

# UPO -06

Two axis optoelectronic pod



30-bit Optical zoom

IR Thermal Vision

Track Pointing

Support PIP

Infinite Circle  
Rotation

Suitable for high speed  
flying fixed wing

Thermal Temperature  
Vision

40x  
Optical  
Zoom

Point zoom  
tracking

HD  
Imaging

2 axis  
stability

HDMI  
video  
output



### Physical parameters

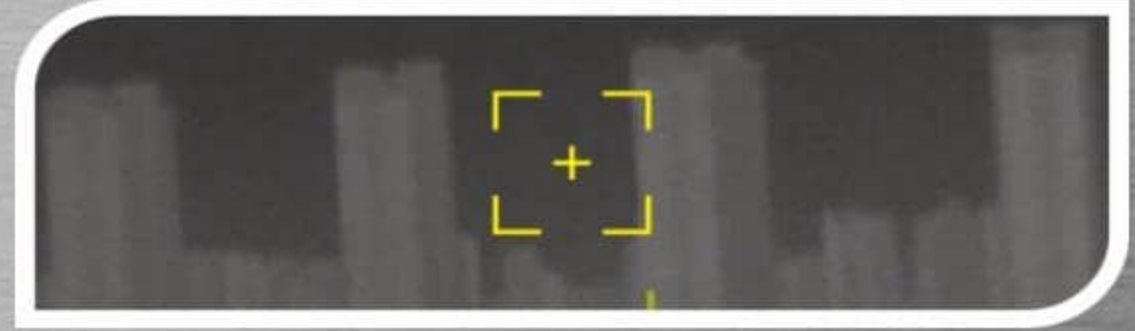
|                   |  |
|-------------------|--|
| Diameter          | 113mm  |
| Weight            | <900g  |
| Dimesnion         | 113*113*169mm  |
| Power supply      | 12V DC input   |
| Power consumption | <15W   |
| Velocity range    | Max rotation angular velocity 120°/s; Min stationary angular velocity $\leq 1^\circ/s$ |
| Angule range      | Pitch +30°~-90°, Yaw $\pm 170^\circ$   |

### Visible light parameter

|              |                               |
|--------------|-------------------------------|
| Video record | 1920*1080                     |
| Optical zoom | 40x                           |
| Pixel        | 2 million                     |
| Lens         | focal length F=2.9~116.0mm    |
| Anti-shake   | AIS advanced image stabilizer |

A

B



|                                   |                              |                              |
|-----------------------------------|------------------------------|------------------------------|
| Video record<br>1920*1080         | Frame frequency<br>50Hz      | Diameter 170mm               |
| Working temperature<br>-20°C~50°C | IR Resolution<br>640*480     | Weight <1.9kg                |
| 30x optical zoom                  | Wavelength range<br>8~14μm   | Dimension<br>170*186*240mm   |
| 2 million pixels                  | Power consumption<br>2.5W    | Stability accuracy<br>< 0.1° |
| F=4.3~129.0mm                     | AIS image stability          | Image output <50ms           |
| RF distance 5-2000m               | Resolution 0.5m              | 905nm pulse laser            |
| Divergence angle<br>3 milliradian | Laser pulse<br>frequency 1HZ | Pitch +30°~-90°              |
|                                   |                              | Roll ±30°<br>Yaw ±360°       |

Point  
zoom  
tracking

30x  
optical  
zoom

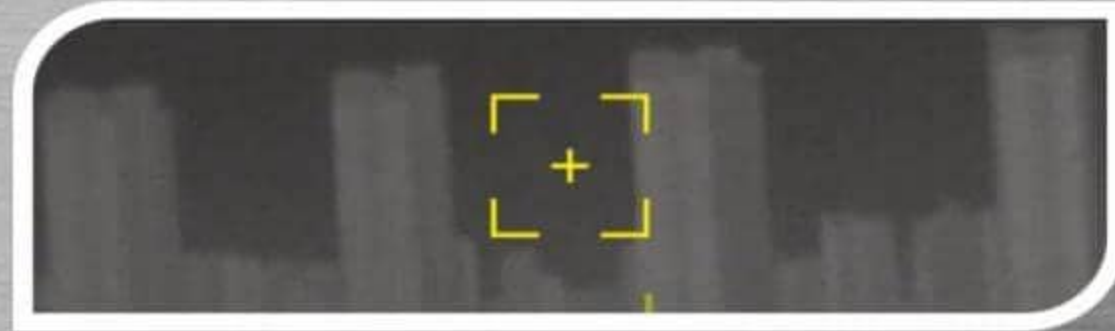
Laser  
Range  
Finder

# UPO-25 EO/IR/LRF Camera

Two-Axis 360° Stable System  
 30X Optical Zoom HD Camera  
 25mm 640\*480 Thermal Imaging  
 3000m Laser Range Finder  
 EO/IR Target Tracking



| Performance Parameters             |   |
|------------------------------------|---|
| Dimension                          | 180mm*180*240mm                           |
| Diameter                           | 180mm                                     |
| Weight                             | 2000g                                     |
| Stabilization System               | 2-axis (Pitch +30°~-90°/ Yaw ±360°)       |
| Stabilization Precision            | Better than 0.1 degree                    |
| Velocity Range                     | Max rotate angular velocity: 120 ° /s;    |
| Power supply                       | 12V DC, power consumption less than 15w   |
| Visible Light Parameter            |   |
| Optical Zoom                       | 30X Zoom                                  |
| Sensor                             | 1/2.8" high quality HD CMOS Sensor        |
| Pixel                              | 16:9 2.13million Pixel                    |
| Storage media                      | SD / SDHC memory card                     |
| Anti-shake function                | AIS Advanced Image Stabilizer             |
| Operation temperature              | 0°C to 45°C                               |
| Storage temperature                | -10°C~60°C                                |
| Focal Length                       | 4.3-129mm                                 |
| FOV                                | 2.3°~63.7°                                |
| Min illumination                   | 0.0008Lux                                 |
| Video Record                       | HD 1920*1080 record                       |
| Video Format                       | 1080P                                     |
| Protocol                           | TCP/IP、 UDP、 RTP、 RTSP、 RTMP、 RTCP、       |
| ONVIF protocol                     | Standard ONVIF protocol                   |
| 640,25mm Thermal Imaging Parameter |   |
| Pixel                              | 640*480                                   |
| Power consumption                  | 2.5W                                      |
| Image noise reduction              | Digital filtering                         |
| Working Form                       | Uncooled long wave (8 μ m-14 μ m)         |
| Pixel Size                         | 17 μ m                                    |
| NETD                               | ≤50mk (@25°C)                             |
| MRTD                               | ≤550mk (at characteristic frequency)      |
| Image Enhancement                  | Automatically adjust image brightness and |
| Frame rate                         | 50Hz                                      |
| Color option                       | Black, white, pseudo-color                |
| Tracking Velocity                  | ±32Pixel/field                            |
| Target Size                        | 8*8-128*128 pixel                         |
| Operation temperature              | -40°C to 60°C                             |
| Storage Temperature                | -40°C to 65°C                             |
| FOV (°)                            | 19.5x14.7                                 |
| Electronic zoom                    | 2/4/8/16                                  |
| 3000m LRF Parameter                |   |
| Range                              | 5-3000m                                   |
| Resolution                         | 0.5m                                      |
| Operation temperature              | -20°C to 60°C                             |
| Beam                               | 905nm pulse laser                         |
| Beam Divergence                    | 3mrad                                     |
| Laser pulse frequency              | 1HZ                                       |
| Power                              | <1mW, eye safe                            |



|                                   |                                     |  |
|-----------------------------------|-------------------------------------|--|
| Video record<br>1920*1080         | Frame frequency<br>50Hz             | CMOS Sensor                              |
| Working temperature<br>-20°C~50°C | Resolution<br>640*480               | Weight <890g                             |
| 10x optical zoom                  | Wavelength range<br>8~14μm          | Dimension<br>140*110*140mm               |
| 2 million pixels                  | Power consumption<br>2.5W           | Stability accuracy<br>< 0.1°             |
| SD/SDHC memory card               | Image denosing<br>digital filtering | Rotation angular<br>velocity ≤120°/s     |
| AIS image stability               | Image output <50ms                  | Min stationary angular<br>velocity ≤1°/s |
| F=3.3~33.0mm                      | Digital zoom<br>2/4/8/16x           | Pitch +30°~-90°                          |
|                                   |                                     | Yaw ±360°                                |

Point  
zoom  
tracking

10x  
optical  
zoom

Yaw  
±360°



### Five-lens oblique camera operation instructions are as follows

**Make sure all switch buttons are pop-up**

1. Turn on the camera power and the indicators of all switch buttons will be on
2. Press the Switch button
3. After 3 seconds, press the Latch button. After all indicators flash and off, press the Latch button once more until all indicators do not flash.
4. Press the Test button and all indicators will be on as normal status.
5. Manually operate the camera shutter with the remote control. All the indicators will light up and be off, then it is ready for operation after takeoff.



This port does not support hotplug

### Operation steps of camera shutdown after landing are as follows

1. Press and pop-up the Latch button
2. Press and pop-up the Switch button
3. Remove the SD card to copy data after power off.

## Technical Parameter

|                          |                  |                      |   |
|--------------------------|------------------|----------------------|---|
| Adaptive Flight Altitude | 20-300m          | Differential module  | XED-F9P   |
| Adaptive Flight Speed    | 0-15m/s          | Satellite Frequency  | GPS L1/L2 GLONASS L1/L2<br>BEIDOU B1/B2 GALILEO L1/L2 |
| Sensor                   | CMOS             | Positioning Accuracy | 2cm   |
| Sensor Size              | 23.5*15.6mmAPS-C | Base station         | Local/Network   |
| Focal lens               | 35mm             | Antenna              | 2.4GHz WIFI 802.11b/g/n                               |
| Lens Angle               | 45degree         | POS Storage          | 512MB   |
| Single Pixel             | 24.3Mega         |                      |   |
| Total Pixel              | 120Mega          |                      |   |
| Min Exposure Time        | 1.5s             |                      |   |
| Storage                  | 160-640G         |                      |   |
| Read Speed               | 78M/S            |                      |   |
| Power Input              | 15-35V           |                      |   |
| Operating Temperature    | -10°C~40°C       |                      |   |