PRODUCTS & SPECIFICATIONS

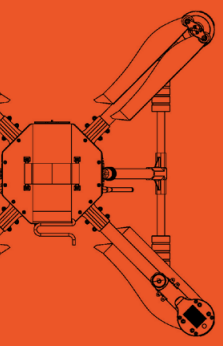
10 Years of Innovation

ARA

ROBOTICS

Leader in the drone industry in Canada

ROBOTICS



01

THE ARA-408 RECON RPAS

The RECON RPAS is a robust, high-endurance quadcopter designed to withstand challenging weather conditions (IP54 rated). This versatile drone supports a wide range of interchangeable payloads, each designed for quick and effortless assembly. It comes housed in a rugged military-grade transport case, providing maximum protection and ease of transport during deployment.

The RECON RPAS is the ultimate solution for ISR (Intelligence, Surveillance, and Reconnaissance) operations, ISTAR (Intelligence, Surveillance, Target Acquisition, and Reconnaissance) missions, and small-scale delivery, offering unmatched versatility and performance.

Hardware Benefits

The RECON RPAS is built to withstand harsh weather conditions and environments. Its robust frame and design ensures reliability, fidelity and efficiency with features such as:

- **Easy and compact storage** in a ruggedized transport case
- Battery strap on top for **easy accessibility**
- **Dedicated on-board processing** for AI
- **High volume** manufacturing

Secure Communications

Canadian-made flight controller with North American, NDAA-compliant radios.

Max Payload Capacity

The drone can carry up to 5.3 pounds (2.4 kg)

Weather-Resistant Design

Resilient performance in light rain and snow (IP54 rating)

Easily Extendable Range

Go beyond the 4 km range with signal amplifier equipment

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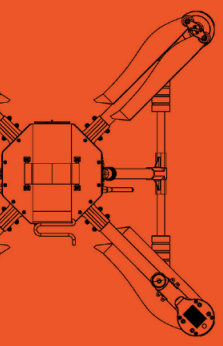

02

STATE-OF-THE-ART SENSORS

Keep Your Team Safe

The RECON RPAS is a tactical reconnaissance system with state-of-the-art sensors that provide real-time mapping, accurate target positioning and comprehensive situation awareness. This solution can quickly capture visual data and detect potential threats to ground troops, empowering operators with actionable intelligence to successfully carry out missions.

Developed in close collaboration with military organizations, the RECON RPAS is specifically engineered to support a wide variety of operations. From conducting battlefield surveillance to reconnaissance missions, the RECON RPAS offers unmatched ISTAR technology, designed to excel even in the most sensitive and demanding situations.

Secure communications
canadian-built flight controller
including the NA made radio

Transmission Perimeter

The RECON RPAS is equipped with an RF communication module capable of transmitting video feeds up to a distance of 4 km (with 1W throughput power) and communication range can be increased by using a signal amplifier.

4 km/RF 2,4 GHZ - 5,8 GHz/
Doodle Helix M1-M6 (1625-2500MHz)
MANET Network Compatibility
NDAA compliant & adhering to CAR 922 standards

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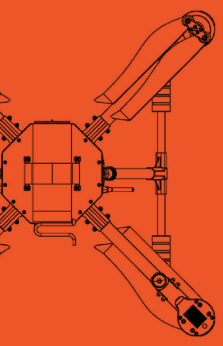

03

DESIGNED FOR RECON MISSIONS

The RPAS RECON can carry a max payload of 2.4 kg (flight time of 25 minutes at max payload). In addition, our drones can be coordinated for swarm operations, making it the ideal choice for defence and military organizations.

Compatible Camera Models

- ✓ NextVision - Dragon Eye 2
- ✓ NextVision - Colibri 2
- ✓ NextVision - Night Hawk 2
- ✓ NextVision - Raptor
- ✓ Gremsy VIO
- ✓ Sony ILX-LR1
- ✓ Teledyne FLIR Boson™
- ✓ Allied Vision Alvium 1800 U-2460

New Tactical Features

• ATAK Compatibility

Compatible with ATAK GCS software such as the ATAK UAS tool plugin.

• Onboard Computing

Our drone are equipped with an Nvidia Jetson Orin computer for onboard processing, enabling advanced AI-driven target detection, classification, and tracking. This allows for real-time data processing, decision-making, and delivery of actionable intelligence directly in the field.

• Target Position Estimation

This process involves estimating the range and GPS coordinates of targets using imagery from high-resolution cameras. The drone is capable of accurately determining the positions of targets at distances of up to 1.5 kilometers. Additionally, the system can perform estimations in low-light conditions using an infrared (IR) camera.

• Tether Compatibility

This drone supports sustained hovering at elevations of up to 100 meters. It is deployable from mobile platforms such as vehicles, serving as either a dynamic watchtower or a fixed automated observation station. For added safety, it is equipped with an automatic emergency landing system that activates if the tether disconnects.

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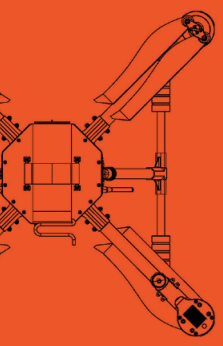

04

CLOSED SYSTEM

Access to Protected Data “Cyber Hardness”

The RECON RPAS integrates ARA Robotics’s proprietary embedded software and is coupled with advanced security measures to safeguard against data theft. The military-grade software ensures that no flight data is recorded, guaranteeing protection to sensitive information. Additionally, all radio communication is encoded according to the AES 256 encryption standard.

Mesh Networking

Wide-area mesh network between multiple drones and ground units. Resilience towards radio signal jamming and line of sight obstruction. Enables a tethered drone to act as a communication relay to extend the range of free-flying reconnaissance drones.

Stealth Flight in Tethered Mode

Data transfer via tether ensures complete radio-silent operation, making it ideal for stealth missions in conflict zones.

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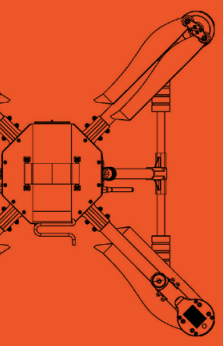
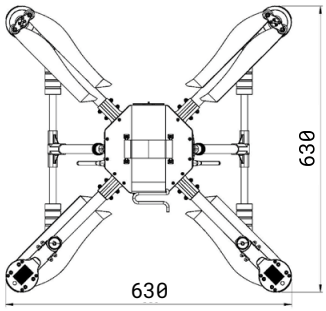


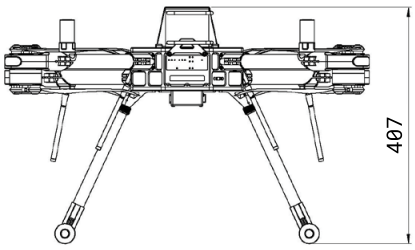
05

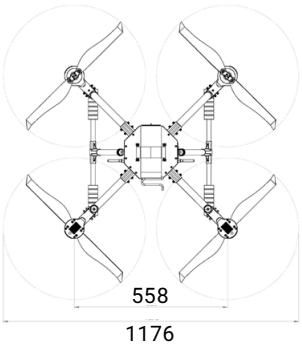
TECHNICAL SPECIFICATIONS

Unladen weight : 5.6 kg

Drone dimensions (mm) :







Flight Controller Technology (autopilot)	SKYMATE™ by ARA Robotics
Maximum flight time*	40 minutes
Transmission perimeter	4 km
GNSS system	Multiband, 1 m precision, 1 cm with RTK
Orientation measurement	Dual GNSS measurement (without magnetometer)
IP rating	54
Wind resistance	Up to 45 km/h wind gusts
Operating temperature	-30 °C to 50 °C
Weather resistance	Light to moderate rain and snow (See IP54 payload technical specifications for more information)
Batteries	6S 22000mAh Lithium-Ion
Horizontal speed	12 m/s
Vertical speed	4 m/s
Communication link	Doodle Labs 2.4Ghz Extreme, Silvus Technologies SI52000 or Helix Radios M1-M6: 1625-2500 Mhz/ 256-bit AES software encryption (12 Mbps max throughput) (FIPS140-2, Level 2 compliant)
Automatic flight features	Automated missions, take-off and landing
Ground station software compatibility	SkyControl™ by ARA Robotics and video feed accessible via ATAK - CivTAK

* With no payload and in optimal conditions

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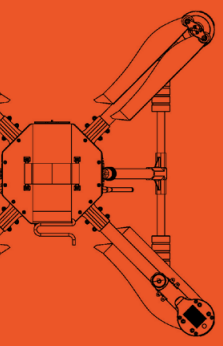

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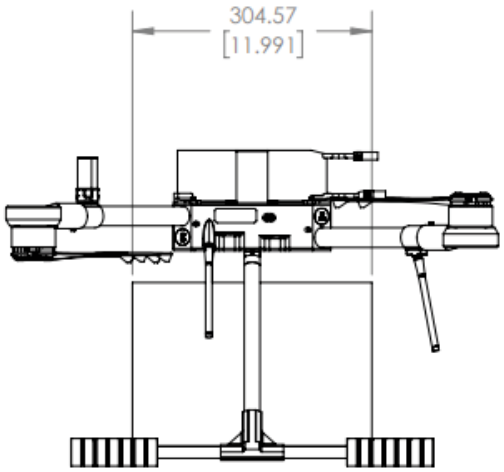
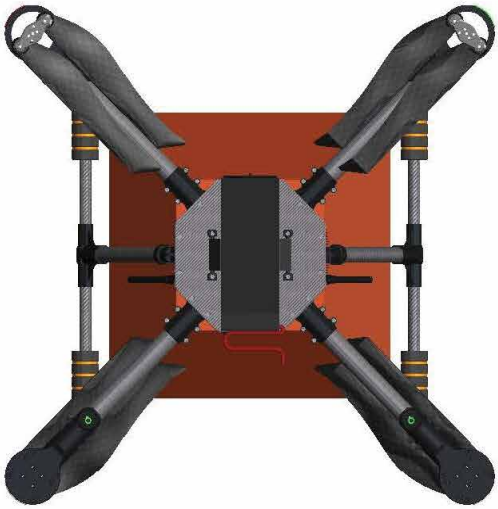
ADDITIONAL INFORMATION

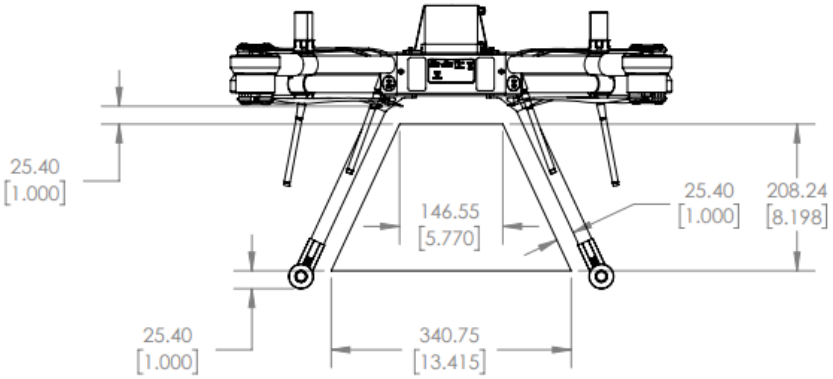
Payload Bay Volume



Side view



Top down view



Front view

Isometric view

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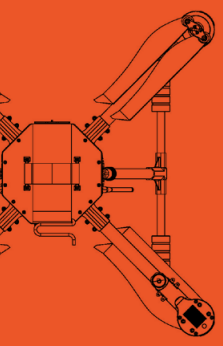

08

ABOUT ARA ROBOTICS

ARA Robotics, founded in 2014, is a Canadian company based in Montreal providing technological development and manufacturing in the field of commercial, civilian and military RPAS. Its flight controller technology, the SKY-MATE™, is currently integrated into several Remotely Piloted Aircraft Systems (RPAS) manufacturers in North America and supports the safe integration of their products into civilian airspace. RECON RPAS, designed for industrial and urban operations, excels in reconnaissance missions, particularly in GPS-denied environments, making it an invaluable tool for critical operations.

In addition to its military and industrial applications, ARA Robotics develops specialized RPAS solutions for surveying and mapping, delivering precision and efficiency in these sectors.

ARA Robotics' goal is to push the automation of the missions for each RPAS by developing tools for the perception, analytics and measurement of the environment in conjunction with North American research labs and businesses to advance prototyping and testing in its various prioritized development areas.

Contact Us

- **ARA Robotics website**
  ara-uas.com
- **Facebook**
  facebook.com/ararobotique/
- **Email**
  info@ara-uas.com
- **Youtube**
  @ararobotique
- **Phone**
  (438) 387-1306, ext. 104
- **LinkedIn**
  @ARARobotics