

# Vexcel Imaging Launches Aerial Camera Solution for Wide-area Data Collection



Vexcel Imaging has released the next camera based on its 4th-generation camera architecture, the UltraCam Condor 4.1. The new camera addresses a very specific application: high-altitude ortho image generation with superior image quality and flying efficiency.

The camera design consists of a very wide, high-resolution RGB array that delivers an impressive resolution and flying efficiency due to across-track footprint of 48,462 pixels. The system also features a lower resolution rectangular NIR for classification projects and a lower resolution rectangular PAN for producing highly accurate DSMs and DTMs through dense matching. Due to the rectangular image footprint, frontlap of 85% is

obtained for maximum dense matching quality. According to [Vexcel Imaging](#), this breadth of functionality eliminates the need for additional flights by other sensors, given that all necessary data sets can be derived from a single UltraCam Condor 4.1 flight.

## CMOS technology

Benefitting from UltraCam 4th generation technology, the UltraCam Condor 4.1 features numerous enhancements that begin with a fully CMOS-based architecture that enables a fast frame rate of 1 frame per 0.7 seconds, allowing customers to operate the system reliably even with jets and turboprops at rapid speeds. To manage the vast amount of data collected by the CMOS sensors and still maintain the impressive image dynamic enabled by the latest CMOS technology, completely new electronics were implemented for UltraCam 4th generation systems. New temperature-controlled lenses, designed solely for Vexcel Imaging, ensure imagery of exceptional sharpness, resolution and contrast.

A revolutionary feature, exclusive to all UltraCam 4th-generation cameras, is the Adaptive Motion Compensation (AMC). AMC is an innovative motion compensation approach that, in addition to correcting image blur in the direction of flight as provided by traditional Forward Motion Compensation (FMC) technology, also addresses blur caused by multi-directional camera movements during flight.

“If the goal is to map larger regions – such as countries or continents – in record time and to generate ortho images of the highest quality, using just a single sensor, the UltraCam Condor 4.1 is the system your job deserves,” said Alexander Wiechert, CEO of Vexcel Imaging.

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