

## Light Multi-Rotor UAV Thermal Imaging System

### Equip with HD image and digital data transmission task module

- Support HDMI & SD video signal
- Support point to point & single transmitting to multi-receiving mode
- High gain tablet directive antenna, transmission distance can reach 10km



### Gimbal

- Gimbal control accuracy:  $\pm 0.01^\circ$
- Movement range: Pitch  $\pm 90^\circ$ , Yaw  $\pm 150^\circ$
- Control interface: PWM/S-BUS/Serial port
- Storage mode: 16 bits full dynamic infrared temp. data to SD card

### Infrared Camera

- Special designed for light UAV
- 16 bits full radiometric real time recording
- 640x480 pixels or higher resolution detector
- 50mm lens, dual FOV lens module (Optional)
- Real time overlay of geographic and coordinates information, synchronous recording
- Complete task system configuration

### Battery (Standard)

- Model: TB50
- Capacity: 4280 mAh
- Voltage: 22.8 V
- Battery type: LiPo 6S
- Energy: 97.58 Wh
- Battery weight: Appro. 520 g
- Operating temp.:  $-20^\circ\text{C}$  to  $45^\circ\text{C}$
- Charging temp.:  $5^\circ\text{C}$  to  $40^\circ\text{C}$
- Max Charging power: 180 W



## UAVs 640-P SPECIFICATION

### Infrared thermal image performance parameters

Dimensions	887× 880× 378 mm (Unfold)
	716× 220× 236 mm (fold)
Max Takeoff Weight	6.14 kg
Max Payload	2.34 kg (Standard battery) , 1.61 kg (Optional battery)
Max horizontal speed	P mode : 17 m/s , S mode/A mode : 23 m/s
Max Flight Time (Standard battery)	27 min (No Payload) , 13 min (Takeoff Weight 6.14 kg)
Max Flight Time (Optional battery)	38 min (No Payload) , 24 min (Takeoff Weight 6.14 kg)
Max Service Ceiling Above Sea Level	1.86 mi (3000 m)
Max Wind Resistance	10 m/s
Max Rain Resistance	IP43

### Infrared thermal image performance parameters

Thermal sensitivity	0.05°C (at 30°C)
Optical focus	50m, electric focus, auto focus
Digital Zoom	4x, 8x, 16x
Detector type	Focal Plane Array (FPA), uncooled microbolometer 640× 480 pixels
Image frequency	50 Hz/60 Hz
Spectral range	7~14 $\mu\text{m}$
Field of view	12°× 9°
Spatial resolution (IFOV)	0.34 mrad
Temperature range	$-20^\circ\text{C}$ ~ $+150^\circ\text{C}$
Accuracy	$\pm 2^\circ\text{C}$ or $\pm 2\%$ of reading
Max. temp. automatically tracking	Automatically capturing max. temp. and showing specific data in display in-real time
GPS Position (Optional)	GPS geographic coordinate information and infrared data real-time overlay, synchronous record

### IMAGE PRESENTATION

Composite video	NTSC / PAL Composite video
Palette	white hot / black hot / iron

### ENVIRONMENTAL SPECIFICATION

Operating temp. range	$-20^\circ\text{C}$ ~ $50^\circ\text{C}$
Storage temp. range	$-40^\circ\text{C}$ ~ $70^\circ\text{C}$
Humidity	Operating and storage 10% to 95%, non-condensing
Encapsulation	IP54

### GIMBAL

Gimbal Control accuracy	$\pm 0.01^\circ$
Movement range	pitch- $90^\circ$ ~ $+30^\circ$ , course $\pm 150^\circ$ , roll $\pm 25^\circ$
Control interface	PWM/ S-BUS/ Serial port
Storage	16 bits full radiometric infrared temp. data storage into SD card

### VOLTAGE

Working voltage	11~50V
Average power consumption	6W

### PHYSICAL CHARACTERISTICS

Size	112× 61× 72 mm
Weight	$\leq 325\text{g}$ (Excluding gimbal) ; $\leq 660\text{g}$ (Including 3 axes stabilized gimbal)