Videographics Launches Mapping Drone with Integrated KlauPPK

With the new release of the Condor V8-PPK mapping drone, Munich-based Videographics Ingenieurgesellschaft has completed its toolbox for most precise photogrammetric aerial mapping and surveying projects.

The German company Videographics is dedicated to supply superior UAV mapping technology and services. “We successfully generated an impressive knowledge base in the field of most precise GNSS-PPK direct georeferencing and have a solid understanding of all aspects, required for highly accurate results and efficient workflows.” says Stefan Warislohner, CEO of Videographics. “Besides KlauPPK modules and software, we have been able to provide our customers with workshops and trainings and all hardware and software components necessary, however a suitable aircraft (UAV) was missing. Fortunately, our cooperation with Condor Multicopter & Drones, now closes this gap with a great aerial system.”

Coaxial octocopter

The all new Condor V8-PPK is the result of a joint development in Germany between Condor Multicopter & Drones, CADmium and Videographics Ingenieurgesellschaft. This coaxial octocopter is based on a lightweight, very strong carbon fiber monocoque chassis and equipped with a PX4 industrial type flight controller. A Smart Battery Pack, an intelligent dual Li-Ion power source ensuring the drone returns home and lands in time. Besides high-power density, Li-Ion batteries offer a significant advantage with respect to transportation: Once UN 38.3 certified, Smart Battery Packs can be carried on board commercial flights!

The UAV has a 5.2 kg take-off weight, (including Sony Rx1RII, KlauPPK) and a flight time of over 30 minutes (standard Smart Battery Pack) which can be extended to over 40 minutes with the XL-Smart Battery Pack.

Near-real-time system

The KlauPPK controller is installed inside the water and dust protected housing of the aircraft, with easy access for any necessary action and checks on the ground and powered directly from the drone. It is designed to record all signals and information necessary on just one memory device, in order to ensure a most efficient and smooth post processing workflow. Optional there is also Klau Geomatics’ PRO System available: The near real time version (NRT) offers automatic correction data acquisition in the PPK software, just a few minutes after the flight, worldwide. The advanced real time system (RT) receives correction data from satellites, powered by NovAtel Terrastar Pro-C correction service. Precise positions are computed in real time and optional, this technology can be integrated to also support highly accurate navigation needs of the UAV within centimeters accuracy and without any range limitation, worldwide.

With over 2km range, the herelink RC technology ensures a safe and stable radio transmission for both, UAV control and live view (payload camera and integrated FPV camera). This powerful remote-control system includes an integrated display, offers full and simple control of the aircraft and payload and is extremely handy, while enabling the integration of powerful mission applications, such as UgCS.

Payloads

Available payloads for photogrammetry are either Sony’s RX1RII (42MP, 35mm) or SONY’s Alpha 6000 (24MP, 16mm, 20mm), others e.g. PhaseOne, IR-thermal cameras and multi spectral cameras will follow. The camera / lens combinations (RGB type only) will be supplied precalibrated with calibration data provided to go directly into Agisoft or PIX4D.

The payloads are controlled by a 2-axis encoded gimbal which includes all necessary connections including direct power supply for the relevant camera, suited for extended missions. Any data – imagery as well as flight logs or PPK data – will only be stored locally.