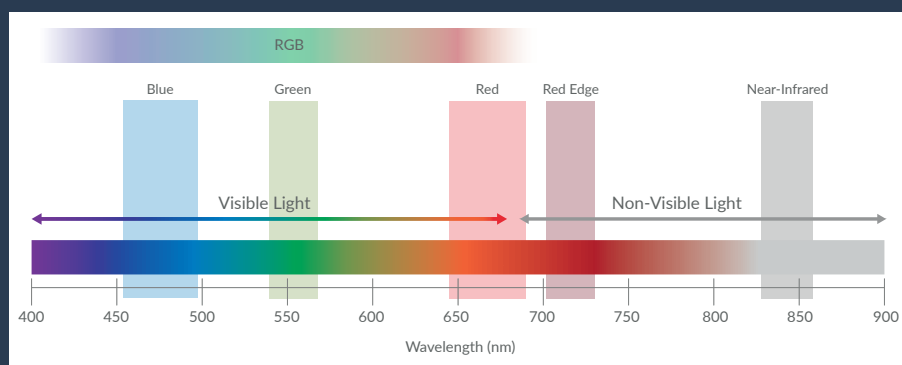
The spectral resolution of the 6X Multispectral + RGB Sensor

The multispectral imagers of the 6X sensor measure the light reflected in five different narrow bands (red, green, blue, red edge, and near-infrared). More bands equal more sensitivity; which increases the potential for picking up variations in vegetation conditions. The 6X RGB imager measures visible light reflected across the red, green, and blue wavelengths and is useful for general observation such as plant counting or monitoring crop growth stages.

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SPECIFICATIONS**

6X Multispectral

Resolution	2048px by 1536px (Multispectral) 5184px by 3888px (RGB)
Shutter Type	Global (Multispectral) Electronic Rolling Shutter (RGB)
Sensor	Sony IMX147 (RGB) Sony IMX265 (Multispectral)
Power Input	10.5 - 26V
Power Consumption	15W Typical, 18W Max
Capture Rate	5 FPS (0.2s interval)
Storage	512 GB Internal SSD
Filter/Sensitivity (custom filtering is available)	Blue: 475nm CWL x 30nm Green: 550nm CWL x 20nm Red: 670nm CWL x 30nm Red Edge: 715nm CWL x 10nm NIR: 840nm CWL x 20nm RGB: IR cut 650nm
Interfaces	USB-C 3.0, Gigabit Ethernet, PPS, Serial, Discrete I/O
Supported Protocols	DJI, MAVlink V1 & V2, Custom
Image Format	8-bit JPEG (RGB), 12-bit TIFF (MSP)
Weight (Sensor only)	280g
Weight (With gimbal)	Skyport: 495g Smart Dovetail: 515g Gremsy Hyper Quick: 490g ILS adds 58g to total
GSD @200ft (60m)	1.0in / 2.6cm (MSP), 0.4in / 1.0cm (RGB)
Field of View	47° HFOV (MSP and RGB)
Dimensions (Sensor Only)	79.5mm x 66mm x 67.5mm
Dimensions (With gimbal)	111.8mm x 126.2mm x 106.4mm

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COMPATIBILITY**

Fully Integrated:

DJI	M350, M300, M210, M200
Inspired Flight	IF800 Tomcat, IF1200A
Freefly	Astro

Custom Integration Options:

Gimbal Interfaces:

Freefly	Smart Dovetail
Gremsy	Hyper Quick

Non-Gimbal Interfaces:

JST GH	Serial, Power In, Ethernet, PPS PWM
USB-C	USB
2-56 Threaded Mounting Holes	Mounting 6 Locations

Key Use Cases

- Mapping: Multispectral, RGB, DSM/Elevation
- Residue cover, carbon monitoring, and conservation practice verification
- Canopy development & senescence detection
- Crop health, damage, disease detection, nutrient status, and stress
- Stand count, emergence, and seed vigor
- Weed pressure and herbicide efficacy
- Leaf area index, plant growth, flowering, growth stage, plant size, uniformity, and biomass monitoring

**Specifications are subject without notice
**With appropriate post-processing