Atlas **A1**

Precision strike UAV

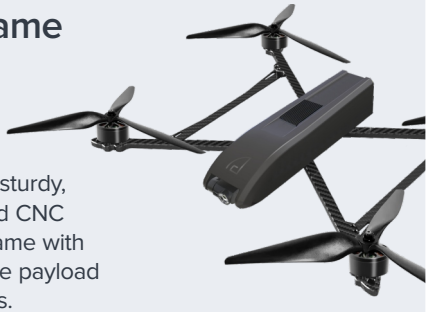
An FPV UAV with 2kg payload capacity, high resolution optical and thermal cameras and optical navigation module for flight in a GPS-denied environment.

Atlas A1 is an advanced FPV UAV, designed for precision strike capability and equipped with both a high resolution VGA thermal imaging camera as well as 64MPx day/low-light camera for target acquisition. These features, along with wide-spectrum jamming-resistant radio, 2-axis stabilized gimbal, full autonomous flight capability in GNSS-denied environment, and 20 minute flight time, makes Atlas A1 an excellent choice for even the most challenging battlefield environments.

Stabilized dual VGA thermal and low-light targeting

2-axis stabilized dual low-light capable and 640p high resolution thermal camera for target acquisition and lock-on.

Lightweight carbon chassis frame design



At the core of the Atlas A1 is a sturdy, custom-designed CNC milled carbon frame with built-in adjustable payload attachment strips.

Optical flow for flying in GPS-denied environment

Onboard Atlas A1 there is an advanced optical position tracking module to ensure course keeping in GNSS-denied environment.

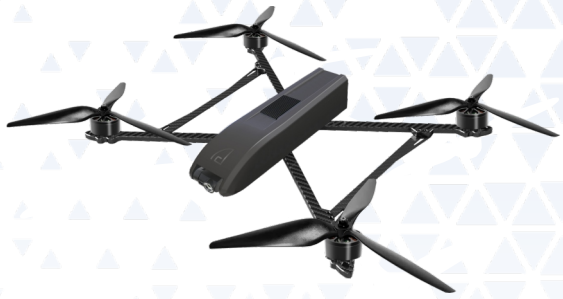
Dual directional antenna array for extended range

To extend the operational range to 10km and beyond there is a dual antenna array built in to the enclosure of the Atlas A1.

ATLAS

Atlas A1 UAV

Technical reference datasheet



PHYSICAL CHARACTERISTICS

Dimensions, w/o props (w x d x h)	**376 x 303 x 72 mm**
Armamenet capacity	**2030 grams**
Weight, w/o armament	**2330 grams**
Chassis	**Carbon fiber composite**
Ingress protection	**IP44, weather resistant**

OPERATIONAL ENVIROMENT

Operating temperature	**-20°C to +55°C**
Relative humidity	**5 ~ 95%, non-condensing**

IMAGING SYSTEM

Still image resolution	**64K (9248 x 6944)**
Daytime/low-light camera	**4K (3840 x 2160) at 60fps**
Thermal camera	**VGA (640 x 512) at 50fps**
Gimbal	**2-axis stabilized, with hall effect sensors**

MAINBOARD

Embedded flight controller	**Atlas FCM**
Onboard video transcoding	**Yes, hardware accelerated**
Onboard target tracking	**Yes, AI image co-processor**
Supported codecs	**H.264 / H.265**
Onboard storage	**Optional MicroSDXC**
Secure comm. channel	**Yes, AES256 encryption**

BATTERY AND POWER

Battery module	**6S Battery pack**
Capacity	**10 000mAh**
Battery management system	**Yes, Smart battery**
Charger	**145W**
Charge time	**95 min**

PROPULSION

Motor configuration	**Quad-rotor**
Flight time	**20 min**
Max speed	**28m/s (101km/h)**
Wind speed resistance	**18m/s**
Max service ceiling (above sea level)	**3000m**
Hand/vehicle launch	**Yes, from up to 20km/h**

ONBOARD SENSORS

GNSS	**U-blox 10 (GPS + GLONASS + Galileo)**
No-GPS positioning	**Daytime optical flow sensor**
Altitude radar	**Microwave altimeter**
Barometer	**High-precision, self calibrating**
Positional sensors	**Compass, Gyro, IMU, Thermometer**

COMMUNICATIONS

Primary radio	**Atlas ATR-200 up to 1W**
AtlasMESH Compatible	**Yes**
Full extended freq. range	**2.2 - 2.7 Ghz**
Frequency hopping	**Yes, with adaptive spectral scan**
Onboard antennas	**1.6dBi and 5dBi**
Radio range	**up to 10.7 km**
Certification	**MIC, FCC**

ACCESSORIES

Additional charger	**Atlas Smart charger (Gen 2)**
Case	**Optional hard case**
Propeller kit	**10” tri-blade props**