RUAS-160

ROTARY WING UNMANNED AERIAL SYSTEM

RUAS-160 is a compact, modular, long range, Rotary-wing Unmanned Aerial System with contra-rotating coaxial rotors. It is the result of the collaboration between the Argentinian helicopter designer and manufacturer Cicaré SA, the state-owned high-tech company INVAP SE and the agricultural service company Marinelli Technology SA.

The main components of RUAS-160 are the Unmanned Aerial Vehicle (Helicopter), the air-to-ground communications link, and the Ground Control Station. A configurable suite of specific airborne payloads provides the capabilities required for each mission.

For Defense and Security activities, INVAP implements the system with the proper combination of gyro-stabilized EO/IR sensors, LiDAR and X-Band SAR Radar, making it able to detect, recognize and identify moving and stationary targets, both on land and at sea.

For the agricultural industry, RUAS-160 is configured with a hyper-selective spraying and imaging payload, designed to obtain information to determine the health of the soil and the crops and act accordingly.

The same sensor technologies are combined to generate payloads for applications in the Oil & Gas, Forestry, Mining and High Voltage Lines. RUAS-160 also adds value in support activities for Fire Fighting and Search and Rescue missions on land or at sea.

The modularity of the system allows for the coupling of elements for sanitary operations, such as organ transport, medical kits or food distribution in emergency response operations. Due to its compact and lightweight design, it can be easily transported, deployed from a ship, and operated in adverse weather conditions with less risk than others aerial vehicles.

The Ground Control Station is based on a robust portable control system for minimal logistics operation, or on an immersive control console system with long range communication capabilities.

MAIN FEATURES

- Service ceiling: 3000 to 3500 m
- Automatic Guidance, Control and Navigation System.
- Payload transport capability in standard and optional configurations:
  - Gyro-stabilized platform with EO/IR sensors.
  - Deployable sensor module for marine environments.
  - LiDAR.
  - Lightweight X-Band SAR Radar.
  - Container for sanitary loads.
  - Crop spraying and imaging module.
  - Multispectral Cameras.

RUAS-160

Description

Length	3.10 m
Fuselage width	0.70 m
Skids width	1.80 m
Height	1.72 m
Main rotors diameter	3.60 m

Weight

Max takeoff weight	150 Kg
Empty weight	80 Kg
Payload capacity	70 Kg (sensors and fuel)

Payload Configuration and Range

Extended Range ISR[1]	EO/IR sensors Gimbal	5 to 6 hs with reserve
Multisensor C4ISTAR[2]	Gimbal, AESA Radar, AIS	3 to 3:30 hs
Agricultural operations	Spray bar and multispectral cameras	1:30 hs

Power Plant

Type	2T alternative engine
Power	39 HP
Optional	Dual alternative engine

[1] ISR: Intelligence, Surveillance and Reconnaissance.
[2] C4: Command, Control, Communications, Computer; TA: Target Acquisition.