

Secure Drone for the Future

蒼天

SOTEN



Power to Move Societal Infrastructure Forward

We have created the "eyes" that bring the sky closer and redefine open-air as a pathway rather than a void.

We want to deliver this to all the people who build and maintain our societal infrastructure to create a better future, with the hope that they will be able to simultaneously achieve economic growth and increased job satisfaction.

The drone is a partner that brings safety and efficiency to your work, giving you time to enjoy the improved future that you create.

Our drones have been optimized by combining all kinds of home-grown technologies including control algorithms, airframe, communication system, camera, propellers, and data security, all designed and made in Japan.

We are proud to be society's new partner.

FEATURE 01



Small Aerial Photography Drone
1.7kg/65cm wide/IP43

FEATURE 02



Wide expandability, including one-touch switchable cameras, top mounting, and MAVLink

FEATURE 03



Security measures for flight data, communications, and photo/video data

FEATURE 04



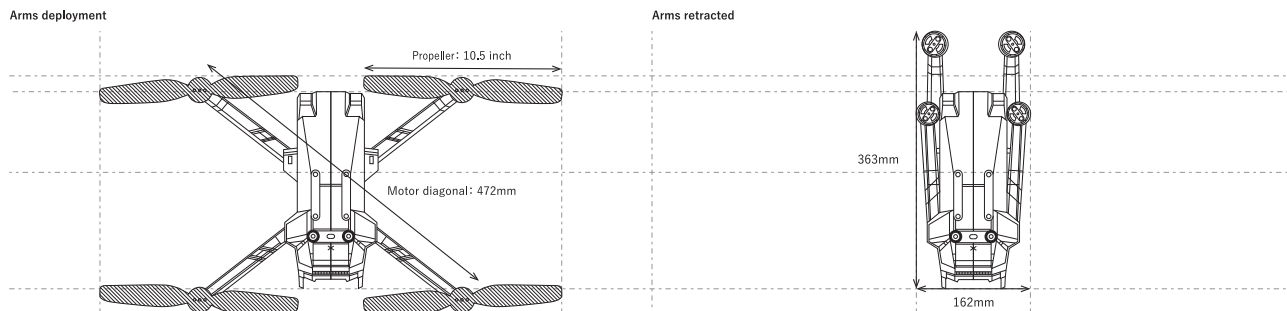
Easy-to-operate user interface

FEATURE 05



Support for control and monitoring using closed network LTE communication (option available in Japan)

SIZE



SPEC

Aircraft

| | |
|--|--|
| Dimensions | Unfolded 637mm×560mm (including propellers) Folded 162mm×363mm |
| Height | Unfolded 153mm (including propellers) |
| Weight | 1.7kg (including standard camera and battery) |
| Number of rotor blades | 4 |
| Intelligent battery | Lithium-ion battery 94Wh, 1 pc |
| Operating frequency | 2,412 - 2,477 GHz |
| Hovering accuracy (using vision positioning) | Vertical: ±0.1m Horizontal: ±0.3m |
| Hovering accuracy (GNSS) | Vertical: ±0.5m, Horizontal: ±1.5m |
| Maximum pitch angle | 30° |
| Maximum angular velocity | Pitch: 80°/s, Yaw: 45°/s |
| Maximum ascent speed | 3m/s |
| Maximum descent speed | 2m/s |
| Maximum speed (no wind) | 15m/s |
| Operational limit altitude | 2000m |
| Maximum airspeed | 15m/s |
| Max flight time* | With standard camera, wind speed 8m/s: 25min. Without standard camera, wind speed 8m/s: 29min |
| Ingress protection | IP43 (with camera, gimbal, and battery) |
| GNSS | GPS + QZSS + GLONASS + SLAS |
| Operating temperature | 0°C to 40°C |
| Optional items | LTE comms module Spare battery |

Vision system

| | |
|--------------------------|-------------------------------------|
| Obstacle detection range | Forward: 10m, Up: 5m, Down: 5m |
| Obstacle detection angle | 70° horizontal, 40° vertical |
| Obstacle detection freq. | Forward: 10Hz, Up: 10Hz, Down: 10Hz |
| Operating environment | Adequate lighting and clear texture |

Infrared sensor

| | |
|--------------------------|--|
| Obstacle detection range | Up: 2m, Down: 12m |
| Obstacle detection angle | Up: 27°, Down: 2° |
| Obstacle detection freq. | Up: 50Hz, Down: 50Hz |
| Operating environment | Large, diffuse or reflective obstacles |

Remote controller (standard product)

| | |
|---|---|
| Operating frequency | 2,412 to 2,477 GHz |
| Maximum distance (without obstructions or radio interference) | 4km |
| Battery life | Up to 4 hours |
| Operating temperature | 0°C to 40°C |
| Security | AES encryption method |
| Multiple operations | Control can be transferred between two radio controllers. |
| Supported mobile devices (customer provided) | |
| OS | Android™ 4.1 or higher |
| Terminal | USB Type-C™ |
| Confirmed models | Sony Xperia™ 5, 10 III (more coming soon) |

Visible camera (standard product)

| | |
|------------------------------|--|
| Number of effective pixels | 20 megapixels |
| Still image shooting method | JPEG / DNG / JPEG+DNG |
| Still image shooting quality | Compression: SuperFine / Fine / Normal Resolution: 20MP / 15MP / 10MP |
| Movie recording method | MOV / H.264 |
| Movie recording quality | 4K: 30fps 2.7K: 60fps / 30fps FullHD: 120fps / 60fps / 30fps HD: 60fps / 30fps nHD: 240fps / 120fps / 60 fps / 30p |
| Video recording time | Available recording time: 60 min. Auto-split: OFF / 1 / 3 / 5 / 10 min. (Split by 4GB in the case of FAT32) |
| Sensor size | 1 inch |
| Shutter system | Mechanical shutter system |
| Focus mode | Mode: Single AF / Continuous AF / MF Area: Multi AF / Spot AF |
| Exposure compensation | -2EV to +2EV (step of 1/3EV) |
| Recording media | microSD UHS speed class: ≥ U3 or V30 Video class: ≥ V30 |
| Security | Data can be encrypted as it is recorded on the recording media. Encryption can be enabled/disabled. |

Camera gimbal

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|------------------|-------------------------------------|
| Gimbal mechanism | 3-axis |
| Operable range | Pan : ±85° Tilt: -115° to 45° |
| Maximum speed | Pan: 60°/s Tilt and roll: 100°/s |
| Control accuracy | ±0.02° |
| Switching method | One-touch camera switching |

Infrared camera + visible camera (optional accessory)

| | |
|------------------------------|---|
| Effective pixels | Visible camera: 12 megapixels Infrared camera: 81,920 pixels Temperature resolution: <60mK Dynamic range: up to +140°C (high gain) |
| Still image shooting method | JPEG / DNG / JPEG+DNG |
| Still image shooting quality | Compression: SuperFine / Fine / Normal |
| Video recording method | MOV / H.264 |
| Video recording quality | FullHD / HD |
| Video recording time | Available recording time: 60 min. Auto-split: OFF / 1 / 3 / 5 / 10 min. (Split by 4GB in the case of FAT32) |
| Recording media | microSD UHS speed class: ≥ U3 or V30 Video class: ≥ V30 |
| Security | Encrypted data can be recorded on recording media. Encryption can be enabled/disabled. |

Multi-spectral camera (optional accessory)

| | |
|----------------------------|---|
| Number of effective pixels | Approx. 20 megapixels (5 MP/wavelength) |
| Sensor size | 1 inch |
| Shutter system | Mechanical shutter system |
| Acquisition wavelength | NDVI mode: 550nm, 660nm, 850nm |
| Filter size | Filter diameter: 30.5mm Thickness: 1mm, Weight: 4.4g |
| Recording media | microSD UHS speed class: ≥ U3 or V30 Video class: ≥ V30 |
| Security | Encrypted data can be recorded on recording media. Encryption can be enabled/disabled. |

* Please pay attention to the remaining battery level in the GCS application, as battery capacity will change depending on conditions such as temperature and the number of times the battery has been used.

ACCESSORIES

Accessories, optional cameras, and optional items are sold separately.

ACCESSORIES 01



Smart controller

ACCESSORIES 02



Radio controller hood

ACCESSORIES 03



Standard battery charger

ACCESSORIES 06



Standard battery

ACCESSORIES 04



Triple battery charger

ACCESSORIES 07



Infrared camera + visible camera

ACCESSORIES 05



Spare propellers

ACCESSORIES 08



Multi-spectral camera

Other accessories and options

| | |
|------------------------|-----------------------|
| Storage case (hard) | Training transmitter |
| Storage case (soft) | LTE comms module |
| Multi-mount | High capacity battery |
| Propeller guard | Optical zoom camera* |
| Standard transmitter | Upper camera mount * |
| SOTEN Virtual Trainer* | *Under development |

Please note that product configurations and specifications are subject to change without notice.

If you have any questions about the purchase or maintenance of the aircraft, please contact the distributor where you purchased the aircraft.



<https://www.acsl.co.jp/drone-soten/>