

Phase One Introduces 190MP Aerial Mapping System



Phase One has launched a major innovation in aerial imaging: the 190MP Aerial System. It is built on the new, dual-CMOS sensor, dual-lens iXU-RS1900 camera, which is capable of capturing images at 190 megapixels. This system was designed with input from engineers and leading experts in the photogrammetric field to address a wide variety of challenging aerial applications,

such as remote sensing, monitoring, inspection and disaster management. The new system features large image coverage, a light weight and low power consumption, presenting an attractive alternative to other traditionally expensive large-format cameras.

At the heart of the fully integrated 190MP Aerial System is the iXU-RS1900 camera. It features two CMOS sensors and two 90mm lenses for capturing RGB information. Key imaging attributes include: a small pixel size ($4.6\ \mu$), large image area ($16,470 \times 11,540$), high image capture rate of 0.6 sec and exposure time of up to $1/2000$ sec. An optional 4-Band configuration, adding a 50mm lens for capturing NIR information, provides 4-Band (RGB, NIR) or CIR imagery. Integrated iX Capture software automatically generates distortion-free images and automatically performs an accurate matching of the NIR and RGB images.

Light aviation vehicles

The camera's small size, light weight and low power consumption make it compatible with most all types of light aviation vehicles, including those that previously could not manage a large format system. The iXU-RS1900 serves as part of this system, which also is a standalone camera for photogrammetric work, as a component for LIdar systems, or as part of a multiple camera array, such as a NADIR camera for oblique systems.

The new system's enhanced productivity and expanded coverage makes it a solution for diverse mapping applications such as: remote sensing, precision agriculture, disaster management and monitoring.

Dov Kalinski, general manager of Phase One Industrial said introducing the Phase One 190MP aerial system demonstrates their continuing commitment to the aerial photography market. The cooperation with leading partners in mount design, GNSS, and flight managements systems enables Phase One to offer an innovative system, and enables customers to execute projects faster and at lower cost.

The Phase One 190MP Aerial System

As described above, the new iXU-RS1900 lies at the heart of a powerful aerial system capable of rendering 190 megapixel images. The entire system comprises many elements including:

iX Controller MK III

This is the central hub of the system. It controls the camera, the gyro-stabilising mount, the GNSS/IMU system, and runs the capture application and the flight management system. The iX Controller supports dual monitors, so both the pilot and the operator are able to monitor and observe different views of the setup in parallel.

iX Capture

iX Capture is an aerial capture, control, and image processing software with an intuitive interface that displays key information such as exposure settings, histogram, GPS data and frame count. It provides the operator with real-time feedback and ensures confidence that each image has been captured correctly.

Gyro Stabilized Camera Mount – Somag DSM400

Designed specifically for Phase One 190MP Aerial System, this mount boasts a low weight of 14 kg and high payload of 35 kg, provides optimal stabilisation of the system pod and allows a highly efficient and precise image capturing under nearly any flight conditions.

GNSS/IMU system

The Phase One 190MP Aerial System is equipped with an Applanix' POS AV system enabling Direct Georeferencing of aerial images. It is

also compatible with other GNSS/IMU systems. By integrating precision GNSS with inertial technology, POS AV enables precise determination of position and attitude, as well as the completion of geospatial projects in a more efficient and cost effective manner.

Flight Management System

Controlled and operated with ease, TopoFlight flight management system, integrated into the Phase One 190MP Aerial Camera System, enables the planning, positioning and sensors' management - reducing aerial survey operational costs and increasing productivity. The 190MP Aerial System is also compatible with other flight management systems.

Availability and Pricing

The iXU-RS1900 camera and 190MP Aerial Systems are available now from Phase One Industrial partners worldwide. The iXU-RS1900 camera pricing starts at 150,000 USD; the 190MP Phase One Aerial System pricing starts at 280,000 USD; and the 190MP 4-Band Aerial System pricing starts at 365,000 USD. For more information, visit <http://industrial.phaseone.com>.

<https://www.gim-international.com/content/news/phase-one-introduces-190mp-aerial-mapping-system>
