

Customer Testimonials

ABRIS Design Group

Obtaining High Precision and Accuracy with Tallysman's Helical Antenna Solutions



ABRIS Design Group is a leading Ukrainian UAV manufacturer based in Kyiv. One key ABRIS-DG product is the FLIRT Cetus unmanned aircraft, designed for high-precision aerial surveys and used worldwide.



A Standard Design Solution for Our Aircraft

“ To obtain accurate and complete orthophoto maps of the terrain, it is crucial to navigate the aircraft along the designated flight routes and to accurately determine the positions of the center of photographs in flight or after a session. To do so, we use the EPSKit-7 dual-frequency GNSS system. The imaging sensor is a 61 MP full-frame CMOS, SONY A7RIV camera. Ultra-light and compact HC871 helical antennas, from Tallysman Wireless Inc., are collocated with the optical axis of the camera and operate as part of the GNSS system. This allows reliable and accurate centimeter level position accuracy of the image projection center, at a flight speeds of up to 30 m/sec.

The resulting series of images have good orientation and accurate geo-referencing, which allows generation of high-

precision ortho-mosaics without additional costly ground survey work. In addition, the obtained photographic data are also suitable for processing by the stereoscopic methods, which, as a rule, is impossible for aerial photography from an aircraft-type UAV.

The high efficiency, accuracy and reliability of the above-mentioned GNSS systems underlie our next method – which is to use a two-antenna GNSS systems to determine the angular position of the aircraft, and operate with these values for aircraft navigation, as well as control the camera angle relative to the optical axis to compensate for the wind angle. It is expected that the values determined in

