



New class of survey-grade laser scanner for UAVs

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A novel class of surveying instruments, closing the gap between full-scale airborne laser scanning systems and image-based approaches, is presented: RIEGL developed the first fully survey-grade airborne laser scanner for UAV applications bringing down the performance of state-of-the-art airborne laser scanning to a weight of about 4kg and suitable size for UAV integration. The system employs echo signal digitization, online waveform processing at a measurement rate of up to 600kHz with a maximum operational flying altitude of up to 350m. With its high-resolution multi target capability the instrument is excellently suited for agricultural and forestry applications. We provide insights on the employed technologies as well as integration and operation of the instrument. The capabilities of the instrument are analyzed with respect to measurement precision, resolution, and other application-related aspects like the provided point attributes.