

Unprecedented Performance

TALV-TACT

Unmanned Aerial Systems



SI no	Parameters	Specifications
1	Aerial vehicle (av) characteristics	
A	Uav weight with battery and standard payloads	<5kg
B	Uav size with propeller	966 x 946 x 286 mm
C	Endurance/flight time (at msl)	Up to 55 mins
D	Range for live transmission (radius)	8 km
E	Nominal cruise speed	9 m/s
F	Propulsion	Electric propulsion
G	Maximum operating altitude (agl)	120 m
H	Maximum launch altitude (amsl)	3000 m
I	Functional temperature range	.-10°c to 50°c
J	Humidity	90% rh at 40°c
K	Dust and drizzle resistance	Ip52 slight drizzle (nabl certified)
L	Aural signature	<40 db @ 200 m agl
M	Wind resistance	12 m/s
N	Technical life of av	Up to 600 landings
O	Launch and recovery	Semi-autonomous vertical take-off to landing(VTOL)
P	Maximum space required for recovery	5 m x 5 m in open area
R	Gps	GNSS/GPS/GLONASS/Beidou/QZSS
S	Operating crew	Two-person deployment
T	Deployment time	< 5 min
U	Fail safe features	1. Return to home on communication failure. 2. Return to home/land on low battery. 3. Return to home on high winds (more than 9m/s)
V	Battery capacity	32000 mah
2	Ground control station characteristics - hardware	
A	Hardware specs	1. 5.46 inch, 1080p, 16 million colors, capacitive touch screen 2. Bluetooth / wifi / gps / 2.4g map transmission ground 3. Build-in 4950 mah lipo battery 4. Support micro usb port 5v 2a current charging
3	Ground control station characteristics - software	
A	Flight modes	1. Altitude hold 2. Hover at a defined waypoint 3. Autonomous waypoint navigation (pre-defined as well as dynamically adjustable waypoint during flight) 4. Remotely piloted mode for video-based navigation (rpv mode)

B	Gui display & maps parameters	1. Real-time video displayed at all times during the flight. 2. Artificial horizon indicating uav attitude. 3. Capability of working with google maps and/or other available open-source maps. Application has the capability to download maps automatically after specifying location gps co-ordinates. 4. Capability to integrate geo-referenced raster maps provided in at least one of the commonly used digital map formats (gif, tiff etc.) 5. Default google maps. Can be configured as per the request 6. Geographic map along with uav location, uav trajectory, camera view polygon, waypoints and flight plan.
D	User controls	1. One-click take-off/land/hover. 2. Set altitude of the uav. 3. Waypoint navigation. 4. Dynamic way point adjustment. 5. Point payload to ground co-ordinate function. 6. Capability of taking image snapshots with on-screen display parameters at any time during flight.
E	Pre-flight checks	1. Capability to perform pre-flight checks of the complete system before every flight for confirming the suitability of flightworthiness.
F	Data-logging	1. Essential telemetry data logging on sd card should be encrypted. 2. Export of flight path in .kml format for reviewing in google earth.
G	Communication link characteristics	1. Transmit control commands from gcs to uav. 2. Transmit telemetry data from uav gcs. 3. Transmit day and night video from uav to gcs 4. Secure communication link between uav and gcs with minimum 128-bit aes or better encryption. 5. Digital and encrypted. 6. 2.4 ghz up-link and down-link.
4	Carrying case	1. Soft case with shoulder strap arrangement man portable. 2. Ip 65 (self certification)
5	Accessories	1. Dual battery charger 2. Field tool kit 3. Extra set propellers 4. Operational and maintenance manual
6	Payload characteristics	
6.1	Eo 1.0	
A	Lens	- Fixed focal length 6x digital zoom
B	Equivalent focal length	21 mm
C	Image sensor	Sony 1/1.7-inch, 8 mp effective resolution
D	Aperture	F2.8
E	Fov	Diagonal: 93°, horizontal: 81°

F	Gimbal freedom	3-axis
G	Angular vibration range	$\pm 0.01^\circ$
H	Controllable pitch angle	$-135^\circ \sim +45^\circ$
I	Controllable yaw angle	$-160^\circ \sim +160^\circ$
J	Roll angle	$-30^\circ \sim +30^\circ$
K	Video recording resolution	4k (4096 × 2160) @ 25 fps 2k (2560 × 1440) @ 30 fps 1080p (1920 × 1080) @ 30 fps 720p (1280 × 720) @ 30 fps
L	Video storage bitrate (h265 codec)	4k / 2k: 20 mbps 1080p / 720p: 15 mbps
M	File storage format	Fat32 exfat
N	Image format	Jpg
O	Video format	Mp4
P	Supported microsd cards	Microsd class10, max 512 gb
Q	Still photography mode	Single
R	White balance	Auto
6.2	Eo 2.0	
A	Image sensor	1/3inch cmos
	Total pixel	4mp
B	Effective pixels	2688*1520
C	Optical zoom	10x
D	Resolution	1080p/720/480p 60fps
E	White balance	Auto/manual
F	Gimbal freedom	3-axis
G	Mechanical range	Pitch/tilt: $\pm 120^\circ$, roll: $\pm 70^\circ$, yaw/pan: $\pm 300^\circ$
H	Controllable range	Pitch/tilt: $-45^\circ \sim 90^\circ$, yaw/pan: $\pm 290^\circ$
I	Vibration angle	Pitch/roll: $\pm 0.02^\circ$, yaw : $\pm 0.02^\circ$
J	Local-storage	Sd card (up to 32g, class 10, fat32 or ex fat format)
K	Photo storage format	Jpg (1920*1080)
L	Video storage format	Mov (1080p 30fps)
M	Geotagging	Not supported
	Camera object tracking(optional)	
N	Minimum object size	32*32 pixel
O	Maximum object size	128*128 pixel
6.3	Eo + ir 2.0	
	Eo camera specifications	
A	Imager sensor	1/2.9" cmos sensor
	Resolution	Full hd 1080 (1920*1080)
B	Zoom	12x - digital
C	Image pixel	2mp
D	Angle of view (d,h,v)	Fov : d 60° h 50° v 28°
	Thermal imager specifications	
E	Focus length	9.1mm

F	Zoom	8x -digital
G	Resolution	640*512
H	Horizontal fov	51.9°
I	Vertical fov	30.5°
J	Detective distance	1100 meters
K	Recognize distance	250 meters
L	Verified distance	170 meters
M	Working mode	Uncooled vox long wave (8μm~14μm) thermal imager
N	Pixel size	12μm
O	Color palette	White,black,pseudo color
P	Local-storage	Sd card (up to 128g,class 10, fat32)
Q	Photo storage format	Jpg(1920*1080)
R	Video storage format	Mp4 (1080p 30fps)
S	Geotagging	Support, display time and gps coordinate in picture exif
	Gimbal specifications	
T	Angle scope of structure design	Pitch/tilt: -60°~120°, roll: ±60°, yaw/pan: ±150°
U	Angle scope of software design	Pitch/tilt: -45°~115°, yaw/pan: ±140°
V	Vibration angle	Pitch/roll/yaw: ±0.02°
	Eo / ir camera object detection(optional)	
W	Minimum object size	16*16 pixel
X	Maximum object size	256*256 pixel
Y	Targets type	Car and human
6.4	Eo + ir 2.1	
	Eo camera specifications	
A	Imager sensor	1/3" cmos
B	Picture quality	Full hd 1080 (1920*1080)
C	Resolution	4.08mp
D	Zoom	10x - optical
	Thermal imager specifications	
E	Lens size	19mm
F	Horizontal fov	32°
G	Vertical fov	24°
H	Diagonal fov	39.4°
I	Detective distance (man: 1.8x0.5m)	559 meters
J	Recognize distance (man: 1.8x0.5m)	140 meters
K	Verified distance (man: 1.8x0.5m)	70 meters
L	Detective distance (car: 4.2x1.8m)	1714 meters
M	Recognize distance (car: 4.2x1.8m)	428 meters
N	Verified distance (car: 4.2x1.8m)	214 meters
O	Working mode	Uncooled long wave (8μm~14μm) thermal imager
P	Detector pixel	640*480

Q	Pixel size	17μm
R	Color palette	White, iron red, pseudo color
Gimbal specifications		
S	Pitch/tilt	±90°
T	Roll	±85°
U	Yaw/pan	±170° / ±360°*n
V	Vibration angle	Pitch/roll: ±0.01°, yaw : ±0.01°
Camera object detection		
W	Minimum object size	16*16 pixel
X	Maximum object size	160*160 pixel
Thermal object detection		
Y	Minimum object size	16*16 pixel
Z	Maximum object size	128*128 pixel

Payload Images



EO 1.0 (Day payload)



EO 2.0 (Day payload)



EO+IR 2.0 (Day & Night payload)



EO+IR 2.1 (Day & Night payload)

We look forward to serving you!

For more details,
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