

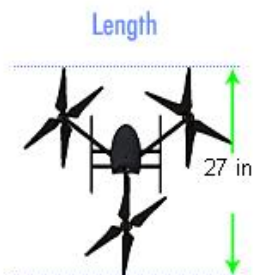
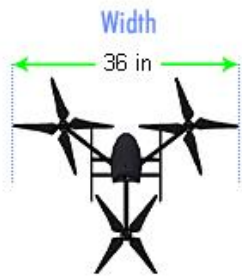
## **Draganflyer X6 Helicopter Description/Technical Specifications**

The Draganflyer X6 is a remotely operated, unmanned, miniature, vertical take off and land, aircraft designed to carry wireless video cameras and still cameras.

### **Helicopter Size**

- **Dimensions**

- Width: 91cm (36in)
- Height: 25.4cm (10in)
- Length: 85cm (33in)
- Top Diameter: 99cm (39in)



### **Weight & Payload**

- Helicopter Weight: 35oz (1,000g)
- Payload Capability: 18oz (500g)
- Maximum Gross Take-Off Weight: 53oz (1,500g)

### **Materials**

- Carbon Fiber
- Glass Filled Injected Nylon
- Aluminum & Stainless Steel Fasteners

- RoHS Compliant

### **Landing Gear**

- Installed Height: 18cm (7in)
- Stance Width: 30cm (12in)
- Skid Length: 30cm (12in)
- Landing Gear Material: Molded Carbon Fiber

### **Rotor Blades**

- Three Counter-Rotating Pairs (Six Rotors Total)
- Rotor Blade Material: Molded Carbon Fiber
- Upper Rotor Diameter: 40cm (16in)
- Lower Rotor Diameter: 38cm (15in)
- Upper Rotor Weight: 12g (0.42oz)
- Lower Rotor Weight: 11g (0.38oz)

### **Position Navigation Lights**

- Type: 1 Watt LED Variable Brightness Emitters
- Luminous Flux at Full Brightness: 40lm
- Purpose: Helicopter Orientation Confirmation
- Visible Condition Range: Full Darkness to Direct Sunlight
- Standard Aircraft Colors
  - Red: Left
  - Green: Right
  - White: Tail/Rear

### **Electric Motors**

- Brushless Motors: 6
- Configuration: Direct Drive (One Motor per Rotor)
- Safety Features: Stall Protection
- Ball Bearing: 2 per Motor
- Rotor Mounting Points: Integrated
- Nominal Current Draw Per Motor: 1.04 Amps
- Nominal Power / Motor: 15.4 Watts
- Nominal Total Helicopter Motor Power: 92.4 Watts
- Peak Total Helicopter Motor Power: 450 Watts
- Motor Speed at Hover: 2000 RPM
- Voltage: 14.8V nominal
- Weight: 1.34oz (38g)

### **Operating Requirements**

- Operating Temperature: 14° to 104°F (-10° to 40°C)

- Relative Humidity: 0% to 90% Noncondensing
- Maximum Wind speed: 18mph (30km/h)

### **Flight Characteristics:**

- Climb Rate: 23ft/s (7m/s)
- Descent Rate: 13ft/s (4m/s)
- Turn Rate: 90°/second
- Cruise Speed: 6mph (10km/h)
- Maximum Speed: 30mph (50km/h)
- Minimum Speed: 0mph (0km/h)
- Launch Type: VTOL (Vertical Take Off and Landing)
- Maximum Altitude ASL: 8,000ft (2438m)
- Maximum Flight Time: 25 minutes

### **11 Onboard Sensors**

- 3 Solid State MEMS (Micro-Electro-Mechanical Systems) Gyros
- 3 Solid State MEMS (Micro-Electro-Mechanical Systems) Accelerometers
- 3 Magnetometers (Magnetoresistive Sensors)
- 1 Barometric Pressure Sensor
- 1 GPS Receiver
  - GPS Battery Backup: 75mAh Lithium Polymer

### **GPS**

- GPS Used For: Position Hold, Location & Velocity Data
- Maximum Satellites Tracked Simultaneously: 16
- Position Update Rate: 4 Hz
- GPS Antenna: Ceramic Patch
- Battery Backup: Lithium Polymer

### **Black Box Data Recorder**

- Flight Data Recording: On-Board
- Stored To: Removable 1Gb MicroSD Memory Card
- Data Recorded: Onboard Sensor Flight Data (Link quality, Orientation, Altitude, Speed, Direction)

### **RF Communications**

- **2.4GHz Data Link**
  - Link Type: Helicopter to Ground & Ground to Helicopter (Two-Way)
  - Helicopter Antenna: Wired Whip Antenna
  - Controller Antenna: Omni-Directional
  - Transmission Power (North America): 100mW (+20dBm)

- Transmission Power (International): 10mW (+10dBm)
- RF Data Rate: 250kbps
- Receiver sensitivity: -100dBm
- Transmission Technique: DSSS (Direct Sequence Spread Spectrum)
- Frequency band: 2.4000 - 2.4835 GHz
- Certifications: CE, FCC, IC, ETSI
- Data Link Channel Selection: Automatic (12 Channels)
- **5.8GHz Video Link**
  - Link Type: Helicopter to Ground (One-Way)
  - Transmitter Antenna: Omni-Directional
  - Receiver Antennas: Omni-Directional & Flat Patch
  - Transmission Power: 12dBm
  - Transmitter Power Consumption: 500mW
  - NTSC and PAL Compatible
  - 7 Selectable Channels: 5740MHz, 5760MHz, 5780MHz, 5800MHz, 5820MHz, 5840MHz, 5860MHz

### **Rechargeable Helicopter Battery**

- Cell Chemistry: Lithium Polymer
- Voltage: 14.8V nominal
- Capacity: 2600mAh
- Cell Configuration 4s2p (4-series 2-parallel)
- Connectors: Integrated Balance and Power
- Recharge Time: 30 minutes (after typical flight)
- Length: 7.5cm (2.9in)
- Width: 6.7cm (2.6in)
- Height: 2.7cm (1.0in)
- Weight: 228g (8.0oz)

### **Camera Attachments**

- 10MP (Mega-Pixel) Digital Still Camera with Remote Controlled Tilt, Zoom & Shutter
- 1080p HD (High Definition) Video Camera with Remote Controlled Tilt
- Thermal FLIR (Forward Looking Infra-Red) Camera with Remote Controlled Tilt
- Low Light (0.001lux) Dusk/Dawn Black & White Video Camera with Remote Controlled Tilt