



**GEOSPATIAL TECHNOLOGY WING PROJECT  
CAPITAL DEVELOPMENT AUTHORITY**

**EXPRESSION OF INTEREST (EOI)  
FOR  
THE PROCUREMENT OF UAV/DRONES ALONG ACCESSORIES AND  
DRONE DATA PROCESSING MACHINE**

1. Capital Development Authority (CDA) Islamabad is responsible for provisioning of various services to the citizens of Islamabad including but not limited to City Maintenance, availability of indispensable necessities, expansion of city with the passage of time, to keep city and its environment clean, acquire land and undertake works in "Specified Area", planning and execution of development schemes etc. PC-1 for establishment of Geospatial technology wing project was approved on 21st November 2022 by CDWP with two years project duration. Geospatial Technology Wing has been mandated to provide assistance to all the wings of CDA for the use of Geospatial Technologies like Satellite Imagery, UAV and Drone Imagery, GIS, Remote Sensing and GPS. GSTW has mandate to digitize and transform all existing maps, layout plans, drawings to geospatial information and formulate decision support system for informed decision making. Procurement of UAV/drone along processing Software is necessary to achieve the administrative and technical objectives of the project:

2. Request for EOI documents, containing detailed terms and conditions, etc. are available on the CDA website ([www.cda.gov.pk](http://www.cda.gov.pk)). EOI documents can also be downloaded from PPRA website [www.ppra.org.pk](http://www.ppra.org.pk) free of cost.

3. The expression of interest, prepared in accordance with the instructions in the EOI documents, must reach Geospatial Technology Wing, Old One Window cell, Chairman Secretariat, G7/4, Islamabad, on 9 December 2024. The RFP will be opened on the same day on 9 December 2024 at 1130 hrs. Submission will be in hardcopy only.

**PROJECT DIRECTOR/ADMINISTRATOR  
GEOSPATIAL TECHNOLOGY WING PROJECT  
ROOM NO 113, 1ST FLOOR , EXECUTIVE BLOCK CHAIRMAN OFFICE  
G7/4, ISLAMABAD  
Contact:051-9252616  
Email: [member.technical@cda.gov.pk](mailto:member.technical@cda.gov.pk)**



**REQUEST FOR EXPRESSION OF INTEREST (EOI)**

**FOR**

**PROCUREMENT OF UAV/DRONES ALONG ACCESSORIES AND  
DRONE DATA PROCESSING MACHINE**

**FOR**

**GEOSPATIAL TECHNOLOGY WING PROJECT  
CAPITAL DEVELOPMENT AUTHORITY**

## **INSTRUCTIONS TO BIDDERS**

### **1. BACKGROUND:**

- 1.1. Capital Development Authority (CDA) Islamabad is responsible for provisioning of various services to the citizens of Islamabad including but not limited to City Maintenance, availability of indispensable necessities, expansion of city with the passage of time, to keep city and its environment clean, acquire land and undertake works in "Specified Area", planning and execution of development schemes etc. PC-1 for establishment of Geospatial technology wing project was approved on 21st November 2022 by CDWP with two years project duration. Geospatial Technology Wing has been mandated to provide assistance to all the wings of CDA for the use of Geospatial Technologies like Satellite Imagery, UAV and Drone Imagery, GIS, Remote Sensing and GPS. GSTW has been mandated to digitize and transform all existing maps, layout plans, drawings to geospatial information and formulate decision support system for informed decision making. Procurement of UAV/drone along processing Software is necessary to achieve the administrative and technical objectives of the project:
  
- 1.2. Quality and accuracy of geo-location of the open-source imagery is not standardized and precise to be used for infrastructure mapping and resource management purposes. CDA is lacking an accurate and precise basemap for superimposition of master plan and lay out plans. In order to achieve the creation of Spatial Data, perform Spatial Planning & Monitoring and launch of Geospatial Services, an updated accurate and precise basemap of the city is required to provide spatial information for Planning & Monitoring, Land record mapping, encroachment identification and demarcation, Monitoring of infrastructure & environmental development projects, Monitoring of legal/illegal housing societies development progress and Monitoring of development projects & zone wise construction activities monitoring, which is not possible without procurement UAV/drones.

### **2. INVITATION TO SUBMIT AN EXPRESSION OF INTEREST**

- 2.1. Eligible suppliers are invited to submit a proposal to participate in CDA's pre-qualification process for the provision of optical UAV/drones along accessories and drone data processing machine which are required to be supplied at CDA office in Islamabad. Suppliers should submit their proposals detailing their experience and qualifications in the form provided in this document.

### **3. TERMS AND CONDITIONS**

- 3.1. This request for EOI will be subject to the Public Procurement Regulations 2004, and any other relevant rules.
- 3.2. All expenses related to participating in this request for EOI will be borne by the applicants.
- 3.3. CDA reserves the right to verify any information submitted by applicants.
- 3.4. Any information which is found by CDA to be false will be ground for rejection. Any mis-statement or concealment will also be ground for rejection.
- 3.5. CDA reserves the right to cancel at any this procurement process without notice and disclaims all and any liability in that instance.
- 3.6. All queries must be in writing or through email.
- 3.7. In responding to this request for EOI, all bidders accept the responsibility fully to understand this EOI document in its entirety, and in detail, including making any inquiries to CDA as necessary to gain such understanding. CDA reserves the right to disqualify any supplier who demonstrates less than such understanding. Further, CDA reserves the right to determine, at its sole discretion, whether the firm has demonstrated such understanding. That right extends to cancellation of award if award has been made. Such disqualification and/or cancellation shall be at no fault, cost, or liability whatsoever to CDA.

### **4. DEADLINE FOR SUBMISSION AND PROCEDURE**

By 1100 hour of 9 December 2024, all proposals must reach the CDA Office, and proposals will be opened at 1130 hours on 9 December 2024 at the CDA Office located at: Room No 113, 1st floor, executive block chairman office, G7/4, Islamabad.

- 5.1. Submission cannot be through email.
- 5.2. CDA has the authority to reject any or all the proposals without assigning any reason.
- 5.3. All envelopes must be sealed, include all documents required and must be clearly marked: **“EOI for the provision UAV/Drones for GSTW Project, CDA”**

### **5. TERMS OF REFERENCE**

- 5.1. The supplies to CDA must be provided in excellent condition and must be imported through legal channel along with the provision of formal import documents.
- 5.2. Two-week onsite training of CDA officials
- 5.3. One year warranty and after sales support is to be provided by the suppliers.
- 5.4. All the payments will be in PKR and subject to the deduction of all the applicable taxes.
- 5.5. All equipment needs to be supplied within 90 days after issuance of work order.

## 6. ELIGIBILITY DOCUMENTS:

All applicants must submit documents in a sealed envelope:

- i. Company Profile
- ii. Certificate of Company / Firm Registration / Incorporation under the laws of Pakistan
- iii. Registration of NTN with Federal Board of Revenue (FBR) and having Active Tax Payer status.
- iv. Registration of General Sales Tax (GST) with Federal Board of Revenue (FBR) and having Active Tax Payer status.
- v. Bidder must be Authorized Distributor for the manufacturer and must provide authorization letter/ agreement from manufacturer as proof.
- vi. The bidder should have a local office in Islamabad/Rawalpindi
- vii. Affidavit that firm is not Blacklisted and involved in any active litigation in Pakistan on Stamp Paper of at least Rs 100 value.

Note: A bidder will be considered ineligible to participate in prequalification process in case of not meeting any of above-mentioned eligibility condition or CDA shall disqualify the bidder on the ground that he had provided false, fabricated or materially incorrect information.

## 7. PREQUALIFICATION & EVALUATION CRITERIA

- 7.1. Only those bidders who are found responsive and meet eligibility requirements laid out in section 7.2 will be invited to the request for the proposal process.
- 7.2. Minimum Qualification Criteria

Sr. No.	Description	Maximum Marks
1.	Certificate of Company / Firm Registration / Incorporation under the laws of Pakistan (Mandatory)	10
2.	Firm with Income Tax Certificate / GST Certificate with Federal Board of Revenue (FBR) and having Active Taxpayer (Mandatory)	10
3.	Location of Offices in Islamabad or Rawalpindi	10
4.	Firm must be DJI Authorized Distributor (certificate required). (Mandatory)	10
5.	Proof of Financial stability (Bank Statement) Up to 5 million PKR = 05 5.1 to 10 million PKR = 10 Above 10.1 million PKR = 20	20
6.	Technical Presentation of Proposed Equipment along with features offered and training plan	40
<b>Total Marks</b>		<b>100</b>
<b>Minimum Passing Marks</b>		<b>75</b>

- a. Bidder must meet minimum required qualification marks to qualify.
- b. Marks will only be awarded where the applicant has attached documentary evidence.

## QUANTITIES

<b>S/N</b>	<b>Particulars</b>	<b>QTY</b>
1	DJI Mavic 3 (Multispectral)	1
2	DJI Mavic 3 (Enterprises - Optical)	1
3	Battery Pack (3 batteries + Charger)	4
4	RTK Module for Mavic drone	1
5	DJI DRTK 2 Mobile Station (DRTK Tripod Stand)	1
6	DJI Terra Processing Software (Lifetime license)	1
7	Drone Data Processing Machine	1

## TECHNICAL SPECIFICATIONS

<b>1. DJI MAVIC 3 MULTISPECTRAL DRONE SPECIFICATIONS</b>	
Aircraft	
Weight	951 g
Max Takeoff Weight	1,050 g
Dimensions	Folded (without propellers): 221×96.3×90.3 mm(L×W×H) Unfolded (without propellers): 347.5×283×107.7 mm (L×W×H)
Diagonal Distance	380.1 mm
Max Ascent Speed	6 m/s (Normal Mode) 8 m/s (Sport Mode)
Max Descent Speed	6 m/s (Normal Mode) 6 m/s (Sport Mode)
Max Flight Speed (at sea level, no wind)	15 m/s (Normal Mode) Forward: 21 m/s, Side: 20 m/s, Backward: 19 m/s (Sport Mode)
Max Wind Speed Resistance	12 m/s
Max Take-off Altitude Above Sea Level	6000 m
Max Flight Time (no wind)	43 mins
Max Hover Time (no wind)	37 mins
Max Flight Distance	32 km
Max Pitch Angle	30° (Normal Mode) 35° (Sport Mode)
Max Angular Velocity	200°/s
GNSS	GPS+Galileo+BeiDou+GLONASS (GLONASS is supported only when the RTK module is enabled)
Hovering Accuracy	Vertical: ±0.1 m (with Vision System); ±0.5 m (with GNSS); ±0.1 m (with RTK) Horizontal: ±0.3 m (with Vision System); ±0.5 m (with High-Precision Positioning System); ±0.1 m (with RTK)
Operating Temperature Range	-10° to 40° C (14° to 104° F)
Internal Storage	N/A
Motor Model	2008 DJI Mavic 3M
Light Sensor	Built-in module
RGB Camera	
Image Sensor	4/3-inch CMOS, Effective pixels: 20 MP

Lens	FOV: 84° Format Equivalent: 24 mm Aperture: : f/2.8 to f/11 Focus: 1 m to ∞
ISO Range	100-6400
Shutter Speed	Electronic Shutter: 8-1/8000 s Mechanical shutter: 8-1/2000 s
Max Image Size	5280×3956
Photo Shooting Mode	Single shot: 20 MP Timed: 20 MP JPEG: 0.7/1/2/3/5/7/10/15/20/30/60 s JPEG + RAW: 3/5/7/10/15/20/30/60 s Panorama: 20 MP (original material)
Video Resolution	H.264 4K: 3840×2160@30fps FHD: 1920×1080@30fps
Max Video Bitrate	4K: 130 Mbps FHD: 70 Mbps
Supported File System	exFAT
Photo Format	JPEG/DNG (RAW)
Video Format	MP4 (MPEG-4 AVC/H.264)
<b>Multispectral Camera</b>	
Sensor	1/2.8-inch CMOS, effective pixels: 5 MP
Lens	FOV: 73.91° (61.2° x 48.10°) Equivalent focal length: 25 mm Aperture: f/2.0 Focus: 1 m to ∞
Multispectral Camera Band	Green (G): 560 ± 16 nm; Red (R): 650 ± 16 nm; Red Edge (RE): 730 ± 16 nm; Near infrared (NIR): 860 ± 26 nm
Max Image Size	2592×1944
Image Format	TIFF
Video Format	MP4 (MPEG-4 AVC/H.264)
Photo Shooting Mode	Single: 5 MP Timed: 5 MP TIFF: 2/3/5/7/10/15/20/30/60 s
Video Resolution	H.264 FHD: 1920 x 1080@30fps Video content: NDVI/GNDVI/NDRE
Max Video Bitrate	Stream: 60 Mbps
<b>Gimble</b>	
Stabilization	3-axis (tilt, roll, pan)
Mechanical Range	Tilt: -135° to 100° Roll: -45° to 45° Pan: -27° to 27°
Controllable Range	Tilt: -90° to 35°



	Pan: Not controllable
Max Control Speed (tilt)	100°/s
Angular Vibration Range	±0.007°
<b>Sensing</b>	
Type	Omnidirectional binocular vision system, supplemented with an infrared sensor at the bottom of the airera
Forward	Measurement Range: 0.5-20 m Detection Range: 0.5-200 m Effective Sensing Speed: Flight Speed ≤15 m/s FOV: Horizontal 90°, Vertical 103°
Backward	Measurement Range: 0.5-16 m Effective Sensing Speed: Flight Speed ≤12 m/s FOV: Horizontal 90°, Vertical 103°
Lateral	Measurement Range: 0.5-25 m Effective Sensing Speed: Flight Speed ≤15 m/s FOV: Horizontal 90°, Vertical 85°
Upward	Measurement Range: 0.2-10 m Effective Sensing Speed: Flight Speed ≤6 m/s FOV: Front and Back 100°, Left and Right 90°
Downward	Measurement Range: 0.3-18 m Effective Sensing Speed: Flight Speed ≤6 m/s FOV: Front and Back 130°, Left and Right 160
Operating Environment	Forward, Backward, Lateral, and Upward: Surface with a clear pattern and adequate lighting (lux >15) Downward: Diffuse reflective surface with diffuse reflectivity>20% (e.g. walls, trees, people) and adequate li (lux >15)
<b>Video Transmission</b>	
Video Transmission System	DJI O3 Enterprise Transmission
Live View Quality	Remote Controller: 1080p/30fps
Operating Frequency	2.400-2.4835 GHz 5.725-5.850 GHz
Max Transmission Distance (unobstructed, free of interference)	FCC:15 km CE: 8 km SRRC: 8 km MIC: 8 km
Max Transmission Distance (Obstructed)	Strong Interference (dense buildings, residential areas, etc.): 1.5-3 km (FCC/CE/SRRC/MIC) Medium Interference (suburban areas, city parks, etc.): 3-9 km (FCC), 3-6 km (CE/SRRC/MIC) Low Interference (open spaces, remote areas, etc.): 9-15 km (FCC), 6-8 km (CE/SRRC/MIC)
Max Download Speed	15 MB/s (with DJI RC Pro Enterprise)
Latency (depending on environmental conditions and mobile device)	Approx. 200 ms
Antenna	4 Antennas, 2T4R
Transmission Power (EIRP)	2.4 GHz: <33 dBm (FCC), <20 dBm (CE/SRRC/MIC) 5.8 GHz: <33 dBm (FCC), <30 dBm (SRRC), <14 dBm (CE)

Other	Supports the DJI Cellular module
<b>DJI RC Pro Enterprise</b>	
Video Transmission System	DJI O3 Enterprise Transmission
Max Transmission Distance (unobstructed, free of interference)	FCC: 15 km CE/SRRC/MIC: 8 km
Video Transmission Operating Frequency	2.400-2.4835 GHz 5.725-5.850 GHz
Antenna	4 Antennas, 2T4R
Video Transmission Transmitter Power (EIRP)	2.4 GHz: <33 dBm (FCC), <20 dBm (CE/SRRC/MIC) 5.8 GHz: <33 dBm (FCC), <14 dBm (CE), <23 dBm (SRRC)
Wi-Fi Protocol	802.11 a/b/g/n/ac/ax Support 2×2 MIMO Wi-Fi
Wi-Fi Operating Frequency	2.400-2.4835 GHz 5.150-5.250 GHz 5.725-5.850 GHz
Wi-Fi Transmitter Power (EIRP)	2.4 GHz: <26 dBm (FCC), <20 dBm (CE/SRRC/MIC) 5.1 GHz: <26 dBm (FCC), <23 dBm (CE/SRRC/MIC) 5.8 GHz: <26 dBm (FCC/SRRC), <14 dBm (CE)
Bluetooth Protocol	Bluetooth 5.1
Bluetooth Operating Frequency	2.400-2.4835 GHz
Bluetooth Transmitter Power (EIRP)	< 10 dBm
Screen Resolution	1920×1080
Screen Size	5.5 inches
Screen	60 fps
Brightness	1,000 nits
Touchscreen Control	10-point multi-touch
Battery	Li-ion (5000 mAh @ 7.2 V)
Charging Type	Recommended to be charged with the included DJI USB-C Power Adapter (100W) or USB charger at 12 V or
Rated Power	12 W
Storage Capacity	Internal Storage (ROM): 64 GB Supports a microSD card for expanded capacity
Charging Time	Approx. 1 hour 30 minutes (with the included DJI USB-C Power Adapter (100W) only charging the remote co or a USB charger at 15 V) Approx. 2 hours (with a USB charger at 12 V) Approx. 2 hours 50 minutes (with the included DJI USB-C Power Adapter (100W) charging the aircraft and re controller simultaneously)
Operating Time	Approx. 3 hours
Video Output Port	Mini-HDMI port
Operating Temperature Range	-10° to 40° C (14° to 104° F)
Storage Temperature	-30° to 60° C (-22° to 140° F) (within one month) -30° to 45° C (-22° to 113° F) (one to three months) -30° to 35° C (-22° to 95° F) (three to six months)

	-30° to 25° C (-22° to 77° F) (more than six months)
Charging Temperature	5° to 40° C (41° to 104° F)
Supported DJI Aircraft	DJI Mavic 3E
GNSS	GPS+Galileo+GLONASS
Dimensions	Antennas folded and controller sticks unmounted: 183.27×137.41×47.6 mm (L×W×H) Antennas unfolded and controller sticks mounted: 183.27×203.35×59.84 mm (L×W×H)
Weight	Approx. 680
Model	RM510B
<b>Storage</b>	
Supported Memory Cards	Aircraft: SanDisk Extreme 512GB V30 A2 microSDXC
	Remote Controller SanDisk Extreme 512GB V30 A2 microSDXC
<b>Battery</b>	
Capacity	5000 mAh
Standard Voltage	15.4
Max Charging Voltage	17.6 V
Type	LiPo 4S
Chemical System	LiCoO2
Energy	77 Wh
Weight	335.5 g
Charging Temperature	5° to 40° C (41° to 104° F)
<b>Charger</b>	
Input	100-240 V (AC Power), 50-60 Hz, 2.5 A
Output Power	100 W
Output	Max. 100 W (total)
<b>Charging Hub</b>	
Input	USB-C: 5-20 V, 5.0 A
Output	Battery Port: 12-17.6 V, 8.0 A
Rated Power	100 W
Charging Type	Three batteries charged in sequence
Charging Temperature Range	5° to 40° C (41° to 104° F)

## 2. DJI MAVIC 3 ENTERPRISE DRONE SPECIFICATIONS

Aircraft	
Weight	915 g
Max Takeoff Weight	1,050 g
Dimensions	Folded (without propellers): 221×96.3×90.3 mm(L×W×H) Unfolded (without propellers): 347.5×283×107.7 mm (L×W×H)
Diagonal Distance	380.1 mm
Max Ascent Speed	6 m/s (Normal Mode) 8 m/s (Sport Mode)
Max Descent Speed	6 m/s (Normal Mode) 6 m/s (Sport Mode)
Max Flight Speed (at sea level, no wind)	15 m/s (Normal Mode) Forward: 21 m/s, Side: 20 m/s, Backward: 19 m/s (Sport Mode)
Max Wind Speed Resistance	12 m/s
Max Take-off Altitude Above Sea Level	6000 m
Max Flight Time (no wind)	45 mins
Max Hover Time (no wind)	38 mins
Max Flight Distance	32 km
Max Pitch Angle	30° (Normal Mode) 35° (Sport Mode)
Max Angular Velocity	200°/s
GNSS	GPS+Galileo+BeiDou+GLONASS (GLONASS is supported only when the RTK module is enabled)
Hovering Accuracy	Vertical: ±0.1 m (with Vision System); ±0.5 m (with GNSS); ±0.1 m (with RTK) Horizontal: ±0.3 m (with Vision System); ±0.5 m (with High-Precision Positioning System); ±0.1 m (with RTK)
Operating Temperature Range	-10° to 40° C (14° to 104° F)
Internal Storage	N/A
Motor Model	2008
Propeller Model	9453F Propellers for Enterprise
Beacon	Built into the aircraft
Class	C2 (EU)
Wide Camera	
Sensor	4/3 CMOS, Effective pixels: 20 MP
Lens	FOV: 84° Format Equivalent: 24 mm Aperture: f/2.8-f/11 Focus: 1 m to ∞
ISO Range	100-6400

Max Image Size	5280×3956
Still Photography Modes	Single: 20 MP Timed: 20 MP JPEG:0.7/1/2/3/5/7/10/15/20/30/60s JPEG+RAW: 3/5/7/10/15/20/30/60s Smart Low-light Shooting: 20 MP Panorama: 20 MP (raw image)
Video Resolution	H.264 4K: 3840×2160@30fps FHD: 1920x1080@30fps
Bitrate	4K: 130 Mbps FHD: 70 Mbps
Supported File Formats	exFAT
Photo Format	JPEG/DNG (RAW)
Video Format	MP4 (MPEG-4 AVC/H.264)
<b>Tele Camera</b>	
Sensor	1/2-inch CMOS, Effective pixels: 12 MP
Lens	FOV: 15° Format Equivalent: 162 mm Aperture: f/4.4 Focus: 3 m to ∞
ISO Range	100-6400
Shutter Speed	Electronic Shutter: 8-1/8000 s
Max Image Size	4000×3000
Photo Format	JPEG
Video Format	MP4 (MPEG-4 AVC/H.264)
Still Photography Modes	Single: 12 MP Timed: 12 MP JPEG: 0.7/1/2/3/5/7/10/15/20/30/60 s Smart Low-light Shooting: 12 MP
Video Resolution	H.264 4K: 3840×2160@30fps FHD: 1920×1080@30fps
Bitrate	4K: 130 Mbps FHD: 70 Mbps
Digital Zoom	8x (56x hybrid zoom)
<b>Gimble</b>	
Stabilization	3-axis (tilt, roll, pan)
Mechanical Range	Tilt: -135° to 100° Roll: -45° to 45° Pan: -27° to 27°
Controllable Range	Tilt: -90° to 35° Pan: Not controllable
Max Control Speed (tilt)	100°/s
Angular Vibration Range	±0.007°
<b>Sensing</b>	
Type	Omnidirectional binocular vision system, supplemented with an infrared sensor at the bottom of the airera

Forward	Measurement Range: 0.5-20 m Detection Range: 0.5-200 m Effective Sensing Speed: Flight Speed $\leq$ 15 m/s FOV: Horizontal 90°, Vertical 103°
Backward	Measurement Range: 0.5-16 m Effective Sensing Speed: Flight Speed $\leq$ 12 m/s FOV: Horizontal 90°, Vertical 103°
Lateral	Measurement Range: 0.5-25 m Effective Sensing Speed: Flight Speed $\leq$ 15 m/s FOV: Horizontal 90°, Vertical 85°
Upward	Measurement Range: 0.2-10 m Effective Sensing Speed: Flight Speed $\leq$ 6 m/s FOV: Front and Back 100°, Left and Right 90°
Downward	Measurement Range: 0.3-18 m Effective Sensing Speed: Flight Speed $\leq$ 6 m/s FOV: Front and Back 130°, Left and Right 160°
Operating Environment	Forward, Backward, Lateral, and Upward: Surface with a clear pattern and adequate lighting (lux >15) Downward: Diffuse reflective surface with diffuse reflectivity>20% (e.g. walls, trees, people) and adequate li (lux >15)
<b>Video Transmission</b>	
Video Transmission System	DJI O3 Enterprise Transmission
Live View Quality	Remote Controller: 1080p/30fps
Operating Frequency	2.400-2.4835 GHz 5.725-5.850 GHz
Max Transmission Distance (unobstructed, free of interference)	FCC:15 km CE: 8 km SRRC: 8 km MIC: 8 km
Max Transmission Distance (Obstructed)	Strong Interference (dense buildings, residential areas, etc.): 1.5-3 km (FCC/CE/SRRC/MIC) Medium Interference (suburban areas, city parks, etc.): 3-9 km (FCC), 3-6 km (CE/SRRC/MIC) Low Interference (open spaces, remote areas, etc.): 9-15 km (FCC), 6-8 km (CE/SRRC/MIC)
Max Download Speed	15 MB/s (with DJI RC Pro Enterprise)
Latency (depending on environmental conditions and mobile device)	Approx. 200 ms
Antenna	4 Antennas, 2T4R
Transmission Power (EIRP)	2.4 GHz: <33 dBm (FCC), <20 dBm (CE/SRRC/MIC) 5.8 GHz: <33 dBm (FCC), <30 dBm (SRRC), <14 dBm (CE)
<b>DJI RC Pro Enterprise</b>	
Video Transmission System	DJI O3 Enterprise Transmission

Max Transmission Distance (unobstructed, free of interference)	FCC: 15 km CE/SRRC/MIC: 8 km
Video Transmission Operating Frequency	2.400-2.4835 GHz 5.725-5.850 GHz
Antenna	4 Antennas, 2T4R
Video Transmission Transmitter Power (EIRP)	2.4 GHz: <33 dBm (FCC), <20 dBm (CE/SRRC/MIC) 5.8 GHz: <33 dBm (FCC), <14 dBm (CE), <23 dBm (SRRC)
Wi-Fi Protocol	802.11 a/b/g/n/ac/ax Support 2×2 MIMO Wi-Fi
Wi-Fi Operating Frequency	2.400-2.4835 GHz 5.150-5.250 GHz 5.725-5.850 GHz
Wi-Fi Transmitter Power (EIRP)	2.4 GHz: <26 dBm (FCC), <20 dBm (CE/SRRC/MIC) 5.1 GHz: <26 dBm (FCC), <23 dBm (CE/SRRC/MIC) 5.8 GHz: <26 dBm (FCC/SRRC), <14 dBm (CE)
Bluetooth Protocol	Bluetooth 5.1
Bluetooth Operating Frequency	2.400-2.4835 GHz
Bluetooth Transmitter Power (EIRP)	< 10 dBm
Screen Resolution	1920×1080
Screen Size	5.5 inches
Screen	60 fps
Brightness	1,000 nits
Touchscreen Control	10-point multi-touch
Battery	Li-ion (5000 mAh @ 7.2 V)
Charging Type	Recommended to be charged with the included DJI USB-C Power Adapter (100W) or USB charger at 12 V or
Rated Power	12 W
Storage Capacity	Internal Storage (ROM): 64 GB Supports a microSD card for expanded capacity
Charging Time	Approx. 1 hour 30 minutes (with the included DJI USB-C Power Adapter (100W) only charging the remote co or a USB charger at 15 V) Approx. 2 hours (with a USB charger at 12 V) Approx. 2 hours 50 minutes (with the included DJI USB-C Power Adapter (100W) charging the aircraft and re controller simultaneously)
Operating Time	Approx. 3 hours
Video Output Port	Mini-HDMI port
Operating Temperature Range	-10° to 40° C (14° to 104° F)
Storage Temperature	-30° to 60° C (-22° to 140° F) (within one month) -30° to 45° C (-22° to 113° F) (one to three months) -30° to 35° C (-22° to 95° F) (three to six months)

	-30° to 25° C (-22° to 77° F) (more than six months)
Charging Temperature	5° to 40° C (41° to 104° F)
Supported DJI Aircraft	DJI Mavic 3E
GNSS	GPS+Galileo+GLONASS
Dimensions	Antennas folded and controller sticks unmounted: 183.27×137.41×47.6 mm (L×W×H) Antennas unfolded and controller sticks mounted: 183.27×203.35×59.84 mm (L×W×H)
Weight	Approx. 680 g
Model	RM510B
<b>Storage</b>	
Supported Memory Cards	Aircraft: SanDisk Extreme 512GB V30 A2 microSDXC
	Remote Controller SanDisk Extreme 512GB V30 A2 microSDXC
<b>Battery</b>	
Capacity	5000 mAh
Standard Voltage	15.4
Max Charging Voltage	17.6 V
Type	LiPo 4S
Chemical System	LiCoO <sub>2</sub>
Energy	77 Wh
Weight	335.5 g
Charging Temperature	5° to 40° C (41° to 104° F)
<b>Charger</b>	
Input	100-240 V (AC Power), 50-60 Hz, 2.5 A
Output Power	100 W
Output	Max. 100 W (total)
<b>Charging Hub</b>	
Input	USB-C: 5-20 V, 5.0 A
Output	Battery Port: 12-17.6 V, 8.0 A
Rated Power	100 W
Charging Type	Three batteries charged in sequence
Charging Temperature Range	5° to 40° C (41° to 104° F)



### 3. BATTERY KIT /PACK SPECIFICATIONS

#### Battery Kit / Pack ( 3 Batteries & Charger)

Intelligent Flight Battery:	Model: BWX260-5000-15.4 Capacity: 5000 mAh Weight: 335.5 g Battery Type: LiPo 4S Charging Temperature: 5° to 40°C (41° to 104°F)
DJI Mavic 3 Battery Charging Hub (100W):	Model: CHX265-100 Dimensions: 150×55×28 mm (L×W×H) Weight: 116 g Operating Temperature: 5° to 40° C (41° to 104° F) Input: 5-20 V, max 5 A Compatible Power Adapter: DJI USB-C Power Adapter (100W) Charging Time: Approx. 1 h 10 mins (single battery)

#### 4. RTK MODULE SPECIFICATIONS

RTK Module	
Dimensions	50.2×40.2×66.2 mm (L×W×H)
Weight	24±2 g
Interface	USB-C
Power	Approx. 1.2 W
RTK Positioning Accuracy	RTK Fix: Horizontal: 1 cm + 1 ppm; Vertical: 1.5 cm + 1 ppm
System and frequency points:	GPS: L1C/A L2C/L2P BDS: B1I B2I GLO: G1 G2 GAL: E1 E5b QZSS: L1 L2
Compatibility	DJI Mavic 3 Enterprise Series Aircraft

## DRTK 2 MOBILE STATION SPECIFICATIONS

GNSS 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	
	Built-in high-precision 6-axis accelerometer D-RTK 2 movement monitoring
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	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
<b>Communication Distance</b>	
Operating Mode 1/3	SRRC/NCC/FCC/MIC/KCC/CE: 2 km (Unobstructed and free of interference, when the D-RTK 2 Mobile Station is used as a base station and 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)
Operating Mode 4	Between the aircraft and mobile station: NCC/FCC: 7 km; SRRC/MIC/KCC/CE: 5 km Between the remote controller and mobile station: 200 m (Unobstructed and free of interference at a flying altitude of about 120 m, when the distance from the D-RTK 2 antenna to the bottom of the tripod is 1.8 m, and when the remote controller is 1.2 m from ground level)
Operating Mode 5	NCC/FCC: 12 km; SRRC/MIC/KCC/CE: 6 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)
Memory Capacity	16 GB
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
Operating Temperature	4° to 131° F (-20° to 55° C)

## **5. DJI TERRA PROCESSING SOFTWARE SPECIFICATIONS**

Processing Capability	3D Models, 2D Maps, LiDAR, Multispectral
License	Lifetime

## 6. DRONE DATA PROCESSING MACHINE SPECIFICATIONS

Processor	Intel ® Core™ i9 14900KF (36 MB Cache, 24 Core, upto 6.0 GHz P-Core Thermal Velocity)
OS	Windows 11 Pro, English
GPU	NVIDIA GeForce RTX™ 4090, 24 GB GDDR6X
RAM	RAM 64GB:2X32 GB, DDR5. 6000 MT/S
Storage	4 TB (2X2 TB), M.2, PCIe, SSD
Chassis	1000W Platinum Rated PSU, 240mm Liquid-Cooled CPU Clear Side Panel
Monitor	QHD2560X1440, Display port (OC): 180 Hz, Display Port: 165Hz, HDMI:144 Hz
Peripheral Devices	Keyboard, Mouse and Cables