

BYE Silent Falcon Data Considerations

GCS Requirements:

- TIFF exported from Data View to incorporate World File.
- DPI: 1200 works fine. A little slow to load in Vendor software, but seems the best balance.
- UTM projections. Vendor software will reproject as needed. .prj file needs to be provided.
- DTED/DEM: Vendor software provides this.
- To meet needs for both GCS and Sensor maps, vendor needs 3 files (.tif, .prj, .tfw)

Site Selection Requirements:

(Antenna height, preferred flight altitude, takeoff/landing area, etc.)

Antenna height - 30 feet max. Pref. 6' for ease of adjustment/safety

Preferred flight levels - 1,000 to 12,000 AGL

Launch and Recovery size - 150' X 300' clear area. Ideally obstacles within a quarter mile are less than 100' tall (for both approach and departure)

Data Processing:

(Format, conversion needed, FMV ready?)

Sensor Display

- Displays where/how for which sensors?
 - Lat/Long display? Sensor center? Yes, yes
 - Gimbal angle for tilt and pan displayed? Yes, yes
 - HFOV displayed? Yes
- Basemap displayed? yes
 - Same or different from GCS basemap? Uses same .tif as basemap with .prj file.
 - Displays footprint of sensor FOV? Yes
 - Format?
- Elevation model required? Yes, vendor software provides.
 - Format?

Gimbal Control

- Zoom specs? 30X Optical EO. 8X Digital IR.
- Cursor control? Slaved to GCS waypoints? Vendor controlled. 1 pilot 1 payload operator.
- Tracking? yes

Sensor Specs

- For each sensor:
 - Megapixels?
 - Resolution height and width (pix) 1.0 720X1280 for EO .3 640X512 for IR.
 - Sensor height and width (mm)
 - Focal length (mm)
 - IR
 - Pixel pitch (microns, if applicable)
 - Radiometric?
- For multiple optics
 - Boresighted? N/A

Data Collection

- Video
 - Dual streams? Freqs? EO or IR. Not at the same time. 2.2-2.5 Mhz
 - Stream multiple sensors? No, one or the other.
 - Streamed packet size? Bit rate 1 megabit/sec
 - Closed circuit or IP? (Multicast) IP and multicast.
- Stills
 - Ability to collect stills while collecting video? yes
 - Stills watermarked? no
 - For mapping - intervalometer or camera triggers? Separate mapping camera.

Other:

Storage

- Files archived on display device and/or on board? File type? .ts mpeg2-ts
- Files backed up on server? Local GCS storage. Could stream to server if there is a data connection.
- Files chunked based on size or time? Streaming based on record button. Start/stop
- Transfer method? USB flash drive.