

# Real-time video processing for drones

**Aerialtronics (Netherlands) has released the Pensar dual-spectrum computer vision platform. The optionally CAN-connectable camera system is based on Nvidias's Jetson module.**

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The Pensar system comprises the Flir Boson thermal IR camera (Photo: Aerialtronics)

The introduced computer vision platform with deep-learning capabilities is a stand-alone twin sensor platform. It utilizes the GPU-accelerated computing power of the Jetson module to allow for real-time video processing and immediate augmented insights. Nvidia's Jetpack software development kit supports users to develop software for the platform. It comprises libraries and APIs, samples and documentation needed to code and deploy own algorithms.

The supplier claims that it is the first platform in market to integrate the Flir Boson thermal IR camera into a drone application. Additionally, it contains a Sony zoom daylight camera. Beside CAN connectivity, the product features Bluetooth and Wi-Fi interfaces. This makes it suitable for robotic and drone applications.

During flight, the Pensar leverages deep-learning networks in real-time to detect, recognize, track, classify, and annotate certain objects or deviations of interest and conversely, to blur out and mask objects for privacy reasons. It allows users to run algorithms that filter the acquired data and output only what's relevant to them. This eliminates the need for lengthy and costly post-processing procedures, which can massively decrease the turnaround time between aerial data collection and follow-up operations. The platform comes with the open-source Ubuntu Linux. It is agnostic and compatible with open-source libraries like Google's Tensorflow.

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