

December 24, 2020

Cooperated with unmanned aerial vehicle to collect capsules of the asteroid explorer "Hayabusa2"



We, Aero Asahi Corporation (Headquarters: Tokyo, Toshinori Ogure, CEO) and three other companies (FUJI IMVAC INC. , SkymatiX, Inc. and JAXA), participated in the project that Japanese spacecraft "Hayabusa2" brought back the sand collected on the asteroid "Ryugu" and applied aerial photography by UAV operations with image analysis technology. We are pleased to inform you that we developed the technology that detected the capsules landed on earth, and contributed to rapid collection of the capsules

As a usual method to seek a capsule landed on a vast desert, manned helicopters fly according to beacon information transmitted by the capsule. From this project, as an alternative method in cases the beacon becomes ineffective, it has started to study about systems to detect the capsule by aerial photographing operations by UAV and image analysis technologies.

Aero Asahi selected the sensors and equipment.

Fuji-imvac developed the UAV.

SkymatiX developed the image processing application.

Three companies developed, and provided "the capsules detection system using UAV" together,



On December 6, 2020, the capsules entered the Earth's atmosphere, and landed on the desert of southern Australia. At the same time, a helicopter flew to collect it. Then later, an unmanned aerial vehicle began searching for the heat shield which protected the capsule when it entered the atmosphere, and that helped identify the location of the heat shield by the image taken in the desert. Aero Asahi will continue to cooperate with JAXA.

The aircraft used on the capsules collection project
V-6 type x2
Engine: 86cc reciprocating engine x2
Fuel: kerosene
Flight range: 3 hours (with an external tank 5 hours in total)
Communication: mutual satellite communication system
(video and data transmission possible)
Redundancy: equipped with an automatic avoidance system for uncrewed vehicles
parachutes

