senseFly
Camera Collection

A professional sensor for every application

senseFly
Parrot Group

Image: senseFly S.O.D.A. 3D oblique image (left) merging into 3D mesh (right).

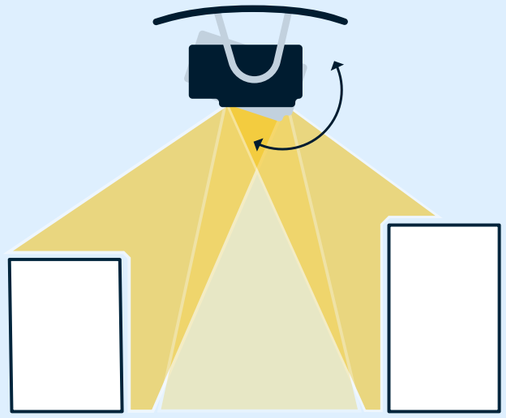
Introducing senseFly S.O.D.A. 3D

3D mapping, redefined

- Stunning digital 3D reconstructions in vertically-focused environments such as urban areas, open pit mines and coastlines—over larger areas than quadcopters can achieve
- Vast coverage over flat, homogenous terrain (up to 500 ha / 1,235 ac per 122 m / 400 ft flight*)

The senseFly S.O.D.A. 3D is a unique innovation—a professional drone photogrammetry camera that changes orientation during flight to capture three images (2 oblique, 1 nadir) every time, instead of just one, for a much wider field of view. It is optimised for quick, robust image processing with Pix4Dmapper.

* eBee X flight with Endurance Extension.



Sensor
1”
RGB

Lens
F/2.8-11,
10.6 mm (35 mm equivalent: 29 mm)

Resolution
20 MP
5,472 x 3,648 px
(3:2)

Formats
RGB: JPEG, DNG+JPEG

Exposure compensation
±2.0 (1/3 increments)

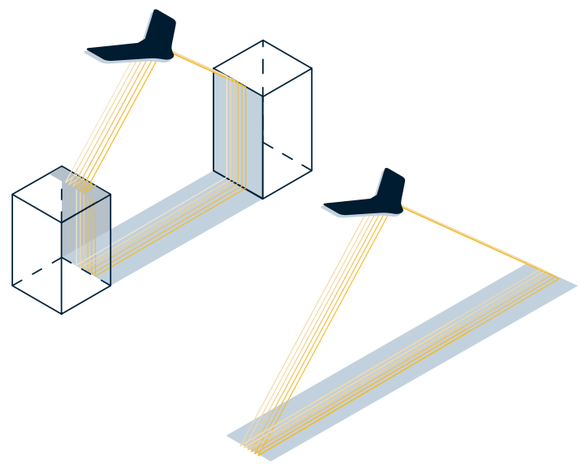
Shutter
Global
1/30–1/2000s (sensor)
1/500–1/2000s (user-configurable)

White balance
Auto, sunny, cloudy, shady

ISO range
125-6400 (sensor)
125-1600 (user-configurable)

FOV
Total FOV: 154°
64° optical
90° mechanical

Direct In-Flight Georeferencing (DIFG)



senseFly S.O.D.A. 3D’s wide field of view ensures excellent 3D results in vertically-focused environments or vast mapping coverage over flat terrain.

Suits:

- Urban mapping
- Mine & quarry mapping
- Coastline mapping
- Large area mapping over flat terrain

Compatible with:

- eBee X

Image: senseFly Aeria X orthomosaic (1 cm/0.4 in GSD)

Smart Exposure technology

- Optimised exposure time suits numerous light conditions, including low-light
- Super sharp, rarely over-exposed images
- Minimal risk of noise & motion blur

Meet the senseFly Aeria X

The compact marvel of drone photogrammetry

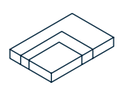
The senseFly Aeria X is a compact drone photogrammetry powerhouse.

This rugged innovation offers the perfect blend of size, weight and DSLR-like image quality. It offers stunning image detail and clarity, in virtually all light conditions, allowing you to map for more hours per day than ever before.

Its built-in Direct In-Flight Georeferencing meanwhile boosts your efficiency even further by lowering the amount of image overlap required—for greater coverage and quicker post-flight image processing.

Direct In-Flight Georeferencing (DIFG)

- Records the GPS position and exact orientation of senseFly Aeria X at each capture location
- Less image overlap is required, enabling greater flight coverage and quicker image processing
- Improved reconstructions over difficult environments (water, forests etc.)

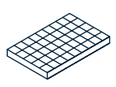


Sensor

APS-C
RGB

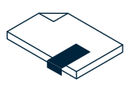
Lens

F/2.8-16,
18.5mm (28mm equivalent: 35 mm)



Resolution

24 MP
6,000 x 4,000 px
(3:2)



Formats

RGB: JPEG, DNG+JPEG

Exposure compensation

±2.0 (1/3 increments)

Shutter

Global
1/30–1/4000s (sensor)
1/500–1/2000s (user-configurable)

White balance

Auto, sunny, cloudy, shady

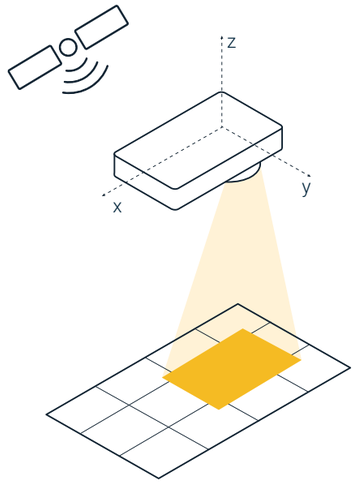
ISO range

100-6400 (sensor)
100-3200 (user-configurable)

FOV

75° (diagonal)
HFOV: 64°

Direct In-Flight Georeferencing (DIFG)



Direct In-Flight Georeferencing automatically records the GPS position and orientation of the camera at each capture location.

Suits:

- Surveying & cadastre
- Topographic mapping
- Site digitisation
- Volume measurement
- Inspection

Compatible with:

- eBee X

Image: senseFly Duet T RGB orthomosaic (left) merging into thermal orthomosaic (right).

Presenting senseFly Duet T

2 sensors, 1 heat map star

The senseFly Duet T is a rugged dual-camera thermal mapping rig. Use it to create geo-accurate thermal maps and digital surface models quickly and easily.

The Duet T includes a high-resolution thermal infrared (640 x 512 px) camera and a senseFly S.O.D.A. RGB camera. Both image sources can be accessed as and when required, while the rig's built-in Camera Position Synchronisation feature works in sync with Pix4Dmapper photogrammetry software (optional) to simplify the map reconstruction process.

Sensors
Thermal infrared (FLIR):
(10.9 mm x 8.7 mm)
RGB: 1”

RGB lens
F/2.8-11,
10.6 mm (35 mm equivalent: 29 mm)

Thermal lens
F/1.25,
13 mm (35 mm equivalent: 40 mm)

Resolution
Thermal: 640 x 512 px (5:4)
RGB: 5,472 x 3,648 px (4:3)

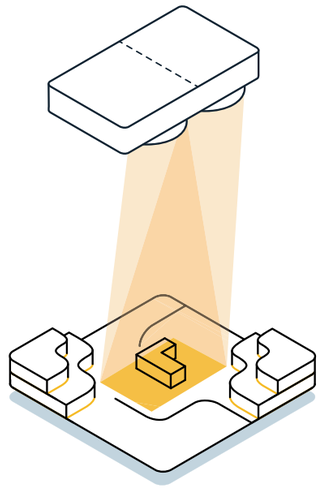
Shutter
Thermal: rolling, 30 Hz
RGB: Global
1/500–1/2000s

Formats
Thermal: R-JPEG
RGB: JPEG

IMU
Synchronized IMU

Thermal FOV
HFOV: 45°
VFOV: 37°
DFOV: 56°

RGB FOV
HFOV: 64°
VFOV: 37°
DFOV: 74°



senseFly Duet T concurrently captures RGB data and thermal infrared data, including a temperature reading for each pixel.

Suits:

- Solar panel inspection
- Irrigation planning & analysis
- Animal management (e.g. counting & detection)
- Heat tracking & leak detection
- Environmental monitoring

Compatible with:

- eBee X

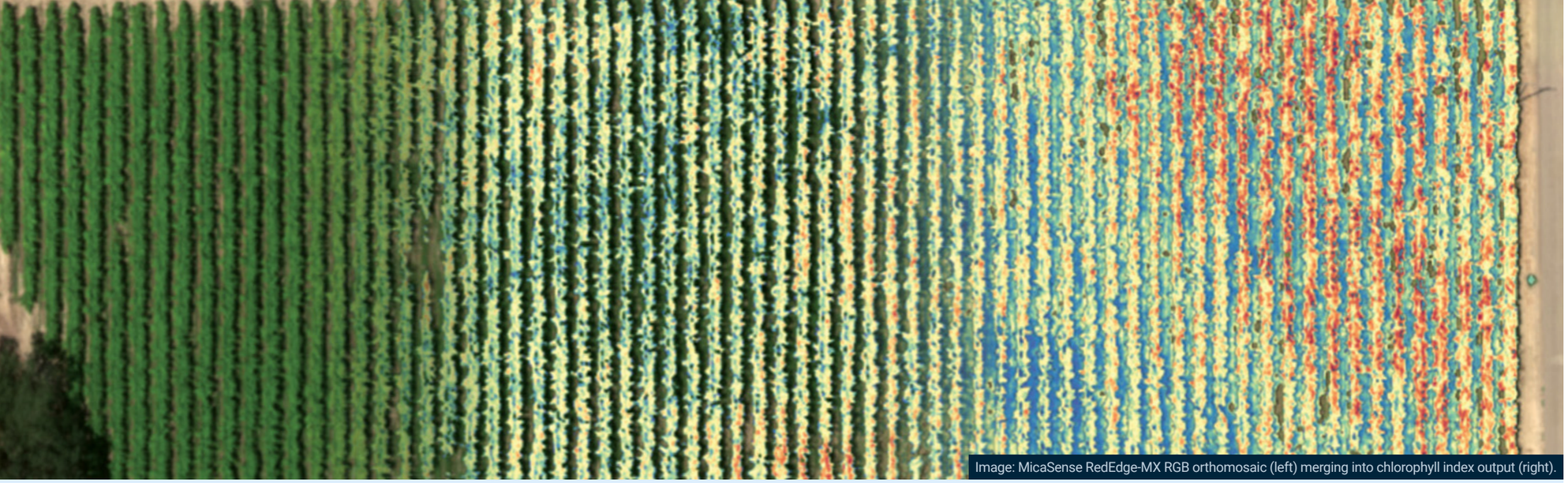


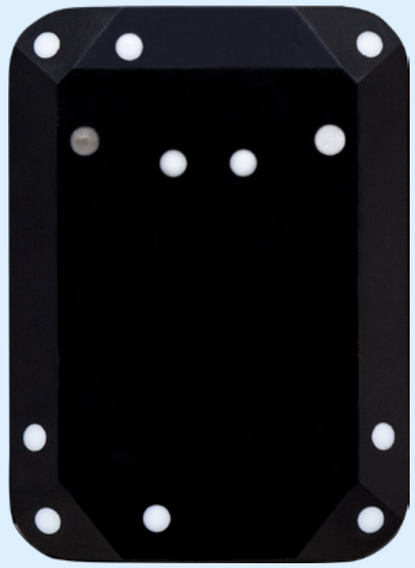
Image: MicaSense RedEdge-MX RGB orthomosaic (left) merging into chlorophyll index output (right).

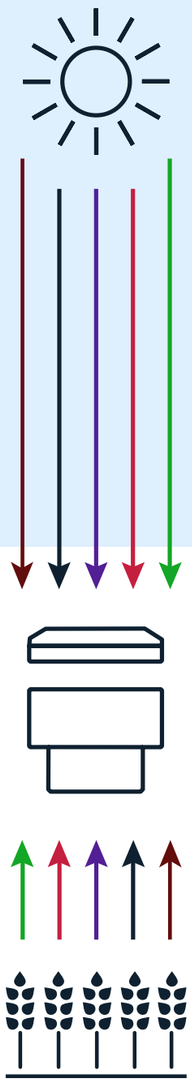
Here's the MicaSense RedEdge-MX

The sensor that doesn't compromise

The RedEdge-MX is a rugged and precise multispectral sensor for advanced agricultural analysis. It captures both the spectral bands required for crop health indices and an additional blue band for deeper insights into specific issues.

The RedEdge-MX features an optimised GSD of 8 cm (3.1 in) per pixel at 120 m / 400 ft, composite RGB color images, a global shutter for distortion-free captures and an additional light sensor (DLS 2) for highly-accurate radiometric calibration, making the RedEdge-MX one of the most powerful crop sensors on the market.





Sensor
Five band
multispectral sensor: 1/3"

Multispectral sensor
Five-band

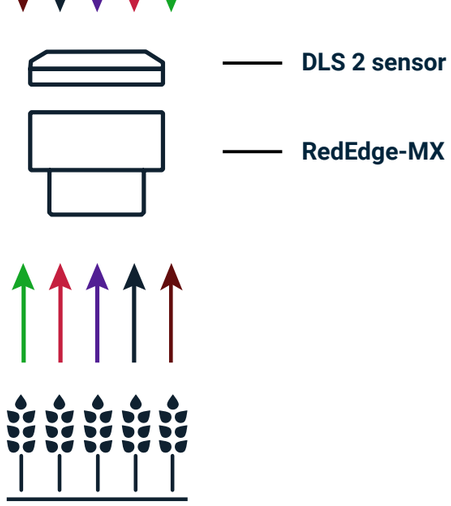
Single-band resolution
1.2 MP
1,280 x 960 px
(4:3)

Formats
TIFF

Shutter
Global

Multispectral bands
Blue (475 nm ± 20 nm)
Green (560 nm ± 20 nm)
Red (668 nm ± 10 nm)
Red edge (717 nm ± 10 nm)
Near infrared (840 nm ± 40 nm)

Single-band FOV
HFOV: 47°
VFOV: 37°
DFOV: 58°



Suits:

- Plant health analysis
- Agricultural research / field trials
- Emergence tracking
- Disease monitoring
- Definition of management zones
- Fertiliser/input planning & optimisation

Compatible with:

- eBee X

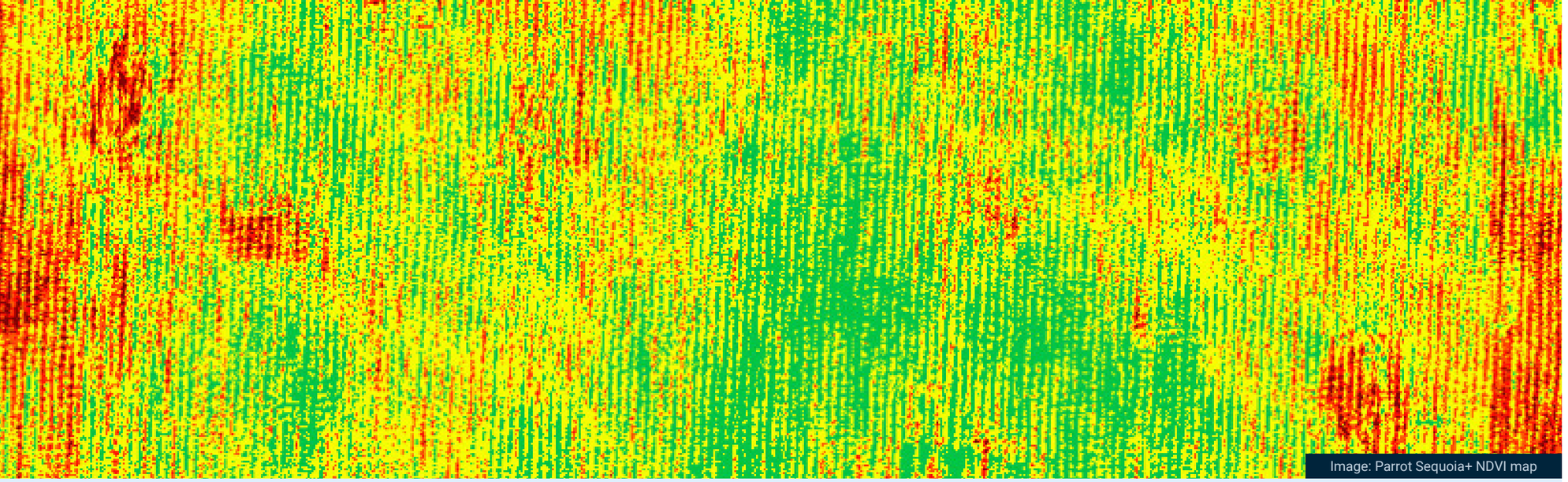


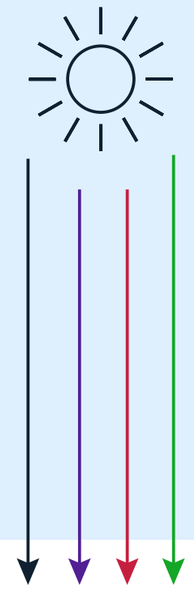
Image: Parrot Sequoia+ NDVI map

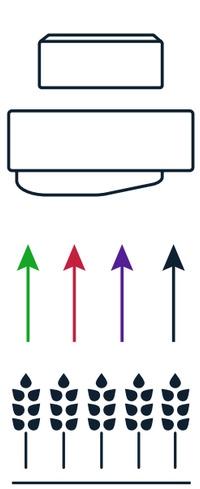
This is Parrot Sequoia+

Capture the invisible

The Parrot Sequoia+ is the most popular multispectral sensor in agriculture. This lightweight, adaptable and value-packed solution features two types of sensor for the price of one: four multispectral 1.2 MP sensors, with global shutters, and RGB, plus a sunshine sensor.

When used with Pix4D software, the Sequoia+ is the first multispectral camera to provide absolute reflectance measurements without the need for a radiometric calibration target. The Sequoia+ is also the only crop sensor to support RTK/PPK workflows for precise georeferenced results. And it offers the largest single-flight coverage of any sensor in its class (nominal coverage of 200 ha / 494 ac with an eBee SQ flown at 120 m / 400 ft).





Sensors
Multispectral sensor: 1/3”
RGB camera: 1/2.3”

Multispectral sensor
Four-band

RGB resolution
16 MP
4,608 x 3,456 px
(4:3)

Single-band resolution
1.2 MP
1,280 x 960 px
(4:3)

Multispectral bands
Green (550 nm ± 40 nm)
Red (660 nm ± 40 nm)
Red edge (735 nm ± 10 nm)
Near infrared (790 nm ± 40 nm)

Single-band shutter
Global

RGB shutter
Rolling
6 Hz

RGB FOV
HFOV: 64°
VFOV: 50°
DFOV: 74°

Single-band FOV
HFOV: 62°
VFOV: 49°
DFOV: 74°

Suits:

- Plant health analysis
- Emergence tracking
- Disease monitoring
- Definition of management zones
- Fertiliser/input planning & optimisation

Compatible with:

- eBee X, eBee SQ, eBee Plus, eBee Classic

senseFly S.O.D.A.

The sensor optimised for drone applications

Image: senseFly S.O.D.A. orthomosaic

Image: senseFly S.O.D.A. Corridor orthomosaic

senseFly Corridor

Linear mapping made easy

The senseFly S.O.D.A. is the first camera to be built for professional drone photogrammetry and has quickly become the reference sensor in its field. It captures amazingly sharp aerial images, across light conditions, with which to produce detailed, vivid orthomosaics and ultra-accurate 3D digital surface models.

senseFly Corridor is a combined senseFly S.O.D.A./eMotion software solution that makes corridor mapping easy. With its portrait camera position, senseFly Corridor requires 30% fewer images to map the same linear route. This, in turn, means 30% shorter processing times.

Suits:

- Surveying & cadastre
- Topographic mapping
- Site digitisation
- Volume measurement
- Inspection
- Plant counting
- Irrigation design

Compatible with:

- eBee X, eBee Plus, eBee Classic

Sensor
1”
RGB

Lens
F/2.8-11,
10.6 mm (35 mm equivalent: 29 mm)

Shutter
Global
1/30–1/2000s (sensor)
1/500–1/2000s
(User-configurable)

White balance
Auto, sunny, cloudy, shady

Formats
RGB: JPEG, DNG+JPEG

Resolution
5,472 x 3,648 px
(3:2)

Exposure compensation
±2.0 (1/3 increments)

ISO range
125-6400 (sensor)
125-1600
(User-configurable)

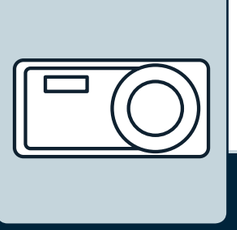
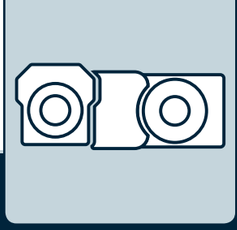
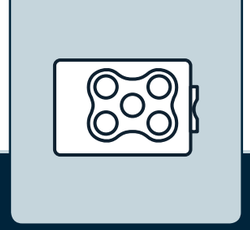
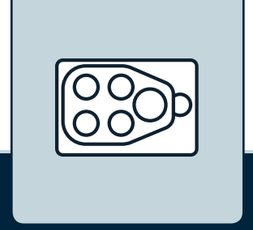
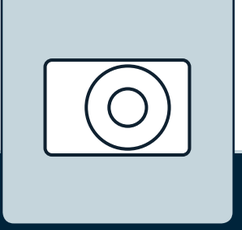
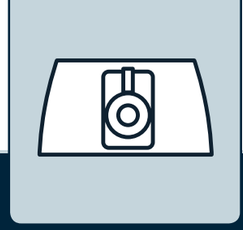
Suits:

- Planning, design & analysis of linear infrastructure
- River & coastline mapping

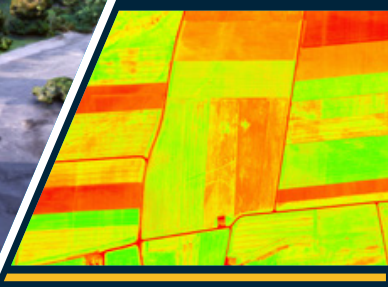
Compatible with:

- eBee X, eBee Plus

Compare cameras

	senseFly S.O.D.A. 3D	senseFly Aeria X	senseFly Duet T	MicaSense RedEdge-MX	Parrot Sequoia+	senseFly S.O.D.A.	senseFly Corridor
RGB							
Sensor	1” RGB	APS-C RGB	Thermal infrared (FLIR) and RGB (senseFly S.O.D.A.)	Five band multispectral sensor	Multispectral sensor and RGB camera	1” RGB	1” RGB
RGB lens	F/2.8-11, 10.6 mm (35 mm equivalent: 29 mm)	F/2.8-16, 18.5 mm (28 mm equivalent: 35 mm)	F/2.8-11, 10.6 mm (35 mm equivalent: 29 mm)	--	--	F/2.8-11, 10.6 mm (35 mm equivalent: 29 mm)	F/2.8-11, 10.6 mm (35 mm equivalent: 29 mm)
RGB resolution	20 MP, 5,472 x 3,648 px (3:2)	24 MP, 6,000 x 4,000 px (3:2)	20 MP, 5,472 x 3,648 px (3:2)	--	16 MP, 4,608 x 3,456 px (4:3)	20 MP, 5,472 x 3,648 px (3:2)	20 MP, 5,472 x 3,648 px (3:2)
Exposure compensation	±2.0 (1/3 increments)	±2.0 (1/3 increments)	--	--	--	±2.0 (1/3 increments)	±2.0 (1/3 increments)
RGB shutter	Global 1/30 - 1/2000 s	Global 1/30 - 1/4000 s	Global 1/30 - 1/2000 s	Global	Rolling, 6 Hz	Global 1/30 - 1/2000 s	Global 1/30 - 1/2000 s
White balance	Auto, sunny, cloudy, shady	Auto, sunny, cloudy, shady	Auto, sunny, cloudy, shady	Automatic	Automatic	Auto, sunny, cloudy, shady	Auto, sunny, cloudy, shady
ISO range	125-6400	100-6400	125-6400	Automatic	Automatic	125-6400	125-6400
RGB FOV	Total FOV: 154°, 64° optical, 90° mechanical	HFOV: 65°, VFOV: 46°, DFOV: 75°	HFOV: 64°, VFOV: 45°, DFOV: 73°	--	HFOV: 64°, VFOV: 50°, DFOV: 74°	HFOV: 64°, VFOV: 45°, DFOV: 73°	HFOV: 45°, VFOV: 64°, DFOV: 73°
RTK/PPK support	Yes	Yes	Yes	No	Yes (eBee X)	Yes	Yes
Operating temperature	-10°C - 40°C	-10°C - 40°C	-10°C - 40°C	0°C - 60°C	--	-10°C - 40°C	-10°C - 40°C
Thermal-IR							
Thermal lens	--	--	F/1.25, 13 mm (35 mm equivalent: 40 mm)	--	--	--	--
Thermal resolution	--	--	640 x 512 px (5:4)	--	--	--	--
Thermal shutter	--	--	Rolling, 30 Hz	--	--	--	--
IMU / DIFG	DIFG	DIFG	Synchronized IMU	--	--	--	--
Thermal FOV	--	--	HFOV: 45°, VFOV: 37°, DFOV: 56°	--	--	--	--
Multispectral							
Multispectral sensor	--	--	--	5-band	4-band	--	--
Single-band resolution	--	--	--	1.2 MP, 1,280 x 960 px (4:3)	1.2 MP, 1,280 x 960 px (4:3)	--	--
Multispectral bands	--	--	--	Blue (475 nm ± 20 nm) Green (560 nm ± 20 nm) Red (668 nm ± 10 nm) Red edge (717 nm ± 10 nm) Near infrared (840 nm ± 40 nm)	Green (550 nm ± 40 nm) Red (660nm ± 40 nm) Red edge (735nm ± 10 nm) Near infrared (790 nm ± 40 nm)	--	--
Single-band shutter	--	--	--	Global	Global	--	--
Single-band FOV	--	--	--	HFOV: 47°, VFOV: 37°, DFOV: 58°	HFOV: 62°, VFOV: 49°, DFOV: 74°	--	--
Calibration	--	--	--	DLS 2 and included Calibrated Reflectance Panel	Automatic radiometric calibration	--	--
Formats							
RGB	JPEG, DNG+JPEG	JPEG, DNG+JPEG	JPEG	--	JPEG	JPEG, DNG+JPEG	JPEG, DNG+JPEG
Thermal	--	--	R-JPEG	--	--	--	--
Multispectral	--	--	--	TIFF	TIFF	--	--
Compatible with	eBee X	eBee X	eBee X	eBee X	eBee X, eBee SQ, eBee Plus, eBee Classic	eBee X, eBee Plus, eBee Classic	eBee X, eBee Plus



Explore the datasets: **www.senseFly.com/datasets**

For more information: **www.senseFly.com/cameras**

At **senseFly**, we believe in using technology to make work safer and more efficient. Our proven drone solutions simplify the collection and analysis of geospatial data, allowing professionals in surveying, agriculture, engineering and humanitarian aid to make better decisions, faster. **senseFly** was founded in 2009 and quickly became the leader in mapping drones. The company is a commercial drone subsidiary of **Parrot Group**.

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