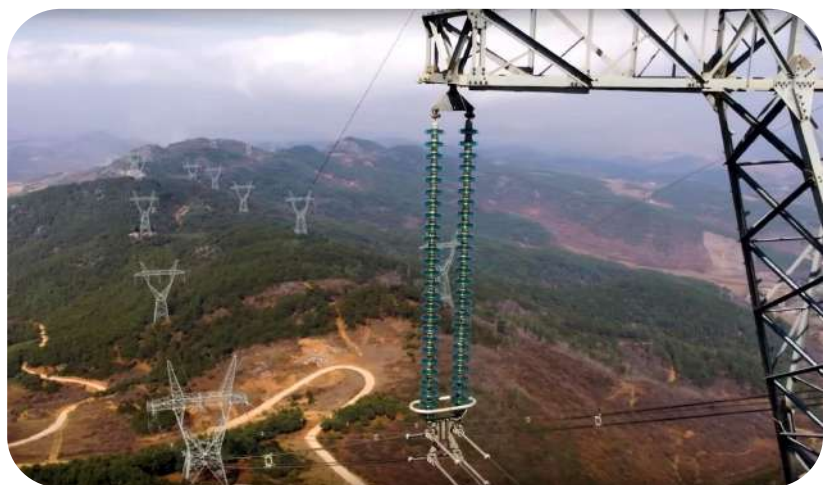
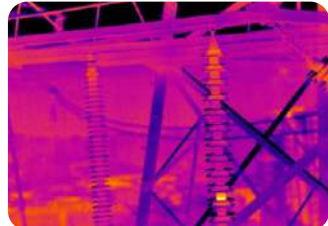
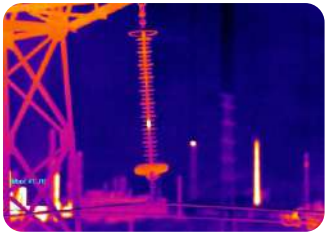
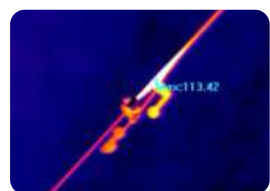
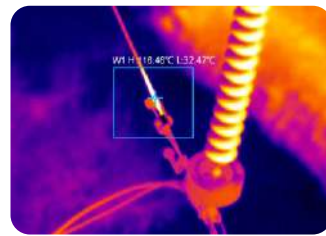
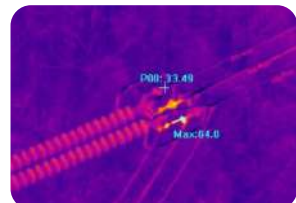




# SATIR UAVs-P Infrared Inspections System



One-Click to install on DJI M210 series drone, perfectly integrated with DJI's flight controller, GPS module, transmission system

Accurate temp. measurement, meet requirement of powerline inspection etc.,

Observe target from distance, meet the needs of public security, fire protection, environmental protection etc.,

High resolution infrared camera, detector resolution 640 x 480 pixels

16 bits full radiometric temp. measurement video

Highly integrated with DJI's App, convenient to use.



# SATIR UAVs-P Infrared Inspections System

## Apply to Powerline Inspection



### ■ UAVs-P Technical Feature



50mm lens, enable customer to capture more details and observe target from distance.



Image frequency up to 30Hz, record clear video under motion



Image dynamic display range adjustment function, satisfied different complicated application



Full temp. analysis function in real time



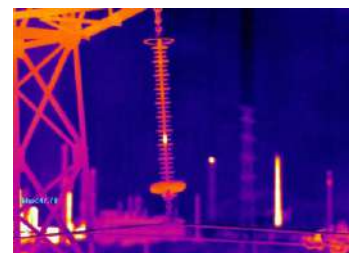
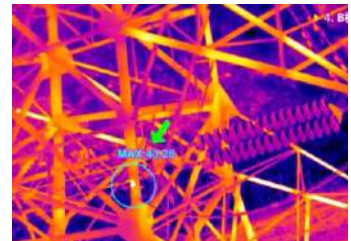
Display and record GPS information in real time



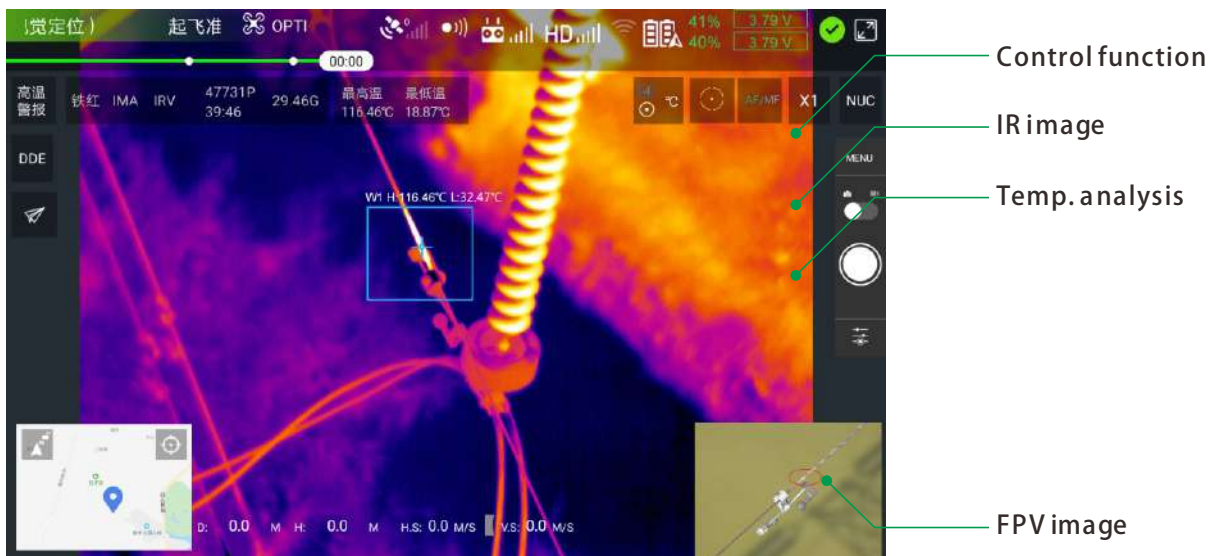
Corresponding APP and base station display software



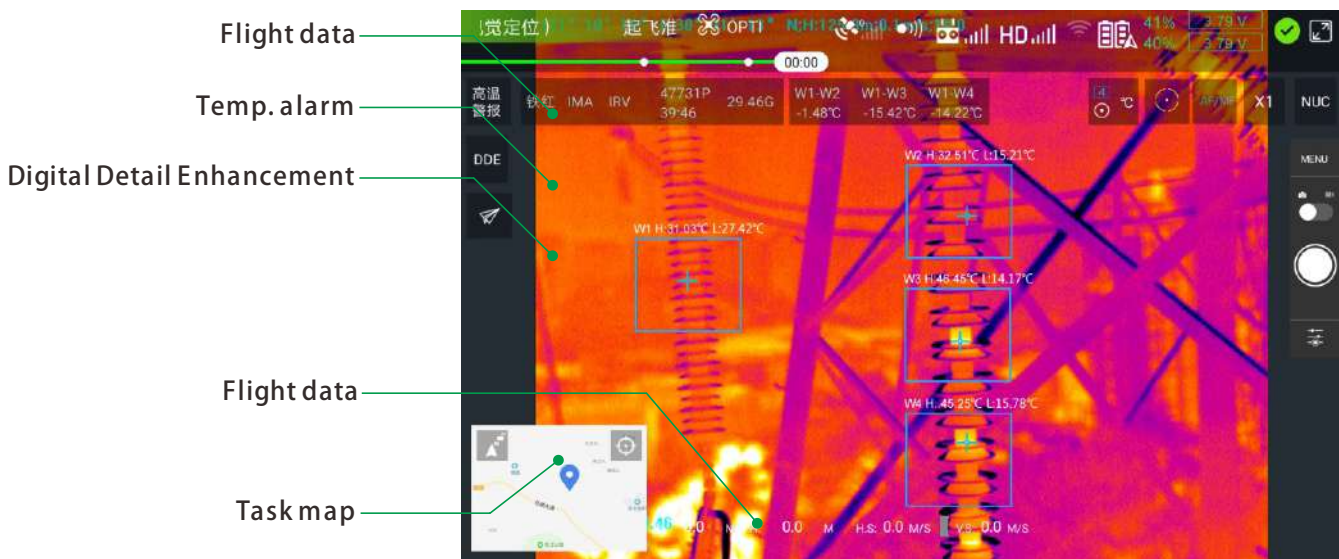
Support task management, data management and analysis software in different industries. Take power industry as an example, we directly added relevant modules in the APP, such as "inspection work ticket", "inspection data database import index" and "inspection work instruction", with corresponding ground analysis and processing software and database system, and can be integrated with other inspection data.



■ Complete function APP, integrated flight controller and temperature analysis function



Temp. measurement box

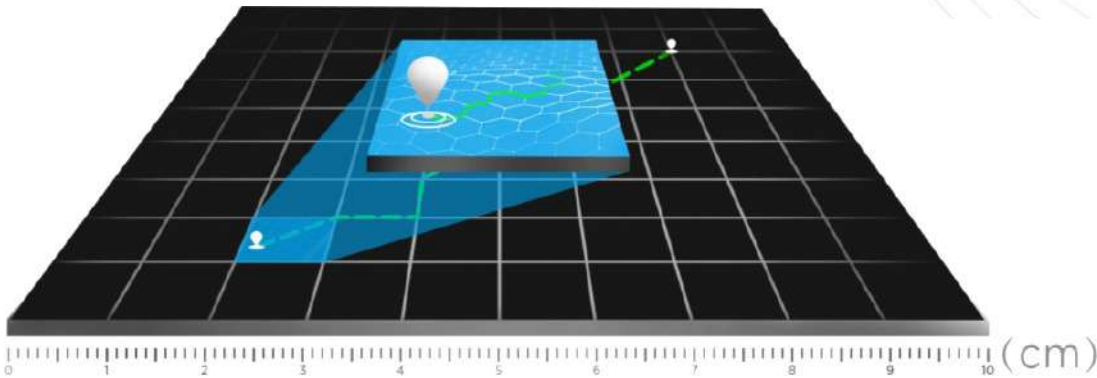


4 moveable points, size changeable boxes in the APP to compare and analysis target

Main function	Description
Data replay	Replay ima, jpg
Point temp. measurement	Single point temp. measurement
	Multiple point temp. measurement
Box temp. measurement	Support multiple box temp. measurement
	Support multiple max. temp
Full radiometric temp. measurement	Display max. temp
	Display min. temp
	Display Avg. temp
High temp. alarm setting	Set value of high temp. alarm
Real time GPS information overlap	GPS/BEIDOU/GLONASS/GALILEO
DDE	Digital Detail Enhancement
Task information input and execute	Yes
Task data statistic	Quantity statistic
	Flight time statistic

■ RTK Mobile Station for powerline and substation inspection

RTK Mobile Station supports all major global satellite navigation systems(GPS,BEIDOU,G LONASS,GALILEO) providing real-time differential corrections that generate centimeter-level positioning data for improved relative accuracy.



**Centimeter-Level Positioning**

RTK Mobile Station supports communication via 4G, OcuSync, WiFi, and LAN, ensuring an uninterrupted, stable data transmission under any application scenario. Up to 5 remote controllers can be connected to RTK Mobile Station simultaneously. This makes coordinated operations involving multiple drones a possibility, significantly improving efficiency.



# RTK MOBILE STATION SPECIFICATIONS

## GNSS (Global Navigation Satellite System) RECEIVER

GNSS Frequency	Simultaneously receive:
	GPS: L1 C/A, L2, L5
	BEIDOU: B1, B2, B3
	GLONASS: F1, F2
	Galileo: E1, E5A, E5B
Positioning Accuracy	Single Point Horizontal: 1.5 m(RMS) Vertical: 3.0 m(RMS) RTK Horizontal: 1 cm+ 1 ppm(RMS) Vertical: 2 cm+ 1 ppm(RMS) 1 ppm: For every 1 km increase in distance, the accuracy will be 1 mm less. For example, the horizontal accuracy is 1.1 cm when the receiving end is 1 km away from the base station.
Positioning Update Rate	1 Hz, 2 Hz, 5 Hz, 10 Hz and 20 Hz
Cold Start	< 45 s
Hot Start	< 10 s
Recapture Time	< 1 s
Initialization Reliability	> 99.9%
Differential Data Format	RTCM 2.X/3.X

## IMU (Inertial Measurement Unit)

Features	Built-in high-precision 6-axis accelerometer
	D-RTK 2 movement monitoring
	Sloping measurements
	Electronic bubble level

## PHYSICAL CHARACTERISTICS

Dimensions (D-RTK 2 body with extension rod)	168 mm×168 mm×1708 mm
IP Rating	IP65

## COMMUNICATION AND DATA STORAGE

Data Link	OcuSync, Wi-Fi, LAN, 4G
Operating Frequency	2.400 GHz to 2.483 GHz (China, United States, Australia, Europe, Japan, Korea) 5.725 GHz to 5.850 GHz (China, United States, Australia)
EIRP (Effective Isotropic Radiated Power)	OcuSync 2.4 GHz SRRC (Mainland China) / CE (Europe) / MIC (Japan) / KCC (Korea): < 20 dBm FCC (United States, Australia) / NCC (Taiwan, China): < 26 dBm 5.8 GHz FCC (United States, Australia) / SRRC (Mainland China) / NCC (Taiwan, China): < 26 dBm Wi-Fi 2.4 GHz SRRC (Mainland China) / CE (Europe) / MIC (Japan) / KCC (Korea): < 20 dBm FCC (United States, Australia) / NCC (Taiwan, China): < 22 dBm 5.8 GHz FCC (United States, Australia) / SRRC (Mainland China) / NCC (Taiwan, China): < 22 dBm
Communication Distance	OcuSync: 2 km (unobstructed and free of interference, when the distance from the D-RTK 2 antenna to the bottom of the tripod is 1.8 m, when the difference in height between the remote controller and D-RTK 2 is less than 2 m, and when the remote controller is 1.2 m from ground level)
Memory Capacity	16 GB

## ELECTRICAL CHARACTERISTICS

Power Consumption	12 W
Power Supply	16.5 to 58.8VDC
Battery	Type: Lithium-ion battery Capacity: 4920 mAh Energy: 37.3 WH
Run Time	WB37 battery: > 2 h MG-12000P battery: > 50 h

## ENVIRONMENTAL

Operating Temperature	-20° to 55° C
Storage Temperature	-20° to 60° C

# DRONE SPECIFICATIONS

<b>Model</b>	<b>M210 RTK V2</b>
Dimensions	Unfolded, propellers and landing gears included, 883×886×427 mm Folded, propellers and landing gears excluded, 722×282×242 mm
Diagonal Wheelbase	643 mm
Weight	Approx. 4.91 kg (with two TB55 batteries)
Max Takeoff Weight	6.14 kg
Max Payload	1.23 kg
Operating Frequency	2.4000-2.4835 GHz; 5.725-5.850 GHz
EIRP	2.4 GHz: ≤ 26 dBm (NCC/FCC); ≤ 20 dBm (CE/MIC); ≤ 20 dBm (SRRC) 5.8 GHz: ≤ 26 dBm (NCC/FCC); ≤ 14 dBm (CE); ≤ 26 dBm (SRRC)
Hovering Accuracy (P-mode with GPS)	Vertical: ±1.64 feet (±0.5 m) or ±0.33 feet (±0.1 m, Downward Vision System enabled) Horizontal: ±4.92 feet (±1.5 m) or ±0.98 feet (±0.3 m, Downward Vision System enabled)
Hovering Accuracy	Vertical: ±0.33 feet (±0.1 m); Horizontal: ±0.33 feet (±0.1 m) with RTK turn on
Max Angular Velocity	Pitch: 300°/s, Yaw: 120°/s
Max Pitch Angle (Dual Downward Gimbal/Single Upward Gimbal)	S-mode: 30°; P-mode: 30° (Forward Vision System enabled: 25°); A-mode: 30°
Max Pitch Angle [Single Downward Gimbal (Gimbal Connector I)]	S-mode: 35°; P-mode: 30° (Forward Vision System enabled: 25°); A-mode: 30°
Max Ascent Speed	16.4 ft/s (5 m/s)
Max Descent Speed (vertical)	9.8 ft/s (3 m/s)
Max Speed (Dual Downward Gimbal/Single Upward Gimbal)	S-mode/A-mode: 73.8 kph (45.9 mph); P-mode: 61.2 kph (38 mph)
Max Speed [Single Downward Gimbal (Gimbal Connector I)]	S-mode/A-mode: 81 kph (50.3 mph); P-mode: 61.2 kph (38 mph)
Max Service Ceiling Above Sea Level	5000 meters
Max Wind Resistance	39.4 ft/s (12 m/s)
Max Flight Time (with two TB55 batteries)	38 min (no payload), 24 min (takeoff weight: 6.14 kg)
Supported Gimbal Configurations	Single Downward Gimbal, Dual Downward Gimbals, Single Upward Gimbal
IP Rating	IP43
GNSS	GPS+GLONASS+BeiDou+Galileo
Operating Temperature	-20° to 50° C
Storage Temperature	-20° to 60° C
<b>DOWNWARD VISION SYSTEM</b>	
Velocity Range	<32.8 ft/s (10 m/s) at the height of 6.56 feet (2 m)
Altitude Range	<32.8 feet (10 m)
Operating Range	<32.8 feet (10 m)
Operating Environment	Surfaces with clear patterns and adequate lighting (>15 lux)
Ultrasonic Sensor Operating Range	0.33-16.4 feet (0.1-5 m)
Ultrasonic Sensor Operating Environment	Non-absorbing material, rigid surfaces (thick indoor carpeting will adversely affect performance)
<b>UPWARD INFRARED SENSING SYSTEM</b>	
Obstacle Sensing Range	0-16.4 feet (0-5 m)
FOV	±5°
Operating Environment	Large, diffuse, and reflective obstacles (reflectivity >10%)
<b>CHARGER (IN2C180)</b>	
Voltage	26.1 V
Rated Power	180 W
<b>REMOTE CONTROLLER</b>	
Operating Frequency	2.4000-2.4835 GHz; 5.725-5.850 GHz
Max Transmitting Distance (unobstructed, free of interference)	NCC/FCC: 5 mi (8 km); CE/MIC: 3.1 mi (5 km); SRRC: 3.1 mi (5 km)
EIRP	2.4 GHz: ≤ 26 dBm (NCC/FCC); ≤ 20 dBm (CE/MIC); ≤ 20 dBm (SRRC) 5.8 GHz: ≤ 26 dBm (NCC/FCC); ≤ 14 dBm (CE); ≤ 26 dBm (SRRC)
Power Supply	Extended Intelligent Battery (Model: WB37-4920mAh-7.6V)
Output Power (max)	13 W (Without supplying power to monitor)
USB Power Supply	1 A= 5.2 V (max)
Operating Temperature	-20° to 50° C
<b>FORWARD VISION SYSTEM</b>	
Obstacle Sensing Range	2.3-98.4 feet (0.7-30 m)
FOV	Horizontal 60°; Vertical: 54°
Operating Environment	Surfaces with clear patterns and adequate lighting (> 15 lux)
<b>INTELLIGENT FLIGHT BATTERY (TB55-7660MAH-22.8V)</b>	
Capacity	7660 mAh
Voltage	22.8 V
Battery Type	LiPo 6S
Energy	174.6 Wh
Net Weight (Single One)	Approx. 885 g
Operating Temperature	-20° to 50° C
Charging Temperature	5° to 40° C
Max Charging Power	180 W
<b>CHARGING HUB (IN2CH)</b>	
Input Voltage	26.1 V
Input Current	6.9 A

# Z30 VISUAL CAMERA SPECIFICATIONS

## GENERAL

Dimensions	152×137×61 mm
Weight	556 g

## CAMERA

Sensor	CMOS, 1/2.8"
	Effective Pixels: 2.13 M, 1080P HD Camera
Lens	30x Optical Zoom+180x Digital Zoom
	F1.6 (Wide) - F4.7 (Tele)
	Zoom Movement Speed:
	- Optical Wide – Optical Tele: 4.6 sec - Optical Wide – Digital Tele: 6.4 sec - Digital Wide – Digital Tele : 1.8 sec
	Focus Movement Time:
	∞ - near: 1.1 sec
FOV	63.7°(Wide) - 2.3°(Tele)
Min. Working Distance	10 mm - 1200 mm
Photo Formats	JPEG
Video Formats	MOV, MP4
Working Modes	Capture, Record, Playback
Still Photography Modes	Single shot, Burst shooting: 3/5 frames, Interval (2/3/4/7/10/15/20/30 sec)
Exposure Mode	Exposure Mode Auto, Manual, Shutter priority, Aperture priority
Exposure Compensation	±2.3 (1/3 increments)
Metering Mode	Center-weighted metering, Spot metering (Area option 12x8)
AE Lock	Supported
Electronic Shutter Speed	1/30 – 1/6000 s
White Balance	Auto, Sunny, Cloudy, Incandescent, Custom (2000K - 10000K)
Video Captions	Supported
TapZoom	Supported
TapZoom Range	1-5
Defog	Supported
One Key to 1x Image	Supported
Anti-flicker	50 Hz, 60 Hz
PAL/NTSC	Supported
Supported SD Cards	MicroSD (SD / SDHC / SDXC) Max. Capacity: 64 GB, Class 10 or UHS-1
Supported File Systems	FAT32 (≤ 32 GB) exFAT (> 32 GB)

## GIMBAL

Angular Vibration Range	±0.01°
Mount	Detachable
Controllable Range	Pitch : +30° to -120°, Yaw: ±320°
Mechanical Range	Pitch : +50° to -140°, Yaw: ±330°, Roll: +90° to -50°
Max Controllable Speed	Pitch : 180°/s, Yaw: 180°/s

## ENVIRONMENTAL

Operating Temperature	-10° to 45° C
Storage Temperature	-20° to 60° C



# IR640 INFRARED CAMERA SPECIFICATIONS

## IMAGING PERFORMANCE

Detector Type	Focal Plane Array ( FPA ), uncooled microbolometer 640×480 pixels
Thermal sensitivity	0.05°C at 30°C
Detector Frame Rate	30Hz
Optical Focus	50mm, electric focus, auto focus, 16x digital Zoom
Spectral Range	7 ~ 14 μm
Field of View	12°×9°
Spatial Resolution ( IFOV )	0.34mrad
Temperature Range	-20°C ~ + 150°C
Accuracy	±2°C or ±2% of reading
Palettes	white hot / black hot / iron
Max Temperature Automatic Tracking	Automatically capturing max temperature and showing specific data in display in-real time
GPS	GPS information can be retrieved by corresponding IR image data.
PAL/NTSC	Supported
Photo format	JPEG/IMA with radiometric data
Video format	16 bits full radiometric infrared temp. data 20Hz/MP4 30Hz
Storage	SD Card up to 32GB

## ENVIRONMENTAL SPECIFICATION

Operating Temperature Range	-20°C to +50°C
Storage Temperature Range	-40°C to +70°C
Humidity	Operating and storage 10% to 95%, non-condensing
Encapsulation	IP43(same as drone)

## GIMBAL

Gimbal Control accuracy	±0.01°
Movement range	pitch-90~+30°, course ±150°, roll ±25°
Control interface	PWM/ S-BUS/ Serial port
Connection port	DJI M210 SERIES port

## VOLTAGE

Working voltage	11~50V
Average power consumption	6W

## PHYSICAL CHARACTERISTICS

Size	112 x 61 x 72 (mm)
Weight	320g

