

Sense and Avoid Technology Added to UAS



Aerialtronics, a Dutch unmanned aerial system manufacturer, has developed a sense and avoid solution for the Altura Zenith unmanned aircraft which will fundamentally change how companies inspect telecommunication towers, energy pylons, bridges and buildings.

This advanced sense and avoid solution is designed to help the Zenith UAS stay clear of objects during inspections as it relays images, video and data to the user or a third party. The solution is expected to save customers thousands in costs, particularly during lengthy engineering maintenance projects, or regular inspections of bridges or wind turbines.

Game-changer

This will change the way we inspect telecommunication towers, utility poles, oil rigs and even chimney stacks forever, explained Jan Wouter Kruyt, head of Research and Development at Aerialtronics. The Zenith can be flown at an adjustable safe distance with a minimum of two metres from the object while recording or relaying photographs, video or data from the field. This enables even inexperienced users to safely fly a camera next to a utility pole or chimney, he added.

The sense and avoid solution can detect obstacles up to seven metres away at a 360-degree angle, whether they are static or moving. There are also bounce back and distance keeping functions.

Distance sensing

Kruyt continued by saying the solution Aerialtronics has developed is distance sensing and distance keeping. The UAS can be programmed to 'stop moving forward' or 'bounce back' when they get within a critical distance from any object, be that a wall, a pole or a flying object. It is particularly important in windy conditions where the drone stability is crucial. With sense and avoid, the Zenith UAS can detect if there is a risk of collision and respond accordingly.

Combined with the flight performance of the Zenith and the flexibility of its payloads range, this smart sense and avoid technology adds another dimension to the Altura Zenith, which enables users to focus on delivering data results instead of flying skills.

According to Kruyt this sense and avoid solution really adds value to what customers can buy. The Zenith is a robust and flexible platform. It's a heavy lifter, it has strong endurance and is very stable under difficult wind conditions. If you add a Zenith branded sense and avoid system to that, it will be indispensable in the inspection market, he concluded.

[A video of the solution can be watched here.](#)