

ULTRACAMXp WA

Large Format Digital Aerial Camera



NEW!

Same GSD at Lower
Flight Altitude!

Innovative wide-angle lens
Compatible with the UCX/UCXp

Overview

The new Microsoft UltraCamXp Wide Angle large format digital aerial camera takes advantage of the same superior camera concept and image quality as the UltraCamXp but features a new proprietary, digital, high-performance, high-resolution lens system with a shorter focal length. This allows the latest UltraCam sensor to deliver the same ground sample distance (GSD) as the UltraCamXp, but at lower flight altitudes. An alternative to the UltraCamXp and at the same price, the UltraCam Wide Angle provides small-scale mapping capabilities to customers with lower-flying airplanes.

The UltraCamXp WA provides the same large image format as the UltraCamXp at 196 megapixels (17,310 across track x 11,310 along track), and a pixel size at 6 μm . The UltraCamXp WA integrates fully with existing UCXp and UCX storage and computing systems and is fully supported by Vexcel Imaging's UltraMap workflow software system. The collection rate of 2.5 Gbits per second allows for collecting more data in less time. The UltraCamXp WA is capable of collecting stereo imagery at a remarkable 1 inch GSD at a flight speed of 110 knots. Post-processing of the data can be started on board, and finished on the ground with a group of PCs for even faster turnaround.

Features

- Delivers same ground sample distance (GSD) at lower flight altitudes, providing small-scale mapping capabilities for customers with lower-flying airplanes
- Same camera concept and image quality (radiometry, geometry) as the UltraCamXp
- Largest format available (196 megapixels; 17,310 across track, 11,310 along track) means fewer flight lines, less time, and lower costs
- Pixel size on the ground (GSD) at flying height of 1000 m (at 500m) is 8.6 cm (4.3 cm)
- 1:3 pan-to-color ratio delivers stunning color and color-infrared (CIR) image quality and negligible image vignetting
- Short frame interval allows multi-ray photogrammetry even for large-scale mapping at low altitudes and high aircraft speeds; forward overlaps of 60% are achieved at a 1 inch pixel size at 110 knots
- Sensor head is fully compatible with the existing DXp and CXp systems, providing UCXp and UCX owners a modular add-on solution for small-scale mapping projects
- UltraCamXp WA works with existing environments such as mount and GPS/INS systems
- UltraCamXp WA is fully supported by UltraMap workflow software system, including UltraMap/AT option
- An upgrade path for UCD, UCX and UCXp customers is available by trade in or refurbishment

ULTRACAMXp WA

Large Format Digital Aerial Camera

Configurations

Sensor Unit (SXp WA)

- Modular sensor head fully integrates with existing DX+CX or DXp+CXp systems
- Simultaneously collects Pan, RGB and NIR
- Panchromatic lens focal distance is 70 mm, 23mm RGB + NIR focal length (is 100mm/33mm for UCXp)
- Panchromatic image size 17,310 x 11,310 pixels; color and NIR image size 5,770 x 3,770 pixels
- Weight of SXp w/a ~ 55kg (same as UCXp and UCX)
- Pixel size on the ground (GSD) at flying height of 1000 m (at 500m) is 8.6 cm (4.3 cm)

Computing Unit (CXp)

- Processes raw images on board in real time, to compute quick views and histograms
- 14 CPUs for computation of interim data products for in-the-air image quality assessment

Data Units (DXp)

- In-flight storage capacity limited only by number of DXp units on board, given space and weight constraints of aircraft
- Approximately 6,600 uncompressed images per DXp unit (~4.2 TB) can be stored
- Stores mirror images of the data on two DXp units

Operational Specifications

- Post-processing can begin in the air and be completed on the ground with a laptop or group of PC's
- 11 hours of collection time per single DXp unit at 70% and 20% overlap at 20 cm GSD, 140 knots
- Image geometric accuracy is better than +/- 2 μ m

Options

- Integrated photogrammetric workflow by UltraMap/AT

More Information

Vexcel Imaging GmbH | a Microsoft company

Anzengrbergasse 8

8010 Graz, Austria

www.ultracamx.com | mpsinfo@microsoft.com