

## Autoland Capability for Fixed Wing UAVs

### Vision based autonomous landing for Fixed Wing UAVs

The recovery phase is the most challenging and hazardous part of a UAV flight. By combining our knowledge of UAV retrieval with over 20 years of 3D vision processing experience, Roke has developed an autonomous landing capability for fixed wing UAVs.

#### Key Features and Benefits

- Requires no ground infrastructure – self contained landing capability
- Lands on a moving platform
- Works in a GPS denied environment
- Compiles database of potential emergency landing sites along flight path
- Exploits low cost sensors
- Compact system
- Passive system – covert operation
- Interfaces with flight control system or autopilot
- Detects obstacles on landing area



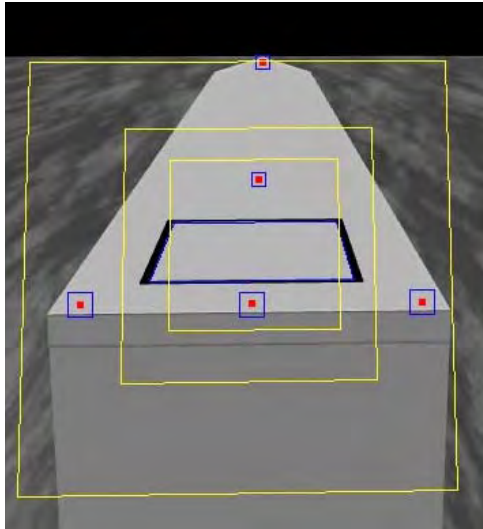
Our system uses video from a UAV mounted camera to identify the landing area, then calculates the relative position of the UAV.

The flight path from the current position to the landing point is then calculated. This information is passed to the autopilot or flight control system. The UAV is then flown along the calculated trajectory allowing the UAV to land autonomously.

**Provides capability for fixed wing UAVs landing onto:**

- Runways
- Temporary landing areas
- Aircraft Carriers
- Land Vehicles

The system uses RAPID, Roke's model-based visual tracking software. RAPID tracks pre-specified structures including 3D objects – such as buildings, ships – and 2D objects including painted markings. The autoland system calculates the position and orientation of the UAV relative to the landing area.



To discuss how this capability can be integrated into your platform contact us by using the details below

**Other Datasheets of Interest:**

*Miniature Radar Altimeter*

*Autoland Capability for Rotary Wing UAVs*



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