

Technical specifications cameras



Full mapping flexibility

Modular payloads	Yes, with a single USB-C connector
Power supply	Flight batteries (up to 45 W)
Payload protection	Yes, maintenance-free integration with full enclosure in main drone body, shock-protection, and smooth VTOL landings
Payloads	<ul style="list-style-type: none"> • RGB61, powered by Sony A7R Mark IV with 24 mm lens, full frame sensor, 61 MP, RGB nadir • Sony RX1R II with 35 mm lens, full-frame sensor, 42 MP, RGB nadir • Sony a6100 with 20 mm lens, APS-C sensor, 24 MP, RGB nadir • Oblique Sony a6100 with 12 mm lens, APS-C sensor, 24 MP, RGB oblique • MicaSense RedEdge-P
PPK equipped	All drones are equipped with a high-precision GNSS board and antenna to produce centimeter-level accuracy with post-processed kinematic (PPK)

RGB cameras nadir



RGB61

High accuracy and most efficient

Sony RX1R II

High accuracy

Sony a6100

Most affordable

Technical specification	61 MP, full-frame sensor, 24 mm lens, nadir configuration	42 MP, full-frame sensor, 35 mm lens, nadir configuration	24 MP, APS-C sensor, 20 mm lens, nadir configuration
Payload weight (incl. mount)	709 g (1.56 lb)	590 g (1.27 lb)	550 g (0.73 lb)
Lowest possible GSD	0.7 cm/px 0.28 in/px	0.7 cm/px 0.28 in/px	1.2 cm/px 0.47 in/px
Maximum coverage at lowest GSD*	Up to 110 ha (270 ac) at 45m (150 ft) flight altitude	Up to 90 ha (230 ac) at 55 m (179 ft) flight altitude	Up to 120 ha (300 ac) at 61 m (200 ft) flight altitude
Maximum coverage at 120 m (400 ft)*	Up to 310 ha (760 ac) at 1.9 cm (0.74 in) GSD	Up to 210 ha (550 ac) at 1.6 cm (0.63 in) GSD	Up to 240 ha (600 ac) at 2.4 cm (0.9 in) GSD
Horizontal absolute accuracy (RMS) with PPK (w/o GCPs)	Down to 1 cm (0.4 in)	Down to 1 cm (0.4 in)	Down to 2 cm (0.8 in)
Vertical absolute accuracy (RMS) with PPK (w/o GCPs)	Down to 3 cm (1.2 in)	Down to 3 cm (1.2 in)	Down to 4 cm (1.6 in)
Sensor type	Full frame	Full frame	APS-C
Sensor size x	35.7 mm (1.4 in)	35 mm (1.38 in)	23.5 mm (0.93 in)
Sensor size y	23.9 mm (0.93 in)	23.3 mm (0.92 in)	15.6 mm (0.61 in)
Mega pixel	61	42.4	24.2
Shutter type	Focal plane	Leaf shutter	Focal plane
Pixel in x	9504	7952	6000
Pixel in y	6336	5304	4000
Focal length of lens	24 mm (0.94 in)	32.8 mm (1.29 in)	20 mm (0.79 in)
Focal length (35mm equivalent)	24 mm (0.94 in)	32.8 mm (1.29 in)	29.8 mm (1.17 in)
Vertical field of view	53°	39.2°	42.6°
Horizontal field of view	73°	56.2°	60.9°
Minimal trigger time	0.9 s	0.6 s	1.0 s
Minimal trigger distance	13 m (42 ft)	9.6 m (31 ft)	16 m (52 ft)

* side overlap 60%

RGB camera oblique



Oblique Sony a6100
3D mapping camera

Technical specifications	24 MP, APS-C sensor, 12 mm lens, low oblique configuration
Payload weight (incl. mount)	730 g (1.61 lb)
Lowest possible GSD	1.6 cm/px 0.63 in/px
Maximum coverage at lowest GSD*	Up to 70 ha (180 ac) at 49 m (161 ft) flight altitude
Maximum coverage at 120 m (400 ft)*	Up to 180 ha (450 ac) at 3.9 cm (1.54 in) GSD
Horizontal absolute accuracy (RMS) with PPK (w/o GCPs)	Down to 2 cm (0.8 in)
Vertical absolute accuracy (RMS) with PPK (w/o GCPs)	Down to 4 cm (1.6 in)
Sensor type	APS-C
Sensor size x	23.5 mm (0.93 in)
Sensor size y	15.6 mm (0.61 in)
Mega pixel	24.2
Shutter type	Focal plane
Pixel in x	6000
Pixel in y	4000
Focal length of lens	12 mm (0.47 in)
Focal length (35mm equivalent)	18 mm (0.71 in)
Front tilt angle (off-nadir)	15°
Horizontal field of view	90° (-45° ... 45°)
Vertical field of view	66° (-18° ... 48°)
Minimal trigger time	1.0 s
Minimal trigger distance	16 m (52 ft)

* side overlap 80%

GSD overview RGB nadir cameras

	RGB61 High accuracy and most efficient	Sony RX1R II High accuracy	Sony a6100 Most affordable
GSD at 120 m flight altitude	1.9 cm/px (0.74 in/px)	1.6 cm/px (0.63 in/px)	2.4 cm/px (0.93 in/px)
Flight altitude	120 m (400 ft)	120 m (400 ft)	120 m (400 ft)
Maximum frontal overlap	85%	89%	83%
Maximum coverage*	310 ha (760 ac)	220 ha (550 ac)	240 ha (600 ac)
Lowest possible GSD	0.7 cm/px (0.28 in/px)	0.7 cm/px (0.28 in/px)	1.2 cm/px (0.47 in/px)
Flight altitude	45 m (147 ft)	53 m (170 ft)	61 m (200 ft)
Maximum frontal overlap	74%	74%	67%
Maximum coverage*	110 ha (270 ac)	90 ha (230 ac)	120 ha (300 ac)
2.0 cm/px GSD	2 cm/px (0.79 in/px)	2 cm/px (0.79 in/px)	2 cm/px (0.79 in/px)
Flight altitude	128 m (315 ft)	155 m (510 ft)	102 m (330 ft)
Maximum frontal overlap	94%	94%	87%
Maximum coverage*	280 (690 ac)	245 (605 ac)	205 ha (500 ac)
600 meters (1970 feet)	9.5 cm/px (3.7 in/px)	7.8 cm/px (3 in/px)	12 cm/px (4.7 in/px)
Flight altitude	600 m (1970 ft)	600 m (1970 ft)	600 m (1970 ft)
Maximum frontal overlap	95%	95%	95%
Maximum coverage*	1470 ha (3700 ac)	1065 ha (2600 ac)	1100 ha (2700 ac)

GSD overview RGB Oblique camera

Oblique Sony a6100 3D mapping camera

GSD at 120 m flight altitude	3.9 cm/px (1.54 in/px)
Flight altitude	120 m (400 ft)
Maximum frontal overlap	90%
Maximum coverage*	180 ha (450 ac)
Lowest possible GSD	1.6 cm/px (0.63 in/px)
Flight altitude	49 m (160 ft)
Maximum frontal overlap	75%
Maximum coverage*	70 ha (180 ac)
2.0 cm/px GSD	2 cm/px (0.79 in/px)
Flight altitude	62 m (203 ft)
Maximum frontal overlap	80%
Maximum coverage*	90 ha (230 ac)
600 meters (1970 feet)	19.5 cm/px (7.6 in/px)
Flight altitude	600 m (1970 ft)
Maximum frontal overlap	95%
Maximum coverage*	840 ha (2075 ac)

* side overlap 70%

Multispectral camera



Micasense RedEdge-P

Technical specifications	5 multispectral sensors (R, G, B, RE, NIR, 5.5 mm lenses), panchromatic band, 10.3 mm lens, nadir configuration	
Payload weight (incl. mount)	502 g (1.1 lb)	
Lowest possible GSD	2.0 cm/px 0.78 in/px	
Maximum coverage at lowest GSD*	Up to 90 ha (230 ac) at 60 m (190 ft) flight altitude	
Maximum coverage at 120 m (400 ft)*	Up to 160 ha (395 ac) at 4 cm/px (1.57 in/px) GSD	
Horizontal absolute accuracy (RMS) with PPK (w/o GCPs)	Down to 3 cm (1.18 in)	
Vertical absolute accuracy (RMS) with PPK (w/o GCPs)	Down to 5cm (1.97 in)	
Sensor type	5 individual sensors Red, Green, Blue, Rededge, Near-infrared,	panchromatic sensor
Sensor size x	5.04 mm (0.19 in)	8.5 mm (0.33 in)
Sensor size y	3.78 mm (0.15 in)	7.1 mm (0.28 in)
Mega pixel	5 × 1.58	5.1
Shutter type	Electronic shutter	Electronic shutter
Pixel in x	1456	2464
Pixel in y	1088	2056
Focal length of lens	5.5 mm (0.22 in)	10.3 mm (0.4 in)
Focal length (35mm equivalent)	41 mm (1.61 in)	38,6 mm (1.52 in)
Vertical field of view	38.3°	37.7°
Horizontal field of view	49.6°	44.5°
Minimal trigger time	0.5 s	0.5 s
Minimal trigger distance	8 m (26 ft)	8 m (26 ft)

GSD overview of multispectral camera

Micasense RedEdge-P

GSD at 120 m flight altitude	4 cm/px (3.2 in/px)
Flight altitude	120 m (400 ft)
Maximum frontal overlap	80%
Maximum coverage*	150 ha (380 ac)
Lowest possible GSD	2 cm/px (0.78 in/px)
Flight altitude	60 m (195 ft)
Maximum frontal overlap	75%
Maximum coverage*	100 ha (300 ac)

A side-profile view of an orange Wingtra Gen II drone. The drone features a large, curved orange wing and a black motor with a propeller mounted on top. A camera is visible on the right side of the fuselage. The drone is supported by a thin white leg on the left and a landing gear assembly on the right. The background is plain white.

wingtra
GEN II

For a quote, a live demonstration or more information
on the Wingtra products please contact us via
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