

MicaSense releases revolutionary new sensor Altum; introduces sensors powered by DJI SkyPort

MicaSense Altum is a new 3-in-1 solution that combines thermal, high-resolution, and multispectral imaging capabilities in one sensor.

MicaSense releases Altum, its new top of the line sensor for professional-grade agricultural drone mapping. Altum captures synchronized multispectral and thermal imagery, enabling aligned outputs for advanced analytics. Altum's multispectral imagers are the highest resolution integrated multispectral solution available for drones, allowing for detailed RGB outputs and advanced crop classifications.

Whereas before they had to fly multiple flights with multiple sensors, researchers, growers, and service providers can now capture data for plant health, water stress mapping, phenotyping and more in one flight, with one sensor. The ideal sensor for enterprise and academic researchers, Altum provides the daily usability and reliability users have come to expect from MicaSense.

"The Altum design resulted from experience developing advanced analytics and understanding needs for advanced research. We realized the market is limited by time and cost constraints of owning multiple sensors and flying multiple passes over the same field. The goal of Altum is to simplify the workflow, and with synchronized capture, to provide results that can be correlated and quantified more easily."

- Justin McAllister, CTO and Co-founder of MicaSense

(Re)defining agricultural drone imaging

Altum includes MicaSense's standard **five-band configuration of multispectral bands** (red, green, blue, near-infrared and red-edge) and an integrated Lepton® **radiometric thermal longwave infrared sensor from FLIR Systems**, providing temperature measurement for every pixel of the scene for additional crop data and optimization. Expandable **high-capacity USB 3.0 storage** allows users to fly longer and cover more area without landing to swap storage. In addition, **advancements in image capture rate** enables faster flight speeds.

Users can process Altum data with industry standard software like Agisoft and Pix4Dmapper to generate an aligned, radiometrically calibrated six band (R,G,B,RE,NIR,T) geotiff, or access the raw data from Altum to process data themselves.

Included with Altum is DLS 2, the patent-pending next generation of the MicaSense Downwelling Light Sensor (DLS). DLS 2 allows for a more streamlined integration as it combines both the DLS and GPS into one product. In addition, through proprietary MicaSense technology, the DLS 2 will offer significantly better calibration for changing light conditions and better measurements over time.

Integrated solutions

Altum's multiple interface options and open API gives users the ability to utilize Altum on a variety of platforms. In addition to the DJI SkyPort integration, Altum is integrated with drone offerings from the following companies (with more to come):

North America: [Drone Nerds \(US\)](#), [BirdsEyeView Aerobotics \(US\)](#), [OmniView Tech \(CA\)](#), [Sky Flight Robotics \(US\)](#), [Blue Skies Drone Rental \(US\)](#)

Europe: [3D Target \(IT\)](#), [Globe Flight \(DE\)](#), [C-Astral \(SI\)](#), [Droneparts.de \(DE\)](#), [Ecobotix \(DK\)](#), [NaviGate \(PL\)](#), [Quantum Systems \(DE\)](#)

Asia: [Cybernetech \(JP\)](#), [Shenzhen Qianhai Yaqi Technology \(CN\)](#)

DJI Payload SDK Program: Altum and RedEdge-MX for DJI M200 Series

Through DJI SkyPort, MicaSense is able to provide seamless integration of its specialized sensors with DJI's powerful line of enterprise drones, resulting in the MicaSense Altum and RedEdge-MX solutions. This provides users a high-quality drone and sensor combination they can rely on to capture quality data every time - with virtually no set-up time.

The DJI SkyPort integration for Altum and RedEdge-MX features plug-and-play integration for Altum and RedEdge-MX right out of the box, including power and quick connect/disconnect, and enhanced light calibration with MicaSense DLS 2.

"Solutions like the MicaSense Altum and RedEdge-MX demonstrate the value of integrating specialized industrial payloads to DJI's powerful drone platforms. By collaborating with solution providers, we are expanding the benefits of drone technology to more and more industries. In

the case of agriculture, a specialized suite of sensors and more advanced level of analytics can truly bring tangible value to business workflows and decision making today.”

- Jan Gasparic, Head of Enterprise Partnerships at DJI

The Altum and SkyPort enabled RedEdge-MX and Altum are available today through the [MicaSense website](#).

For more information about Altum visit: www.micasense.com/altum

To learn more about MicaSense’s DJI Payload SDK packages visit: www.micasense.com/dji-skyport

About Thermal by FLIR

Thermal by FLIR is a cooperative product development and marketing program from FLIR Systems that supports original equipment manufacturers (OEMs) and product innovators who use FLIR thermal imaging sensors in their products. The program ensures that those OEMs that use genuine FLIR sensors can carry the Thermal by FLIR brand and receive additional product development and marketing support from FLIR to build and market their products.

About MicaSense

MicaSense is at the forefront of multispectral sensor development. Together with their customers, they’re pushing the boundaries on agricultural data analysis. They strive to get the right tools into their customer’s hands so they can make the right call at the right time.

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