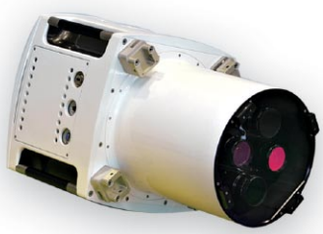
ULTRACAM Lp

Photogrammetric Digital Aerial Camera

Features an impressive collection footprint of 92 megapixels (11,704 x 7,920 pixels pan)

Overview



The UltraCamLp features an image footprint collection capacity of 92 megapixels (11,704 x 7,920 pixels pan), made possible through advanced electronics and a CCD array of just 6 µm. The system is ideal for smaller large-scale and photogrammetric projects, high-resolution (true) orthophoto production, DSM (digital surface model) production, aerotriangulation, corridor mapping, classification, and lidar integration. Benefits of the UltraCamLp rapid cycle rate include:

- Data collection at higher flight speeds
- Increase of potential forward overlap for a given GSD and speed
- Data collection at higher resolutions with the same forward overlap and speed

With superior image quality, the UltraCamLp can be used on smaller airplanes, and thus operated at lower cost. Smaller mapping companies have an affordable option for offering a digital platform and expanding their aerial services. The UltraCamLp is also ideal for larger mapping firms who need to cost-effectively fly small projects or collect digital data in conjunction with lidar or other data. The UltraCamLp provides the same high geometric accuracy, broad dynamic range, matching and stereo capabilities, and full metric capabilities, as the larger footprint UltraCam cameras. The image data are suitable for DSM (digital surface model) production, aerotriangulation, ortho mapping and 3D technical vector mapping.

Features

- *Features an impressive collection footprint of 92 megapixels (11,704 x 7,920 pixels pan)*
- *Advanced camera electronics provide the same maximum frame rate at 2.0 seconds, which increases the forward overlap at a given GSD and speed*
- *1:2.20 pan-to-color ratio delivers brilliant true-color and color-infrared (CIR) image quality with unmatched radiometric range*
- *Short frame interval allows multi-ray photogrammetry even for large-scale mapping at low altitude and high aircraft speed; forward overlaps of 80% are achieved at a 10 cm pixel size at 154 knots*
- *High level of detail with no blur due to Forward Motion Compensation (FMC) using Time Delayed Integration (TDI)*
- *Pixel size on the ground (GSD) at flying height of 1167 m is 10 cm*
- *Removable storage units provide two benefits: the length of missions is limited only by the constraints of the aircraft; ground time is minimized*
- *Maximum use of legacy environments; supports ALL standard gyro-stabilized camera mounts (PAV-30, Z/I-TAS, GSM3000) and most common GPS/IMU systems*
- *An integrated package that contains computing and solid-state storage sub-systems in the sensor head, as well as UltraNav, an optional embedded GPS/INS/FMS system, providing flexibility for onboard orientation of equipment.*
- *Weight of UltraCamLp sensor head is approximately 55 kg*

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Specifications

Sensor Sub-system (integrated in the sensor head)

- Simultaneously collects Pan, RGB and NIR
- Panchromatic image size is 11,704 x 7,920 pixels; color and NIR image size is 5,320 x 3,600 pixels
- New electronics and a smaller CCD array of just 6 µm allows 92 megapixels in pan image

Computing Sub-system (integrated in the sensor head)

- Processes raw images on board in real time, to compute quick views and histograms

Data Sub-system (integrated in the sensor head)

- In-flight storage capacity is limited only by number of solid-state storage devices on board, given space and weight constraints of aircraft
- Approximately 2,500 uncompressed images per device (~1 TB) can be stored

Operational Specifications

- At 70% and 20% overlap, with 20 cm GSD and flying at 140 knots, the data collection period is approximately 6 hours per SSD unit
- Post-processing can begin in the air and be completed on the ground with a laptop or group of PCs
- Image geometric accuracy is better than +/- 2 µm
- Time between frame collections is 2.5 seconds
- Weight of UltraCamLp is approximately 55 kg (only sensor unit required, no additional computing and storage units)

Info

For more information about UltraCamLp, visit www.iFlyUltraCam.com.

Contact Us

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