



AviationTechnology

INDUSTRIAL UNMANNED AERIAL VEHICLES

Raven TAR Series



Tailored for Agricultural
Applications

UNMANNED AERIAL VEHICLES
FOR
AGRICULTURAL APPLICATIONS



MR AVIATION LTD

We Provide Industrial and High
Duty Drone UAVs



AviationTechnology



◀ TAILOR-MADE UAVs

Our company focused on Industrial UAVs and Heavy Duty Drones while designing and manufacturing both generic and customised UAVs and Drones in our plant. We work with our customers in the field for the turn-key solutions including Industrial Inspections, Search and Rescue (SAR) missions, Drone Delivery, Extra high resolution Aerial Imaging and Photogrammetry.

◀ POWERFUL

◀ SPECIAL

◀ INDUSTRIAL



◀ RAVEN TAR – AGRICULTURAL PLATFORM ▶

RAVEN TAR is designed for heavy duties of sprayings or customer required specific operations.

Thanks to its 100% carbonfiber and aluminum composite chasis, latest technology flight controllers and motors, Raven TAR enables fierce condition flights.

Fields with different sizes and characteristics require different spraying equipments. This rule applies to UAVs too. Thus, MR Aviation Technology offers 3 models with various tank volumes:

- Raven TAR10
- Raven TAR16
- Raven TAR30

Features & Capabilities

- Spraying performance like more than 80 decares in an hour
- Carbon Fiber Chassis, arms and legs
- Aluminum Motor Mounts
- Easy-to-fold Arm mechanisms
- High strength carbonfiber cover (important for taking care of electronics)
- Automatic Field Route Generation
- Return-to-home when liquid or battery is empty
- Fixed and Robust Landing Gears
- High quality HobbyWing Motors
- 22.000 mAh Lithium Polymer Batteries
- Up to 10 km Remote Control Range

**RAVEN
TAR**

Spraying Drones

Raven TAR10



Raven TAR16



Raven TAR30



◀ Features & Capabilities

It is possible too mount extraordinary gimbals and payloads.

Battery Bay can carry wide range of batteries (10.000 - 32.000 mAh).

All parts and spare pieces held in stock - in any case of a crash or damage, any technical service can be provided by MR Aviation Technology or its partners. (Limited with geographical boundaries)

▶ Autonomous Flight Control ▶



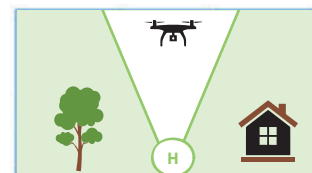
◀ Smart Remote Controllers ▶

Basic Remote Controller (2-3km)
Android Remote Controller (10km)
Control with Android Cell Phone or Tablet

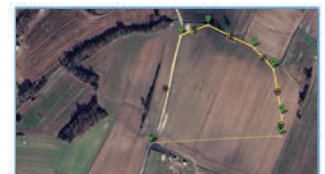


◀ Autonomous Missions

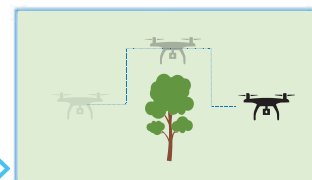
- Automatic WayPoint Missions and Return-To-Home
- Prepare Parametric Field Routes
- Constant distance between UAV and ground thanks to Terrain Following Radar
- Object Avoidance with front and rear radars
- Liquid Pump with automatic flowrate algorithm
- Long Range Video transmission for streams of two cameras.



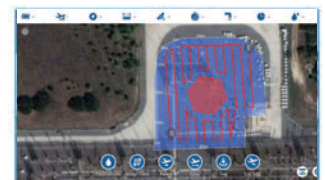
Return-To-Home



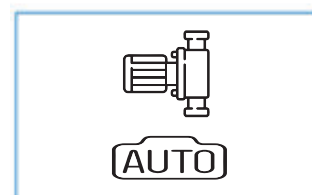
Waypoint Missions



Object Avoidance



Field Routing



Automatic Pump



Terrain Following

◀ Solutions and Applications

Agricultural Spraying

Products under Raven TAR series can operate autonomously without any user inputs. Thanks to its front and rear microwave radars, they can avoid any obstacles on the field, while terrain follow radar ensures its distance to the ground is fixed.

The application used for creating routes lets you define and select your fields on the system. After input of spraying height and dosage for unit area to the application, you are good to go!



Raven TAR continuously monitors remaining pesticide and battery levels. When pesticide tank or battery drained, Return-To-Home procedure will be started automatically. After servicing drone batteries and refilling the tank, mission will resume from where it stops. This operation ensures that every single area is sprayed.

As a result, efficiency of spraying performance will be increased, chemical amount which infiltrate to underground waters will be decreased.

Experts are also indicating, spraying from an aerial platform is up to 5 times more efficient compared to conventional methods.



RAVEN TAR BATTERY PACK



It is very easy to operate your device with Smart Batteries, which are designed for rough field conditions. With smart locking mechanism, loading and unloading can be done in the blink of an eye.

Thanks to specially-chosen high performance battery cells of Raven TAR, battery capacity and battery health can be sustained for longer cycles, they never put you down!

HIGH PERFORMANCE CHARGING STATION



It is very crucial for pesticide applications to continue spraying operation without any interrupts. Most of the time, battery change and charging process causes undesired pauses.

The charging station supplied with Raven TAR can handle two batteries at the same time and can charge them in just 25 minutes with its powerful 2.800 W output. With this performance, it provides uninterrupted spraying operations.

This charging station is developed for Raven Battery Packs, and designed for field conditions. You only need a generator or electric outlet on the field. Just prepare your pesticide mixture, rest is Raven's business!

Raven TAR Technical Specifications

Technical Specifications

Model	Raven TAR16
Dimensions	1755 mm X 1520 mm X 690 mm
Dimensions (Folded)	950 mm X 880 mm X 550 mm
Folding Direction	Side
Wheelbase	1620 mm
Battery	12S - 22.000 mAh
Empty Weight	19.5 kg (battery included)
Maximum Take-off Weight	36 kg
Maximum Payload Weight	16 kg
Positioning Accuracy	Vertical 0,2 m / Horizontal 0,2 m (GPS Mode)
Maximum Yaw Rate	150 °/s
Maximum Roll Angle	35°
Maximum Climb Rate	5 m/s
Maximum Descent Rate	3 m/s
Maximum Cruise Speed	20 m/s
Maximum Altitude	400 m (Software limited)
Wind Resistance	40-50 km/h
Maximum Flight Time	12dk (Full Load)
Motor Type	HobbyWing X8
Propellers	3090, Carbon Composite, Foldable
Landing Gears	Fixed
Operation Temperature	-20 °C - 50 °C
Water Resistance	IP44
Payload Mount	Quick Mount and Release Payload Mount
Battery Capacity	22.000 mAh
Battery Voltage	44,4 V
Battery Type	Lithium Polymer
Battery Power	976.8 Wh
Battery Operation Temperature	0 °C - 50 °C
Battery Storage Temperature	Less than 3 months : -20 °C - 55 °C More than 3 months: 22 °C - 28 °C
Battery Charging Temperature	5 °C - 35 °C
Maximum Charging Power	2.800 W
Remote Controller Frequency	2,4 GHz
Remote Controller Range	10.000 meters

Product Pictures





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