

Autonomous Security Drone

Autonomous surveillance solution for industrial sites



Technical features

Drone	
Frame format	Format in X, with 8 motors
Dimension between engine spacing	39 inches
Propeller size	22 inches
Weight	around 12 kg with payload and battery
Autonomy	25 minutes
Battery	2 x 16 000 mA / 22.2V / 6 cells
Altimeter	Lidar type / accuracy +/- 0.39 inches up to 39 inches altitude
Obstacle detection	360° Lidar type / 60m detection distance
Pan/Tilt	Gyrostabilized on 2 axes, Brushless motor
Camera	Mobotix model S16
Optical	Color 45°/31°/15° to 6 Mpix Thermal radiometry 45°/31°/15° to 50mk
Recording	On microSD card 128 GB
Transmission	2.4 GHz Wifi and GSM backup / 256 bit encryption
Security	Redundancy system, comprising : <ul style="list-style-type: none">▪ double parachute with independent feeding▪ double battery with protection fuse▪ 8 push/pull motors▪ double flight controller▪ double GPS▪ Wifi with GSM backup▪ obstacle detector with bypass
Landing	Precision ultrasound solution
Navigation	GPS, GALILEO, GLONASS, RTK
Resistance	IP54, operating temperature from -20° à +50°C (-4°F to 122°F)

Docking station

Frame	Steel frame with epoxy paint
Dimensions (L x l x H)	70 x 47 x 63 inches
Weight	770 lb
Charger	Charger 5 x 2 batteries cylinder format with charge control independent of the 10 batteries. Temperature control during charging and security system
Automaton	Industrial Automaton/PC SIEMENS brand managing all the functions of the station : <ul style="list-style-type: none"> ▪ opening/closing the cover ▪ maintaining, loosening and centering the drone ▪ chargeur management ▪ plug and removing the drone battery ▪ control of the parameters before the launch of a mission
Management software	GENETEC with drone plugin for mission management and interconnection with existing security systems <ul style="list-style-type: none"> ▪ creating missions from Google Maps ▪ creating of traffic zones and prohibited areas ▪ setting safe fallback zones in case of failure ▪ alarm display with location on the map ▪ starting and stopping missions ▪ display of the telemetry of the drone ▪ display of station information ▪ display of weather information
Other software	<ul style="list-style-type: none"> ▪ Artificial intelligence for intruder detecton and tracking ▪ Communication interface, drone, automation, Genetec and weather station ▪ Artificial intelligence for obstacle avoidance ▪ Web interface for remote monitoring and maintenance with charge cycle control, battery voltages, cover position, weather, UAV position, ...
Network	Industrial switch, VPN with GPRS backup, connection with station secured by a USB key with 1021 bit encryption
Resistance	IP54, operating temperature from -20° to +50°C (-4°F to 122°F)
Accessories	Weather station including : <ul style="list-style-type: none"> ▪ outdoor/indoor temperature sensor ▪ speed and wind direction ▪ indoor/outdoor humidity ▪ atmospheric pressure, precipitation Touch screen for automaton management and site maintenance