**Request for Quote (RFQ) - Drone Hardware Procurement**

**1. Introduction:**

**1.1. Statement of Objective:**

AeroMedic: Medical Supply Delivery is seeking quotes from qualified vendors for the procurement of drone hardware to be utilized in the development and implementation of a drone delivery system for medical supplies.

**2. General Conditions:**

**2.1. Authorized Representative:**

Nicholas Buggs  
AeroMedic: Medical Supply Delivery  
Florida A&M University,

1601 S Martin Luther King Jr Blvd, Tallahassee, FL 32307

**2.2. Approximate Calendar Events:**

|  |  |
| --- | --- |
| **Date** | **Action** |
| 03/31/2024 | Request for Quote Advertised |
| 04/07/2024 | Request for Quote Released |
| 04/21/2024 | Deadline for Submitting Questions |
| 04/24/2024 | Deadline for Written Quotes |

**3. Special Conditions:**

**3.1. Statement of Work:** The vendor is expected to provide the following drone hardware components:

1. **Drone Platform:**
   * Multi-rotor or fixed-wing drone capable of carrying medical payloads.
   * Payload capacity should accommodate various sizes and weights of medical supplies.
   * Modular design for easy maintenance and upgrades.
2. **Flight Controller:**
   * High-performance flight controller with GPS for precise navigation and waypoint tracking.
   * Compatible with the chosen drone platform and capable of autonomous flight.
3. **Battery System:**
   * Lithium-polymer (LiPo) battery packs with sufficient capacity for extended flight times.
   * Quick-charging capability for efficient turnaround between missions.
   * Battery monitoring system to ensure safe and reliable operation.
4. **Propulsion System:**
   * Brushless motors matched to the drone platform for optimal performance.
   * High-efficiency propellers designed for quiet operation and maximum thrust.
5. **Communication System:**
   * Long-range communication module (e.g., telemetry radio) for real-time data transmission.
   * Fail-safe mechanisms (e.g., return-to-home function) to ensure connectivity in case of signal loss.
6. **Payload Mounting System:**
   * Secure and adjustable mounting system for attaching medical supply payloads.
   * Compatibility with standard medical transport containers and packages.
7. **Sensors and Navigation Equipment:**
   * GPS module for accurate positioning and navigation.
   * Obstacle avoidance sensors (e.g., ultrasonic or LiDAR) to prevent collisions during flight.
   * Barometric altimeter for precise altitude control.
8. **Camera System:**
   * High-definition camera for aerial monitoring and situational awareness.
   * Live video feed capability for remote monitoring of flight operations.
   * Optional thermal imaging or night vision camera for enhanced visibility in low-light conditions.
9. **Safety Features:**
   * Redundant systems for critical components (e.g., motors, flight controllers) to ensure system reliability.
   * Automatic emergency procedures (e.g., auto-landing) in case of system malfunction or battery failure.
10. **Ground Control Station (GCS):**
    * Dedicated GCS hardware for mission planning, monitoring, and control.
    * User-friendly interface with intuitive controls and real-time telemetry data display.
11. **Accessories and Spare Parts:**
    * Spare batteries, propellers, and other essential components for maintenance and repairs.
    * Protective cases or carrying bags for safe transportation and storage.

**3.2. Qualification of Bidders:**

Contracts will be awarded to responsive and responsible proposers qualified to provide the specified drone hardware components. Proposers must submit bids using the attached form.

**3.3. Award:**

Proposals will be reviewed and ranked based on criteria including cost, quality, and compliance with specifications.

**3.4. Post Award Meeting:**

The successful vendor shall meet with designated AeroMedic representatives within 7 days after contract award to discuss delivery and implementation details.

**3.5. Content Ownership:**

All drone hardware components purchased under this RFQ shall become the property of AeroMedic upon delivery and acceptance.

**3.6. Assumptions and Constraints:**

* Budget constraints: Total budget for drone hardware procurement is $300,000 USD.
* Delivery timeline: Vendor must be able to deliver all hardware components within 6 months of receival of contract.

**3.7. Invoices:** Prices to appear in USD. Payment terms are NET 20 days.

**4. Specifications:**

1. **Drone Platform:**
   * Payload Capacity: Minimum of 5 kilograms
   * Dimensions: 1.2 meters x 1.2 meters x 0.5 meters
   * Flight Time: Minimum of 30 minutes
   * Control Range: 2 kilometers
2. **Flight Controller:**
   * Autonomous Flight: Capable of waypoint navigation and autonomous mission planning
   * Telemetry: Real-time telemetry data transmission to ground control station
   * Fail-Safe Features: Return-to-home function, automatic landing in case of signal loss
3. **Battery System:**
   * Capacity: 10,000 mAh
   * Voltage: 22.2 volts
   * Charging Time: 2 hours
   * Flight Time: Minimum of 30 minutes per battery
4. **Propulsion System:**
   * Thrust: 5 Newtons per motor
   * Motor ESC: Electronic speed controllers matched to motor specifications.
5. **Communication System:**
   * Frequency: 2.4 GHz
   * Data Rate: 100 kbps
6. **Payload Mounting System:**
   * Maximum Payload Weight: 5 kilograms
7. **Sensors and Navigation Equipment:**
   * Obstacle Avoidance: Ultrasonic sensors for obstacle detection
8. **Camera System:**
   * Resolution: 1080p
   * Additional Features: Optional thermal imaging or night vision capabilities
9. **Safety Features:**
   * Redundancy: Redundant systems for critical components
   * Emergency Procedures: Automatic return-to-home and landing in case of emergencies.
10. **Ground Control Station (GCS):**
    * Interface: User-friendly interface with intuitive controls
    * Telemetry Display: Real-time telemetry data display and monitoring
    * Mission Planning: Mission planning and execution capabilities
11. **Accessories and Spare Parts:**
    * Spare Batteries: 4 spare batteries
    * Spare Propellers: 8 spare propellers

**5. Signature:**

|  |  |
| --- | --- |
| **Firm Name:** |  |
| **Date:** | **Signature:** |
| **Print Name:** | **Print Title** |
| **Address:** |  |
| **City/State:** | **Zip Code:** |
| **Telephone #:** | **Fax #:** |
| **Toll-Free #:** | **Email:** |