



## **DB MARS Information Technologies and Defense Industry**



### **DB MARS AKK-1**

DB MARS – Six Armed Copter (AKK-1) is a small scale Unmanned Aerial Vehicle (UAV) offering advanced sensor and processor technology, with the help of its real time Operating System (O/S). O/S of DB MARS AKK-1 offers both an integrated multithreading programming environment as well as brand new autopilot functions. Therefore, this advanced platform gives our customers great freedom and takes them to a different level in their autonomous projects or their high-tech works.

AKK-1 is developed for civil and defense applications according to its installed different payload systems. It can be controlled by its high performance, flexible and reliable autopilot system and by its special ground control stations. AKK-1 is a modular and completely wireless system with its full autonomy capabilities including take off, flight, waypoint navigation, special mission compilations and landing.

Ground control station of AKK-1 is also vary from Android based Operating Systems (O/S) to Windows, Linux and IOS based Operating Systems (O/S) according to our customers needs. In fact, AKK-1 can also be controlled only from your cellular phone with its unique Android based ground control station or it can also be controlled with laptops, tablets or computers with their corresponding O/S according to our customer requests. AKK-1 can also be controlled by its pilot manually incase of emergency or the conditions necessitate extra safety. Hence the customers should select optionally and state what type of ground control stations that they want to control DB MARS AKK-1 UAVs during their orders.

AKK-1 has also some special modes such as altitude hold, position hold and follow me mode. With follow me mode, AKK-1 can follow you while you are walking, running or driving in the car.

AKK-1 UAV has both Lidar and Optical Flow sensors integrated into its autopilot system. This feature enables pilots to continue flying in position dependent modes (such as hover, loiter or position hold) at a desired altitude even if GPS system fails or there is no access to GPS satellites.

Technical properties and the civil and defense application fields of DB MARS AKK1 are stated as follows depending on the special payload systems installed on it.



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### Technical Properties

Weight	: 2000 gr	Maximum Velocity (Increased optionally)	: 25 m/s
Range (Increased optionally)	: 1000 m	Minimum Velocity (At hover position)	: 0 m/s
Flight Time (Increased optionally)	: 15 dk	Maximum Altitude (Increased optionally)	: 500 m
Take-Off Weight (Increased optionally)	: 2500 gr	Control Types	: Manual and Fully autonomous
Payload Weight (Increased optionally)	: 500 gr	Ground Control System Optional Operating Systems	: Android Windows Linux IOS

The full autonomous flight and performance videos of DB MARS AKK-1 UAV and its ground station alternatives can be seen in [www.dbmars.com](http://www.dbmars.com).

Pre-orders can be taken at any time; however please contact as early as possible to get these unique UAVs with the opportunity of campaign prices.

For more detailed technical specifications and quotation requests; please contact with [info@dbmars.com](mailto:info@dbmars.com)

### DB MARS AKK-1 Defense Applications

Customer needs can change the installed payloads on AKK-1 and hence the defense application field can be changed easily. According to the optional payload systems installed on DB MARS AKK-1 UAV, some possible defense application fields are as follows:

- Site Monitoring and Security
- Border Monitoring and Security
- Maritime Monitoring and Security
- Rescue, Reconnaissance and Surveillance
- Law Enforcement
- HazMat (Hazardous Material) and Sensing Operations
- Biological, Chemical and Gas Agent Detections



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### **DB MARS AKK-1 Autopilot System**

#### **DB MARS AKK-1 Defense Applications**

Customer needs can change the installed payloads of AKK-1 and hence the civil application fields can be changed easily. According to the optional payload systems installed on DB MARS AKK-1 UAV, some possible civil application fields are listed as follows.

- Data collection from its payload and sensor systems
  - Monitoring (Photography and video collection from its high-quality camera systems)
  - Meteorological data collection
  - Gas or chemical detections and similar data collections
  - Ortophoto and mapping applications
- Emergency management applications
  - Communications Systems
  - Disaster Response and Damage Assessment
  - Emergency Medical Services
  - Search and Rescue (Wilderness, marine and urban)
- Public Health and Public Works
- Public Monitoring and Anarchy Activity Protections (Gas spraying, etc.)
- Usage in agricultural fields (Seeding, spraying chemicals, monitoring of plant growth etc.)
- Traffic/traffic jam monitoring and management
- Environmental management and safety
  - Fire Fighting (Fire service and HazMat operations)
  - Wildlife Monitoring
  - Fisheries Management
  - Forest and Mountains Monitoring
- City and Environment Planning Operations (Roads, Water Channels, Dams, Building monitoring from air etc.)
- Electricity, power lines, pipes monitoring and Utilities assessment etc.