

## Blue sUAS – BLM Update (10/27/20)

**Purpose:** Update BLM employees on the Blue sUAS program products and options.

**Background:** On January 9, 2020, The Department of Interior (DOI) issued Secretaries' Order (SO) 3379 limiting DOI-BLM use of UAS (or UAS components) which are manufactured in foreign countries. These UAS have been identified as "Designated". Every UAS in the DOI-BLM inventory is considered "Designated".

**What is Blue sUAS?** On October 6, 2020, The DOI Secretaries' Office released the following update to DOI regarding approved UAS: "*The Department of Defense's Defense Innovation Unit (DIU) recently finalized its small Unmanned Aircraft Systems (sUAS) initiative, which is called Blue sUAS. This capability provides secure and trusted sUAS for Federal government operations*".

### Blue sUAS Systems:

**General:** All the systems are small, lightweight, and backpack portable. None of the systems can carry the Ignis2 PSD payload.

**Payload Flexibility:** The end user can't change/add beyond the manufacturers' payload configuration.

**Payload Weight:** Maximum payload is approximately 75 grams (.17 lbs.).

**Flight Endurance:** Approximately 30 minutes.

**Video:** All of these systems are capable of shooting 4k video.

**Still Photos:** In the current configuration of the Blue sUAS none of them have cameras capable of producing imagery that meets the needs of photogrammetry or high quality images. Most are 12MP images created by a rolling shutter or pulling frames from video, these methods are unacceptable to what the BLM does for data collection.

**Infrared/Thermal:** In the past we have used FLIR thermal sensors with 640x512 resolution and radiometric capability to receive temperature values shown in video as well as embedded in photos taken by the camera. This is an extremely important feature for the BLM in both fire and resource programs. All of these systems have 320x240 resolution sensors and most do not have radiometric capability.

**Automation/Obstacle Avoidance.** While some of these features are attractive the cost benefit is currently not there. Flying in smoke or particulates the obstacle avoidance is not smart enough to discern the difference and needs to be turned off.

**System Descriptions:** DIU has selected 5 sUAS that meet the Blue sUAS requirements. One of these systems will not work due to spectrum used in the radio system. The remaining 4 systems are the Parrot Anafi, Skydio X2D, Vantage Robotics Vesper and Teal Golden Eagle. Although these systems are available on GSA, established ordering procedures remain in place.



**Skydio X2D** – There are several options to this however there are really only 2. First is the Tactical Bundle 2.4ghz (\$15,899.51) BUN-T 2.4 1-X2D-C. Second is the same with 1 controller and double the rest of the first package (\$26,577.07) BUN-T 2.4 2-X2D-C.



**Parrot Anafi USA Gov** – Only one option for this at \$14,000 for one system. Strongly recommend a conversation with your NAO UAS staff prior to deciding on this system.



**Vantage Robotics Vesper** – There are several options to this however there are really only 2. VESPER UAV + VISION GCS BUNDLE (2.4 GHZ) \$8378.84 820-000045-004 and 2X VESPER UAV + VISION GCS BUNDLE (2.4 G) \$13,954.76 820-000045-001. Vantage has 3 plug and play payload options currently with the differences being in the thermal camera options. One of the thermal options may have radiometric capability and we are in the process of getting this answer. They have several other payloads in development including photogrammetry options as well as multispectral and others.



**Teal Golden Eagle** - Only one option for this system at \$11,532.49. GOLDEN EAGLE UAV (2.4GHZ) GETAC-ISM Each system contains all the bits that we are used to in receiving a package. Uses the FLIR Hadron gimbal.

### **Additional Information**

Technical Questions: Bobby Eisele, [beisele@blm.gov](mailto:beisele@blm.gov), 801-814-1357

Ordering Questions: Gil Dustin, [gdustin@blm.gov](mailto:gdustin@blm.gov), 970-210-6153