

# Cherokee Nation

[www.cherokee.org](http://www.cherokee.org)

## REQUEST FOR BIDS

**LAW ENFORCEMENT PACKAGE ON  
OUTDOOR DRONES AND SMALL DRONES  
FOR CHEROKEE NATION MARSHAL SERVICE**



**Bid Due Date: June 17, 2024**

**CHEROKEE NATION**

P.O. Box 948  
Tahlequah, OK 74465  
(918) 453-5000

**CHEROKEE NATION  
BID REQUEST**

**Law Enforcement Package on Outdoor Drones and Small Drones**

The Cherokee Nation is accepting bids from interested parties for law enforcement packages on outdoor drones and small drones for the Cherokee Nation Marshal Service. Interested parties are to provide a bid to furnish product equal to or better than the specifications provided. Interested bidders must follow all directions outlined in this bid packet including the utilization of mandatory bid response sheet to be considered fully responsive.

The lowest most responsive, responsible bid will be the determining factor in awarding this bid taking Indian Preference in accordance with Cherokee Nation Acquisition Management Policy and Procedures. The successful bidder will be issued a purchase order incorporating the bid response.

**Bids are due June 17, 2024 by 5:00 p.m.**

**MANDATORY SUBMITTAL INFORMATION:** Bid submittal requirements must be followed. Each bid must be submitted on the prescribed, required form with all areas completed. Bids may be faxed to the attention of **Pam Jumper** at (918) 458-4493 or (918) 458-7695 or e-mailed to [pam-jumper@cherokee.org](mailto:pam-jumper@cherokee.org). It is the bidder's responsibility to ensure delivery of bid by **June 17, 2024 by 5:00 p.m.** Any bids received after the designated date and time will be ineligible for award.

**Bid Acceptance:** Bids will be accepted from Indian and Non-Indian bidders. Cherokee Nation reserves the right to reject any and all bids. Cherokee Nation reserves the right to determine if a bid meets stated requirements, and to award a purchase order for the bid that is in the best interest of the Cherokee Nation including but not limited to the total cost and capability of the bidder. Bidders are responsible for any and all costs associated with the preparation and submission of bids. To be considered, bids must be received by the specified date and time; any bid received after stipulated date and time will be returned unopened. No bidder may withdraw their bid within 30 days after proposal due date.

**TERO Certification:** Indian preference will be given only to bidders who provide proof of current certification from the Cherokee Nation Tribal Employments Office (TERO) located in Tahlequah, Oklahoma, telephone number (918) 453-5000. Proof of TERO certification must accompany and be included in bid submittal.

**Conflict of Interest and Restrictions:** If any contractor, contractor's employee, subcontractor, or any individual working on the proposed contract may have a possible conflict of interest that may affect the objectivity, analysis, and/or performance of the contract, it shall be declared in writing and submitted to Cherokee Acquisition Management (Attn: Pam Jumper) no later than on or before **June 17, 2024 by 5:00 p.m.**

The NATION will determine in writing if the conflict is significant and material and if so, may eliminate the contractor from submitting a proposal.

**Verbal Instructions:** Interested parties shall not initiate or execute any negotiation, decision, or action arising from any verbal discussion with any Cherokee Nation employee. Only written communications from the designated Contact Person at Cherokee Nation may be considered a duly authorized expression on behalf of the NATION regarding this RFP. Additionally, only written communications from interested parties are recognized as duly authorized expressions on behalf of the vendor. The same instructions shall apply to any subsequent award and agreement communications.

**Qualifications of Bidder:** The NATION may make such investigations as deemed necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the NATION all such information and data for this purpose as the NATION may request. The NATION reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the NATION such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

**Method of Award – Lowest Bid That Contains Lowest Most Responsive/Reasonable Offer From Qualified Bidder:** After consideration of price and other factors, the purchase order will be awarded to the bidder whose bid is determined to be the lowest most responsive/reasonable offer taking Indian Preference into consideration and in the best interest of the Nation to accept. Award shall be to the lowest, most responsive/reasonable bid in accordance with Cherokee Nation Acquisition Management Policy and Procedures. Indian/TERO Preference will be given only to bidders who provide proof of current TERO certification from the Cherokee Nation Tribal Employments Office (TERO) in accordance with current Cherokee Nation Policy. Proof of TERO certification must accompany and be included in bid submittal.

**Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters:** The responding party certifies to the best of its knowledge and belief that the person, the firm, or any of its principals are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency or Indian tribe. The bidder will also certify they have not, within a three-year period preceding this Request for Proposal, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, Local or Tribal) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commissions of embezzlement, theft, forgery, bribery, falsifications or destruction of records, making false statements, and are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in this provision. The responding party certifies they have not, within a three-year period preceding this Request for Proposal, had one or more contracts terminated for default by a Federal, State, Local or Tribal agency. The responding party shall provide immediate written notice to the Cherokee Nation if, at any time prior to

contract award, the person learns its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

**General Information:** Cherokee Nation reserves the right to waive any informalities or to reject any and all bids. Award of purchase order will be to the lowest most responsible responsive bidder and will be subject to availability of funds. All sums due to any suppliers utilized by successful bidders must be paid or will be paid within ten (10) days of receipt of any money received from the Cherokee Nation under any purchase order. Indian preference will be given to Contractors certified as an Indian-Owned firm by the Cherokee Nation Tribal Employment Rights Office (T.E.R.O.). Proof of certification must accompany all bids. No bidder may withdraw their bid within thirty (30) days after bid opening date.

A prospective contractor seeking to receive Indian Preference under this contract must be certified as an Indian-owned firm by the Cherokee Nation Tribal Employment Rights Office (TERO) and submit proof of that certification with their bid.

**MANDATORY BID RESPONSE SHEET**  
**Law Enforcement Package on**  
**Outdoor Drones and Small Drones**

<b><u>Product Description</u></b>	<b><u>QTY</u></b>	<b><u>UNIT COST</u></b>	<b><u>TOTAL</u></b>
<b>Law Enforcement Pkg On Outdoor Drones</b>	<b><u>04</u></b>	_____	_____
<b>Law Enforcement Pkg. Small Drones</b>	<b><u>04</u></b>	_____	_____
<b>SHIPPING COST</b>		\$ _____	
<b>GRAND TOTAL BID</b>		\$ _____	

**LEAD TIME ARO:** \_\_\_\_\_

**ALL SPECIFICATIONS ARE FULLY MET:** \_\_\_\_\_ **YES** \_\_\_\_\_ **NO**

**PRODUCT SPECIFICATIONS INCLUDED:** \_\_\_\_\_ **YES** \_\_\_\_\_ **NO**

\*\*Cherokee Nation will consider bids for product equal to or better. If not bidding exact product, complete details and specifications for product must be submitted with bid.\*\*

NOTE TO BIDDERS REGARDING INDIAN PREFERENCE:

TERO Certified Contractor: \_\_\_\_\_ Yes \_\_\_\_\_ No  
 (Proof of certification must accompany all bids)

SUBMITTED:

\_\_\_\_\_  
 Company Name

\_\_\_\_\_  
 Company Address

\_\_\_\_\_  
 Authorized Signature

\_\_\_\_\_  
 Print Name & Title

\_\_\_\_\_  
 Phone/Fax Number

Product Specifications and Requirements  
Provided by: Cherokee Nation Marshal Service

**The Cherokee Nation Marshal Service is seeking bids for Law Enforcement Pkg. outdoor drones and small drones. The desired information follows, including a make/model; the Nation will accept EQUAL TO OR BETTER THAN SPEC'S PROVIDED.**

**Outdoor Drone LE Pkg.**

**Specs**

**Aircraft**

- Dimensions  
(unfolded, excl. propellers)
  - 470×585×215 mm (L×W×H)
- Dimensions (folded)
  - 365×215×195 mm (L×W×H)
- Diagonal Wheelbase
  - 668 mm
- Weight (incl. two batteries)
  - 3770 ± 10 g
- Max Takeoff Weight
  - 4069 g
- Max Takeoff Weight for C2 Certification in EU
  - 3998 g
- Operation Frequency<sup>[1]</sup>
  - 2.4000-2.4835 GHz; 5.725-5.850 GHz
- Transmitter Power (EIRP)
  - 2.4 GHz: <33 dBm (FCC); <20 dBm (CE/SRRC/MIC)
  - 5.8 GHz: <33 dBm (FCC/SRRC); <14 dBm (CE)

- Hovering Accuracy  
(windless or breezy)
  - Vertical:  $\pm 0.1$  m (Vision System enabled);  $\pm 0.5$  m (N-mode with GPS);  $\pm 0.1$  m (RTK)  
Horizontal:  $\pm 0.3$  m (Vision System enabled);  $\pm 1.5$  m (N-mode with GPS);  $\pm 0.1$  m (RTK)
- RTK Positioning Accuracy  
(fixed RTK enabled)
  - GPS+1 cm+1 ppm (horizontal)  
1.5 cm+1 ppm (vertical)
- Max Angular Velocity
  - Pitch:  $150^\circ/\text{sec.}$ ; Yaw:  $100^\circ/\text{sec.}$
- Max Pitch Angle
  - $35^\circ$  (N-mode and Forward Vision System enabled:  $25^\circ$ )
- Max Ascent/Descent Speed
  - 6 m/s, 5 m/s
- Max Tilt Descent Speed
  - 7 m/s
- Max Horizontal Speed
  - 23 m/s
- Max Service Ceiling Above Sea Level (without other payload)
  - 5,000 m (with 1671 propellers)  
7,000 m (with 1676 propellers)
- Max Wind Resistance
  - 12 m/s
- Max Hover Time <sup>[2]</sup>
  - 36 min
- Max Flight Time <sup>[2]</sup>
  - 41 min
- Motor Model
  - 3511
- Propeller Model
  - 1671  
1676 High Altitude (not included)
- Ingress Protection Rating <sup>[3]</sup>
  - IP55

- GNSS
  - Galileo+BeiDou+GLONASS  
(GLONASS is supported only when RTK module is enabled)
- Operating Temperature
  - -20° to 50° C (-4° to 122° F)

## **Gimbal**

- Angular Vibration Range
  - $\pm 0.01^\circ$
- Controllable Range
  - Pan:  $\pm 90^\circ$   
Tilt: -120° to +45°
- Mechanical Range
  - Pan:  $\pm 105^\circ$   
Tilt: -135° to +60°  
Roll:  $\pm 45^\circ$

## **Zoom Camera**

- Sensor
  - 1/2" CMOS, Effective pixels: 48M
- Lens
  - Focal length: 21-75 mm (equivalent: 113-405 mm)  
Aperture: f/2.8-f/4.2  
Focus: 5 m to  $\infty$
- Exposure Compensation
  - $\pm 3$  ev (using 1/3 ev as step length)
- Electronic Shutter Speed
  - Auto Mode:  
Photo: 1/8000-1/2 s  
Video: 1/8000-1/30 s  
M Mode:



Photo: 1/8000-8 s

Video: 1/8000 -1/30 s

- ISO Range
  - 100-25600
- Max. Video Resolution
  - 3840×2160
- Max Photo Size
  - 8000×6000

## Wide Camera

- Sensor
  - 1/2" CMOS, Effective pixels: 12M
- Lens
  - DFOV: 84°  
Focal length: 4.5 mm (equivalent: 24 mm)  
Aperture: f/2.8  
Focus: 1 m to  $\infty$
- Exposure Compensation
  - $\pm 3$  ev (using 1/3 ev as step length)
- Electronic Shutter Speed
  - Auto Mode:  
Photo: 1/8000-1/2 s  
Video: 1/8000-1/30 s

M Mode:

Photo: 1/8000-8 s

Video: 1/8000-1/30 s

- ISO Range
  - 100-25600
- Max. Video Resolution
  - 3840×2160
- Photo Size
  - 4000×3000

## Thermal Camera

- Thermal Imager
  - Uncooled VOx Microbolometer
- Lens
  - DFOV: 61°  
Focal length: 9.1 mm (equivalent: 40 mm)  
Aperture: f/1.0  
Focus: 5 m to  $\infty$
- Noise Equivalent Temperature Difference (NETD)
  - $\leq 50$  mK@F1.0
- Infrared Temperature Measurement Accuracy<sup>[4]</sup>
  - $\pm 2^{\circ}\text{C}$  or  $\pm 2\%$  (using the larger value)
- Video Resolution
  - Infrared Image Super-resolution Mode: 1280×1024  
Normal Mode: 640×512
- Photo Size
  - Infrared Image Super-resolution Mode: 1280×1024  
Normal Mode: 640×512
- Pixel Pitch
  - 12  $\mu\text{m}$
- Temperature Measurement Method
  - Spot Meter, Area Measurement
- Temperature Measurement Range
  - High Gain Mode:  $-20^{\circ}$  to  $150^{\circ}$  C ( $-4^{\circ}$  to  $302^{\circ}$  F)  
Low Gain Mode:  $0^{\circ}$  to  $500^{\circ}$  C ( $32^{\circ}$  to  $932^{\circ}$  F)
- Temperature Alert
  - Supported
- Palette
  - White Hot/Black Hot/Tint/Iron Red/Hot  
Iron/Arctic/Medical/Fulgurite/Rainbow 1/Rainbow 2

## **FPV Camera**

- Resolution
  - 1920×1080
- DFOV

- 161°
- Frame Rate
  - 30 fps

## **Laser Module**

- Wavelength
  - 905 nm
- Max Laser Power
  - 3.5 mW
- Single Pulse Width
  - 6 ns
- Measurement Accuracy
  - $\pm (0.2 \text{ m} + D \times 0.15\%)$   
D is the distance to a vertical surface
- Measuring Range
  - 3-1,200 m (0.5×12 m vertical surface with 20% reflectivity)
- Safety Regulation Level
  - Class 1M
- Accessible Emission Limit (AEL)
  - 304.8 nJ
- Reference Aperture
  - 18mm length, 18mm width (20.3mm diameter if equivalent to circular)
- Max Laser Pulse Emission Power Within 5 Nanoseconds
  - 60.96 W

## **Vision Systems**

- Obstacle Sensing Range

- Forward: 0.6-38 m  
Upward/Downward/Backward/Sideward: 0.5-33 m
- FOV
  - 65° (H), 50° (V)
- Operating Environment
  - Surfaces with clear patterns and adequate lighting (> 15 lux)

## **Infrared Sensing Systems**

- Obstacle Sensing Range
  - 0.1 to 10 m
- FOV
  - 30°
- Operating Environment
  - Large, diffuse, and reflective obstacles (reflectivity >10%)

## **Flight Battery**

- Capacity
  - 5880 mAh
- Voltage
  - 26.1 V
- Battery Type
  - Li-ion 6S
- Energy
  - 131.6 Wh
- Net Weight
  - Approx. 685 g
- Operating Temperature
  - -20° to 50° C (-4° to 122° F)
- Storage Temperature
  - 20° to 30° C (68° to 86° F)
- Charging Temperature

- -20° to 40° C (-4° to 104° F)  
(When the temperature is lower than 10° C (50° F), the self-heating function will be automatically enabled. Charging in a low temperature may shorten the lifetime of the battery)
- Chemical System
  - LiNiMnCoO<sub>2</sub>

## Auxiliary Lights

- Effective Illumination Distance
  - 5 m
- Illumination Type
  - 60 Hz, solid glow

## Remote Controller

- Screen
  - 7.02 inch LCD touchscreen, with a resolution of 1920×1200 pixels, and high brightness of 1200 cd/m<sup>2</sup>
- Internal Battery
  - Type: Li-ion (6500 mAh @ 7.2 V)  
Charge Type: Supports battery station or USB-C charger maximum rated power 65W (max voltage of 20V)  
Charge Time: 2 hours  
Chemical System: LiNiCoAlO<sub>2</sub>
- External Battery(WB37 Intelligent Battery)
  - Capacity: 4920 mAh  
Voltage: 7.6 V  
Battery Type: Li-ion  
Energy: 37.39 Wh  
Chemical System: LiCoO<sub>2</sub>
- Operating Time<sup>[5]</sup>

- Internal Battery: Approx. 3 hours 18 min  
Internal Battery + External Battery: Approx. 6 hours
- Ingress Protection Rating<sup>[3]</sup>
  - IP54
- GNSS
  - GPS+Galileo+BeiDou
- Operating Temperature
  - -20° to 50° C (-4° to 122° F)

### **O3 Enterprise**

- Operating Frequency<sup>[1]</sup>
  - 2.4000-2.4835 GHz, 5.725-5.850 GHz
- Max Transmission Distance (unobstructed, free of interference)
  - 15 km (FCC); 8 km (CE/SRRC/MIC)
- Max Transmission Distance (with interference)
  - Strong Interference (urban landscape, limited line of sight, many competing signals): 1.5-3 km (FCC/CE/SRRC/MIC)  
Medium Interference (suburban landscape, open line of sight, some competing signals): 3-9 km (FCC); 3-6 km (CE/SRRC/MIC)  
Weak Interference (open landscape abundant line of sight, few competing signals): 9-15 km (FCC); 6-8 km (CE/SRRC/MIC)
- 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
  - Wi-Fi 6
- Operating Frequency<sup>[1]</sup>
  - 2.4000-2.4835 GHz; 5.150-5.250 GHz; 5.725-5.850 GHz
- 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
- Operating Frequency
  - 2.4000-2.4835 GHz
- Transmitter Power (EIRP)
  - <10 dBm

## **Battery Station**

- Dimensions
  - 353×267×148 mm
- Net Weight
  - 3.95 kg
- Compatible Battery Type
  - Intelligent Flight Battery
  - Intelligent Battery
- Input
  - 100-240 VAC, 50/60 Hz
- Output
  - Battery Port: 26.1 V, 8.9 A (supported up to two outputs simultaneously)
  - Intelligent Battery: 8.7 V, 6 A
- Output Power
  - 525 W
- USB-C port
  - Max. output power of 65 W
- USB-A port
  - Max. output power of 10 W (5 V, 2 A)
- Power Consumption (when not charging battery)
  - < 8 W

- Output Power (when warming up battery)
  - Approx. 30 W
- Operating Temperature
  - -20° to 40° C (-4° to 104° F)
- Ingress Protection Rating<sup>[3]</sup>
  - IP55 (with the cover closed properly)
- Charging Time<sup>[6]</sup>
  - Approx. 30 min (charging two batteries from 20% to 90%)
  - Approx. 50 min (charging two batteries from 0% to 100%)
- Protection Features
  - Anti-Backflow Protection
  - Short Circuit Protection
  - Over Voltage Protection
  - Over Current Protection
  - Temperature Protection
- Guaranteed software updates until
  - 2024/12/31

## Small Drone LE Pkg.

### Specs

#### Aircraft

- **Takeoff Weight**
  - Approx. 377 g
- **Dimensions**
  - 185×212×64 mm (L×W×H)
- **Max Ascent Speed**
  - 6 m/s (Normal mode)
  - 9 m/s (Sport mode)



- **Max Descent Speed**
  - 6 m/s (Normal mode)
  - 9 m/s (Sport mode)
- **Max Horizontal Speed (near sea level, no wind)**
  - 8 m/s (Normal mode)
  - 16 m/s (Sport mode)
  - 27 m/s (Manual mode)\*
- **Max Takeoff Altitude**
  - 5000 m
- **Max Flight Time**
  - Approx. 23 mins
- **Max Hovering Time**
  - Approx. 21 mins
- **Max Flight Distance**
  - 13.0 km
- **Max Wind Speed Resistance**
  - 10.7 m/s (Level 5)
- **Operating Temperature**
  - -10° to 40° C (14° to 104° F)
- **Global Navigation Satellite System**
  - GPS + Galileo + BeiDou
- **Hovering accuracy range**
  - Vertical:
    - ±0.1 m (with vision positioning)
    - ±0.5 m (with GNSS positioning)
  - Horizontal:
    - ±0.3 m (with vision positioning)
    - ±1.5 m (with GNSS positioning)

- **Internal Storage**
  - 46 GB

## Camera

- **Image Sensor**
  - 1/1.3-inch image sensor  
Effective Pixels: 12 MP
- **Lens**
  - FOV: 155°  
Format Equivalent: 12 mm  
Aperture: f/2.8  
Focus: 0.6 m to  $\infty$
- **ISO Range**
  - 100-25600 (Auto)  
100-25600 (Manual)
- **Shutter Speed**
  - Video: 1/8000-1/30 s  
Photo: 1/8000-1/50 s
- **Max Image Size**
  - 4000×2256 (16:9)  
4000×3000 (4:3)
- **Still Photography Mode**
  - Single shot
- **Photo Format**
  - JPEG
- **Video Resolution**
  - 4K (4:3): 3840×2880@30/50/60fps  
4K (16:9): 3840×2160@30/50/60fps

2.7K (4:3): 2688×2016@30/50/60fps  
2.7K (16:9): 2688×1512@30/50/120fps  
1080p (4:3): 1440×1080@30/50/120fps  
1080p (16:9): 1920×1080@30/50/120fps

- **Video Format**
  - MP4 (H.264/H.265)
- **Max Video Bitrate**
  - 130 Mbps
- **Supported File System**
  - exFAT
- **Color Mode**
  - Standard
  - D-Log M
- **Camera FOV**
  - Supports normal mode, wide-angle mode, and ultra-wide-angle mode.
- **EIS**
  - Supports RockSteady 3.0+ and HorizonSteady
  - Can be disabled\*

## **Gimbal**

- **Stabilization**
  - Single-axis mechanical gimbal (tilt)
- **Mechanical Range**
  - Tilt: -95° to 90°
- **Controllable Range**
  - Tilt: -85° to 80°
- **Max Control Speed (tilt)**
  - 100°/s
- **Angular Vibration Range**
  - ±0.01°
- **Electronic Roll Axis**
  - Real-time screen correction is unavailable during recording, but can be applied to the footage recorded on the drone.

## Sensing

- **Sensing Type**
  - Downward and backward visual positioning
- **Downward**
  - ToF Effective Measurement Height: 10 m
  - Precise Hovering Range: 0.3-10 m
  - Measurement Range: 0.3-20 m
  - FOV: Horizontal 78°, Vertical 78°
- **Backward**
  - Measurement Range: 0.5-20 m
  - FOV: Horizontal 78°, Vertical 78°
- **Operating Environment**
  - Diffuse reflective surfaces with discernible patterns, diffuse reflectivity > 20% (such as concrete pavement)
  - Adequate lighting (lux > 15, normal indoor lighting conditions)

## Video Transmission

- **Video Transmission System**
  - O4
- **Live View Quality**
  - 1080p@30/50/60/100fps
- **Operating Frequency**
- 2.400-2.4835 GHz
- 5.170-5.250 GHz\*
- 5.725-5.850 GHz\*

### Transmitter Power (EIRP)

- 2.4 GHz:
  - < 33 dBm (FCC)
  - < 20 dBm (CE/SRRC/MIC)
  
- 5.1 GHz:

< 23 dBm (CE)

5.8 GHz:

< 33 dBm (FCC)

< 30 dBm (SRRC)

< 14 dBm (CE)

- **Communication Bandwidth**

- Max 60 MHz

- **Max Transmission Distance (unobstructed, free of interference)**

- FCC: 13 km (subject to the aircraft's max flight distance)

CE: 10 km

SRRC: 10 km

MIC: 10 km

- **Max Transmission Distance (unobstructed, with interference)**

- Strong Interference: Urban landscape, approx.

1.5-4 km

Medium Interference: Suburban landscape, approx.

4-10 km

Low Interference: Suburb/seaside, approx.

10-13 km

- **Max Transmission Distance (obstructed, with interference)**

- Low Interference and Obstructed by Buildings: approx. 0-0.5 km

Low Interference and Obstructed by Trees: approx.

0.5-3 km

- **Max Download Speed**

- Wi-Fi: 30 MB/s\*

- **Lowest Latency**

- 1080p/100fps Video Transmission Quality: 24 ms

1080p/60fps Video Transmission Quality: 40 ms

- **Max Video Bitrate**

- 60Mbps
- **Antennas**
  - 4 antennas, 2T4R

## Wi-Fi

- **Protocol**
  - 802.11a/b/g/n/ac
- **Operating Frequency**
  - 2.400-2.4835 GHz
  - 5.725-5.850 GHz
- **Transmitter Power (EIRP)**
  - 2.4 GHz:  
<20 dBm (FCC / CE / SRRC / MIC)
  
  - 5.8 GHz:  
<20 dBm (FCC / SRRC)
  
  - < 14 dBm (CE)

## Bluetooth

- **Protocol**
  - Bluetooth 5.0
- **Operating Frequency**
  - 2.400-2.4835 GHz
- **Transmitter Power (EIRP)**
  - <10 dBm

## Flight Battery

- **Capacity**
  - 2150 mAh
- **Weight**
  - Approx. 145 g
- **Standard Voltage**
  - 14.76 V
- **Max Charging Voltage**
  - 17 V
- **Battery Type**
  - Li-ion
- **Energy**
  - 31.7 Wh@0.5C
- **Charging Temperature**
  - 5° to 40° C (41° to 104° F)
- **Charging Time**
  - With Charging Hub (60W max charging power):
    - From 0 to 100%: approx. 45 min
    - From 10 to 90%: approx. 30 min
  
  - Directly Charging the Drone (30 W max charging power):
    - From 0 to 100%: approx. 88 min
    - From 10 to 90%: approx. 60 min

## Charger

- **Recommended Charger**
  - 65W Portable Charger
  - 65W Car Charger
  - USB Power Delivery charger

## Battery Charging Hub

- **Input**
  - 5-20 V, max 3 A
- **Output (power accumulation)**
  - Max 65 W
- **Output (charging)**
  - Max 17 V
- **Output (USB)**
  - 5 V, 2 A
- **Charging Type**
  - Three batteries charged in sequence.
- **Compatibility**
  - Intelligent Flight Battery

## FPV Remote

- **Max Operating Time**
  - Approx. 10 hours
- **Operating Temperature**
  - -10° to 40° C (14° to 104° F)
- **Charging Temperature**
  - 0° to 50° C (32° to 122° F)
- **Charging Time**
  - 2 hours
- **Charging Type**
  - 5 V, 2 A
- **Battery Capacity**
  - 2600 mAh
- **Weight**
  - Approx. 240 g
- **Dimensions**
  - 165×119×62 mm (L×W×H)
- **Operating Frequency**
  - 2.400-2.4835 GHz



- **Transmitter Power (EIRP)**
  - 2.400 GHz:
    - < 26 dBm (FCC)
    - < 20 dBm (CE/SRRC/MIC)

## **Others**

- **Guaranteed software updates until**
  - 2026/12/31