Camera Collection

A professional sensor for every application

AgEagle

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

S.O.D.A. 3D

3D mapping, redefined

The 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.
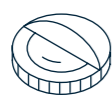
- The camera provides stunning digital 3D reconstructions in vertically-focused environments such as urban areas, open pit mines and coastlines—over larger areas than quadcopters can achieve.

- Vast coverage over flat, homogenous terrain (up to 500 ha / 1,235 ac per 122 m / 400 ft flight*).

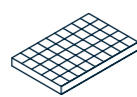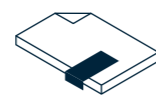* eBee X flight with Endurance Extension.
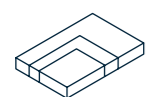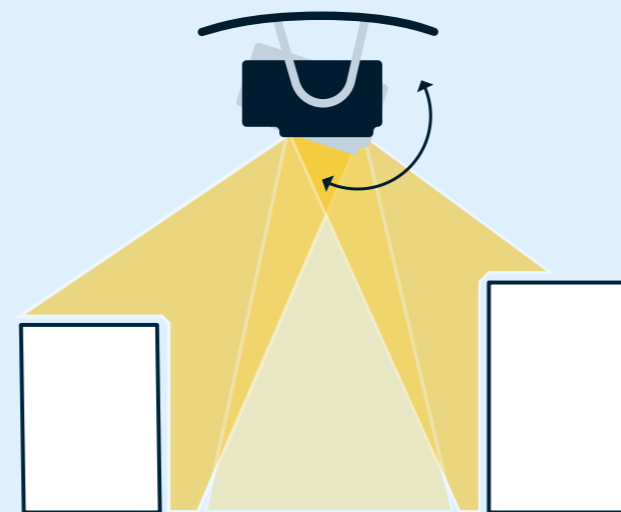
Sensor
1"
RGB
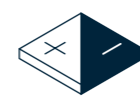
Lens
F/2.8-11,
10.6 mm (35 mm
equivalent: 29 mm)

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
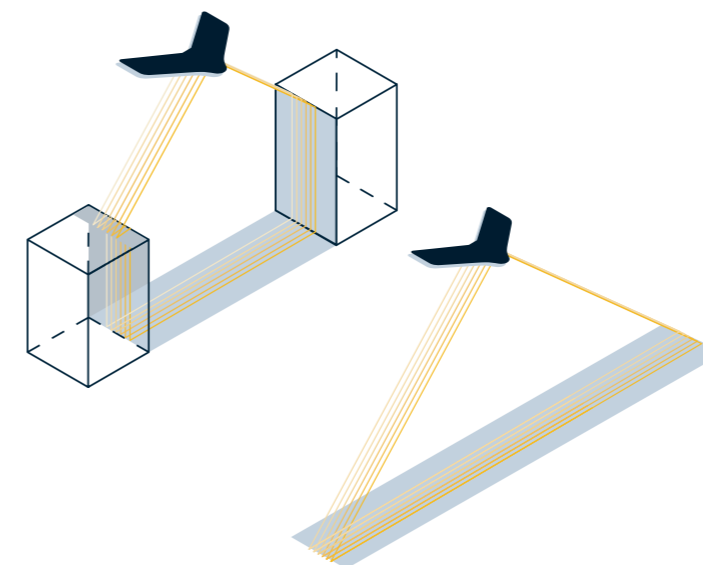125-6400 (sensor)
*125-1600
(user-configurable)*

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

**Direct In-Flight
Georeferencing (DIFG)**

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, eBee TAC

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.

Aeria X orthomosaic (1 cm/0.4 in GSD).

Aeria X

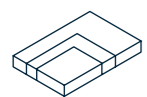## The compact marvel of drone photogrammetry

The 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 Aeria X at each capture location.
- Less image overlap is required, enabling greater flight coverage and quicker image processing.
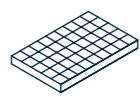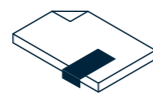- Improved reconstructions over difficult environments (water, forests, etc.).

senseFly

Sensor	**Lens**	**Resolution**	**Formats**	**Exposure compensation**
APS-C RGB	F/2.8-16, 18.5mm (28mm equivalent: 35 mm)	24 MP 6,000 x 4,000 px (3:2)	RGB: JPEG, DNG+JPEG	±2.0 (1/3 increments)

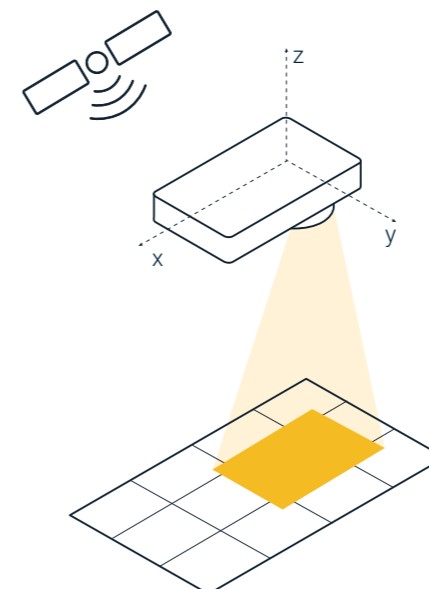| **Shutter**	**White balance**	**ISO range**	**FOV**	**Direct In-Flight Georeferencing (DIFG)**
Global 1/30−1/4000s (sensor) *1/500−1/2000s (user-configurable)*	Auto, sunny, cloudy, shady	100-6400 (sensor) *100-3200 (user-configurable)*	75° (diagonal) HFOV: 64°	

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 , eBee TAC

S.O.D.A.

The sensor optimised for drone applications

S.O.D.A. orthomosaic.

The 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.
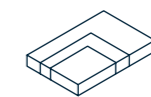
Suits:

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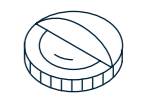- Inspection
- Plant counting
- Irrigation design

Compatible with:

eBee X, eBee TAC, eBee Geo

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

Corridor

Linear mapping made easy

Corridor orthomosaic.

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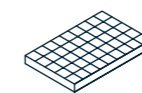
Achieve higher ground resolutions

A vertical camera position lets you fly closer to the ground while still achieving the image overlaps your digital outputs require. The result is lower ground resolutions down to 1.5 cm / 0.6 in per pixel.
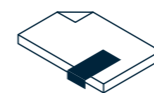
Formats
RGB: JPEG, DNG+JPEG

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 TAC

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

Duet T

2 sensors,
1 heat map star

The 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 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.
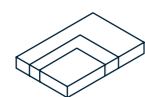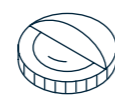

Sensors
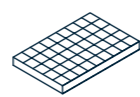Thermal infrared (FLIR): (10.9 mm x 8.7 mm) RGB: 1"
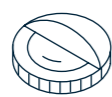
RGB lens
F/2.8-11, 10.6 mm (35 mm equivalent: 29 mm)

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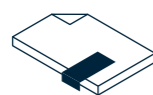F/1.25, 13 mm (35 mm equivalent: 40 mm)

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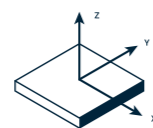Thermal: 640 x 512 px (5:4)
RGB: 5,472 x 3,648 px (4:3)

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

Formats
Thermal: R-JPEG
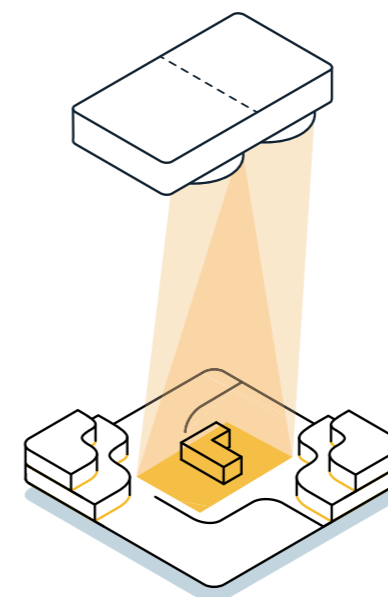RGB: JPEG

IMU
Synchronized IMU

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

RGB FOV
HFOV: 64°
VFOV: 37°
DFOV: 74°

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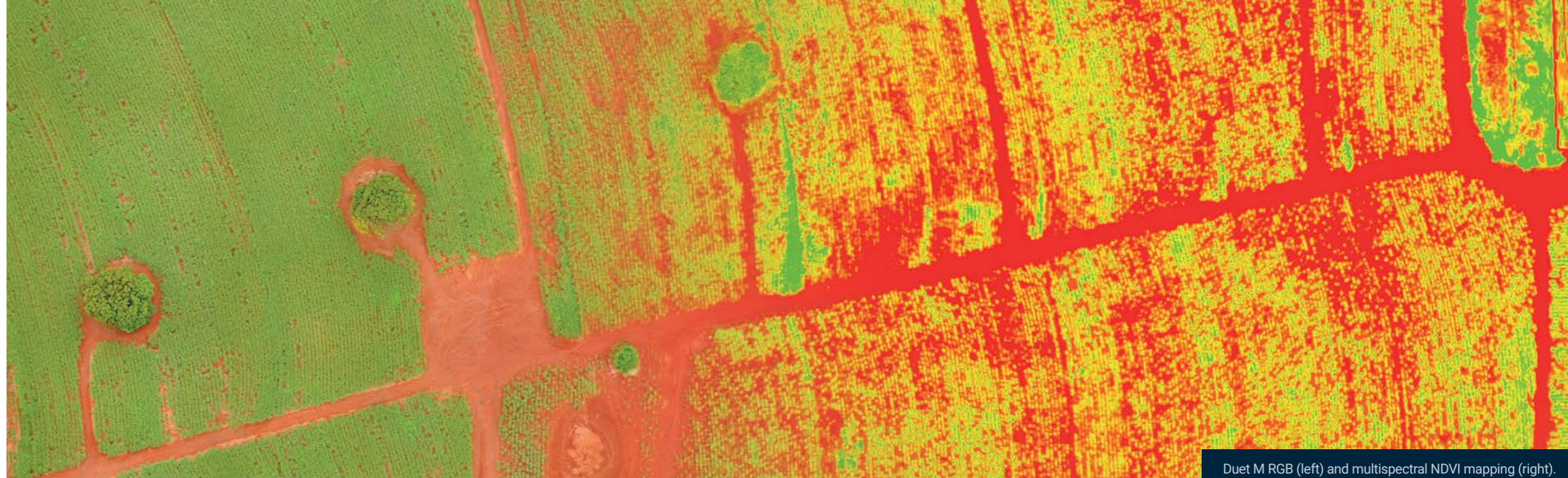
Suits:

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

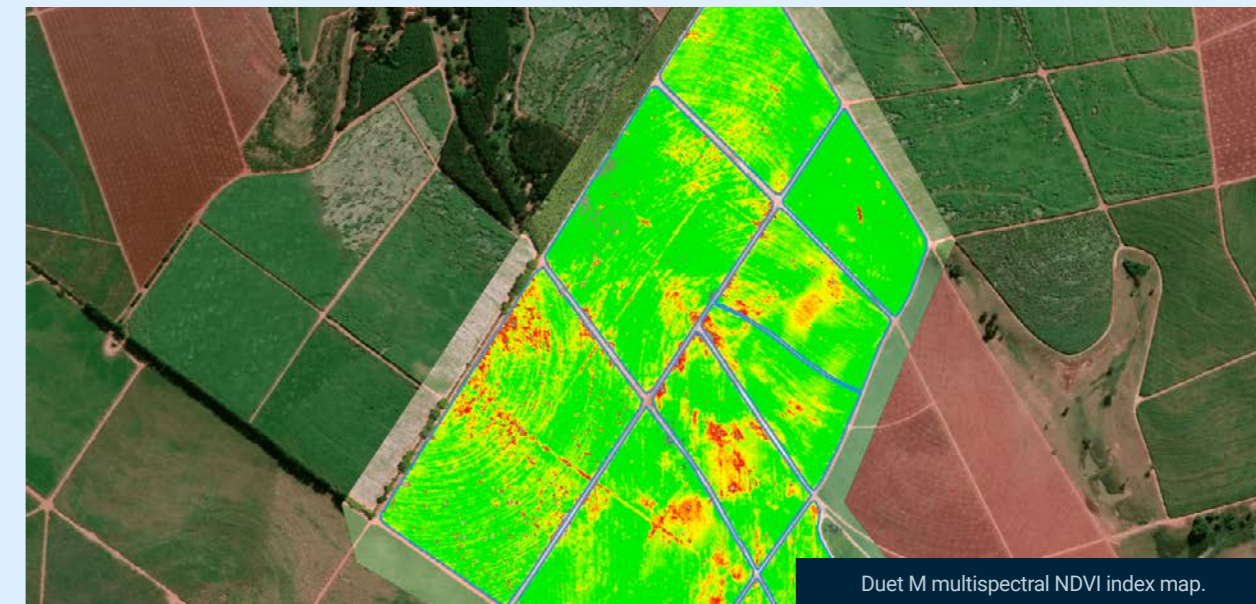## Compatible with:

eBee X, eBee TAC

Duet M

High-resolution RGB and multispectral camera

Duet M RGB (left) and multispectral NDVI mapping (right).

Duet M is an innovative dual-purpose RGB and multispectral mapping camera rig. Use it to create geo-accurate multispectral maps and high-resolution digital surface models (DSMs) quickly and easily.
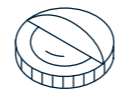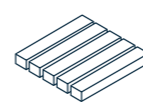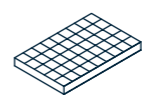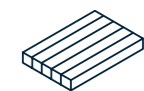

Duet M multispectral NDVI index map.

Suits:

- Plant health analysis
- Emergence tracking
- Disease monitoring
- Definition of management zones
- Fertiliser/input planning & optimisation
- Weed detection
- Water management
- Survey
- Plant counting

Compatible with:

eBee X, eBee TAC, eBee Ag

Sensor
Multispectral (Sequoia+) and RGB (S.O.D.A.)

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

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

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

ISO range
125-6400 (sensor)

Multispectral sensor
Four-band

Shutter
Global Shutter
1/30 – 1/2000s)

White balance
Auto, sunny, cloudy, shady

Shutter
Global

Formats
JPEG
TIFF

Single-band FOV
HFOV: 64°
VFOV: 50°
DFOV: 74°

Sequoia+ NDVI map.
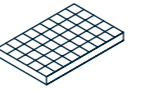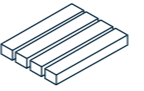
Sequoia+

Capture the invisible

The 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+ 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°

Sunshine sensor

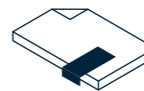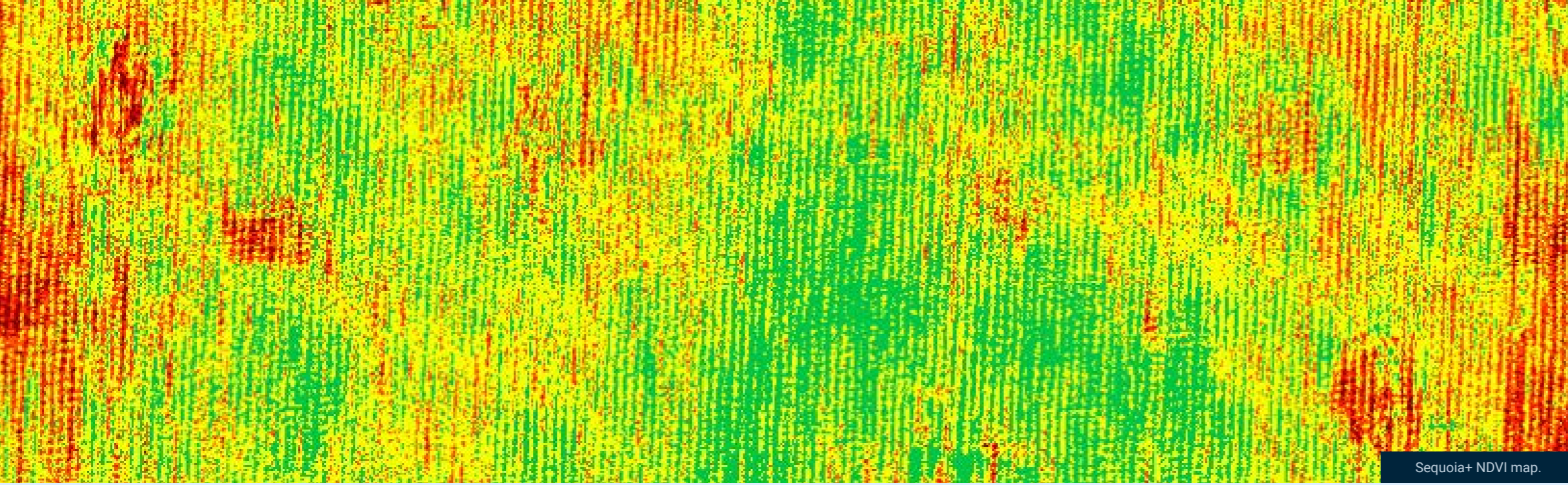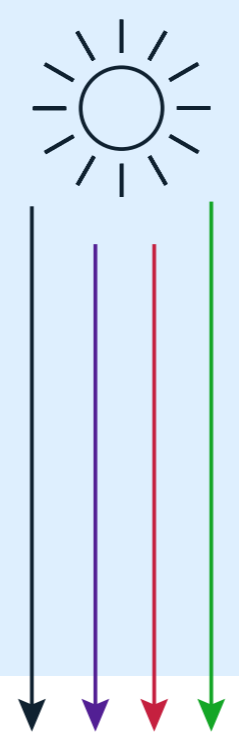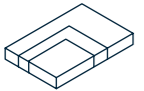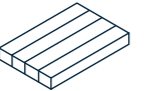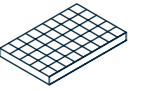Sequoia+

Suits:

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

Compatible with:

eBee X, eBee TAC

Compare cameras

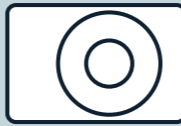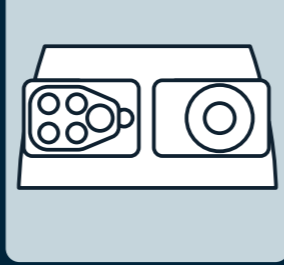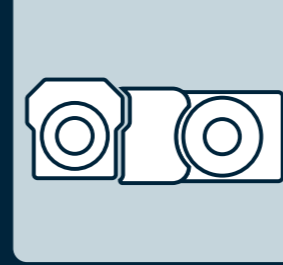|	S.O.D.A.	Corridor	S.O.D.A. 3D	Aeria X
Sensor	1" RGB	1"RGB	1"RGB	APS-C RGB
RGB lens	F/2.8-11, 10.6 mm (35 mm equivalent: 29 mm)	F/2.8-11, 10.6 mm (35 mm equivalent: 29 mm)	F/2.8-11, 10.6 mm (35 mm equivalent: 29 mm)	F/2.8-16, 18.5 mm (28 mm equivalent: 35 mm)
RGB resolution	20 MP, 5,472 x 3,648 px (3:2)	20 MP, 5,472 x 3,648 px (3:2)	20 MP, 5,472 x 3,648 px (3:2)	24 MP, 6,000 x 4,000 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 - 1/2000 s	Global 1/30 - 1/2000 s	Global 1/30 - 1/4000 s
White balance	Auto, sunny, cloudy, shady	Auto, sunny, cloudy, shady	Auto, sunny, cloudy, shady	Auto, sunny, cloudy, shady
ISO range	125-6400	125-6400	125-6400	100-6400
RGB FOV	HFOV: 64°, VFOV: 45°, DFOV: 73°	HFOV: 45°, VFOV: 64°, DFOV: 73°	Total FOV: 154°, 64° optical, 90° mechanical	HFOV: 65°, VFOV: 46°, DFOV: 75°
RTK/PPK support	Yes	Yes	Yes	Yes
Operating temperature	-10°C - 40°C	-10°C - 40°C	-10°C - 40°C	-10°C - 40°C
Thermal lens	--	--	--	--
Thermal resolution	--	--	--	--
Thermal shutter	--	--	--	--
IMU / DIFG	--	--	DIFG	DIFG
Thermal FOV	--	--	--	--
Multispectral sensor	--	--	--	--
Single-band resolution	--	--	--	--
Multispectral bands	--	--	--	--
Single-band shutter	--	--	--	--
Single-band FOV	--	--	--	--
Calibration	--	--	--	--
Formats — RGB	JPEG, DNG+JPEG	JPEG, DNG+JPEG	JPEG, DNG+JPEG	JPEG, DNG+JPEG
Thermal	--	--	--	--
Multispectral	--	--	--	--
Compatible with	eBee X, eBee TAC, eBee Geo	eBee X, eBee TAC	eBee X, eBee TAC	eBee X, eBee TAC

RGB · **Thermal-IR** · **Multispectral**

Compare cameras

|	Duet M	Duet T	Sequoia+
Sensor	Multispectral sensor (Sequoia +) and RGB (S.O.D.A.)	Thermal infrared (FLIR) and RGB (S.O.D.A.)	Multispectral sensor and RGB camera
RGB lens	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)	20 MP, 5,472 x 3,648 px (3:2)	16 MP, 4,608 x 3,456 px (4:3)
Exposure compensation	--	--	--
RGB shutter	Global 1/30 - 1/2000 s	Global 1/30 - 1/2000 s	Rolling, 6 Hz
White balance	Auto, sunny, cloudy, shady	Auto, sunny, cloudy, shady	Automatic
ISO range	125-6400	125-6400	Automatic
RGB FOV	HFOV: 64°, VFOV: 45°, DFOV: 73°	HFOV: 64°, VFOV: 45°, DFOV: 73°	HFOV: 64°, VFOV: 50°, DFOV: 74°
RTK/PPK support	Yes	Yes	Yes (eBee X)
Operating temperature	-10°C - 40°C	-10°C - 40°C	--
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	--	Synchronized IMU	--
Thermal FOV	--	HFOV: 45°, VFOV: 37°, DFOV: 56°	--
Multispectral sensor	4-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	Green (550nm ± 40nm) Red (660nm ± 40nm) Red edge (735nm ± 10nm) Near infrared (790nm±40nm)	--	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: 62°, VFOV: 49°, DFOV: 74°	--	HFOV: 62°, VFOV: 49°, DFOV: 74°
Calibration	Automatic radiometric calibration	--	Automatic radiometric calibration
Formats RGB	JPEG	JPEG	JPEG
Thermal	--	R-JPEG	--
Multispectral	TIFF	--	TIFF
Compatible with	eBee X, eBee TAC, eBee Ag	eBee X, eBee TAC	eBee X, eBee TAC

For more information: **www.ageagle.com/solutions/sensors/**
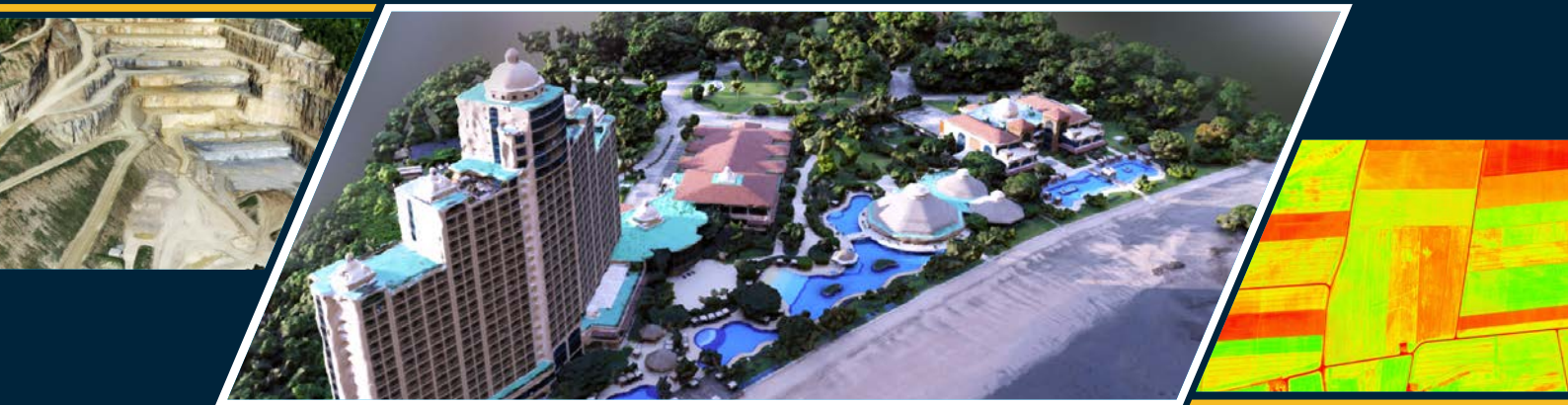
Explore the datasets: **www.ageagle.com/use-cases/**

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