

Hyperspectral Camera for UAV based Remote Sensing

The ULTRIS X20 Plus, a dual-sensor iteration of the X20, is tailored for UAV-based aerial mapping. Accompanied by a second camera capturing **panchromatic images**, it delivers a resolution of **1886 x 1886 pixels**, ensuring highly detailed imagery. This additional data facilitates pansharpening, enhancing images and boosting the spatial resolution of spectral data.

Despite integrating two sensors, the ULTRIS X20 Plus remains **lightweight** at 630 g, making it compatible with various drones, including the **DJI Matrice M300/350 RTK**. When assembling individual data files post-flight, the panchromatic data significantly enhances the spatial accuracy of the resulting mosaic.

Technical Specifications ULTRIS X20 Plus

Technology
Readout
Spatial Resolution
Spatial Resolution Pan
Wavelength Range
Spectral Bands
Spectral Sampling
FWHM

FWHM Spectral Data Points Bandpass Filter Light Field, Dual-Sensor Global Shutter 410 x 410 pixel, 1886 x 1886 pixel 350 - 1000 nm 164 4 nm Constant 10 nm 164 x 168 100 (24.5 M) Mosaic Integration Time
Attachable Optics
FOV (Field of View)
Data Depth
Max Frame Rate
Data Link
Sensor
File size processed
Weight
Dimensions

35°
12 bit
3 Hz
GigE
CMV20000 / IMX264
< 55 MB / < 1.2 GB pan
630 g
86 x 121 x 105 mm

 $0.1 - 1000 \, \text{ms}$

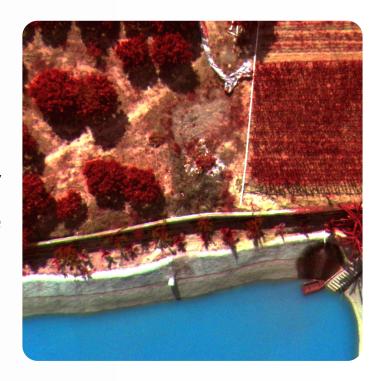


A gimbal for DJI

The ULTRIS X20 Plus offers compatibility with various drones, providing flexibility for data recording in time lapse mode or direct UAV triggering. Specifically designed for the X20P, the **UXG Gimbal** featured in the image on the left is tailored for mounting on the **DJI** Matrice M300/350 RTK. This gimbal Windows-based incorporates a mini computer running Cubert CUVIS software, ensuring seamless data recording during flights. Connected via **DJI-Skyport**, it enables automatic camera triggering and provides **RTK GPS** signals for each individual data file.

Comprehensive options

The CUVIS software takes **Raw data**. **Reflectance** and **Radiance**. While retaining a minimal raw data consumption, exported data, available in ENVI and TIFF. seamlessly integrates with common GIS and mapping software, including pansharpening. Meta data like GPS information, a necessary input for the stitching software, is written to the exported files as well. The image on the right shows a **pansharpened** Colored Infrared scene taken with a X20 Plus of a corn field, trees and a lake. The data was taken in a height of 40 m, with a resulting panchromatic resolution of stunning 1.5 cm per pixel.





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Need more information?

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