

Partnership Results in Hyperspectral Multi-sensor Aircraft



With the successful integration of SPECIM's AisaFENIX, a full spectrum imager, on the DA42 MPP special mission aeroplane, Diamond Aircraft Industries has added first-rate hyperspectral detection capabilities to its range of turnkey survey solutions. Diamond Aircraft Industries, Exogenesis and SPECIM teamed up to unite hyperspectral data capture and multipurpose data analysis options on the advanced DA42 MPP remote sensing platform.

Test flights in Wiener Neustadt (Austria) where Diamond Aircraft is based demonstrated the performance of this hyperspectral turnkey solution. According to Diamond Aircraft and SPECIM, the AisaFENIX sensor found all the intended targets with zero false positives, found potential unexploded ordnance and revealed a body of forest with strong soil-

pollution-related stress. Spatial, spectral and radiometric resolution of the sensor resulted in the ability to detect sub-pixel targets that were less than 3-9% of a size of a single pixel. For example, a standard sized beverage can was detected from within an image pixel of 65cm GSD, based on its spectral signature.

Test flights were also supported by SOMAG with the gyro-stabilised mounting for AisaFENIX and IGI navigation and georeferencing systems.

The DA42 MPP is designed as a multi-purpose platform, and the aircraft is ready to carry various sensors according to specific customer needs. The DA42 MPP Geostar Hyperspectral is particularly suited for ISR (Intelligence, Surveillance and Reconnaissance), mineralogy or environmental applications.

SPECIM, Finland, is a leading manufacturer of hyperspectral imaging instruments and systems. In addition to AISA airborne remote sensing systems, SPECIM provides ImSpector Imaging Spectrographs, Spectral Cameras and Hyperspectral Imaging Solutions to an increasing range of demanding industrial and science applications like colour measurement, recycling, geological core logging, process analytical technology (PAT), life sciences, chemical imaging and forensics.

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