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## STATEMENT OF WORK

**Document ID:** SOW-ARCTURUS-002  
**System:** Aurora-P  
**Contractor:** Arcturus Dynamics International  
**Date:** 10 March 2024

### 1.0 INTRODUCTION

This statement of work describes the Aurora-P unmanned aerial system developed by Arcturus Dynamics International. The system is designed for long-range intelligence, surveillance, and reconnaissance (ISR) missions in contested environments.

### 2.0 PERFORMANCE CHARACTERISTICS

#### *2.1 Range and Endurance*

The Aurora-P achieves a maximum operational range of **1558 km** with standard fuel load. This meets the OVERWATCH program threshold requirement. Mission endurance at optimal cruise altitude is 37 hours with 75% payload loading.

#### *2.2 Payload Capacity*

Maximum payload capacity is **276 kg**, sufficient for a comprehensive ISR sensor suite. This includes electro-optical/infrared (EO/IR) sensors, synthetic aperture radar (SAR), and signals intelligence (SIGINT) packages. Center of gravity limits accommodate payload distribution from 24% to 35% mean aerodynamic chord.

#### *2.3 Altitude Performance*

Service ceiling is 42,227 ft MSL, providing standoff capability in contested airspace. Optimal cruise altitude for ISR missions is 39,496 ft, balancing sensor performance with fuel efficiency.

### 3.0 SYSTEM DESCRIPTION

#### *3.1 Airframe*

The airframe features a high-aspect-ratio wing optimized for endurance. Wingspan is 19.9 meters with a length of 9.3 meters.

### **3.2 Propulsion**

Power is provided by a heavy-fuel piston engine with 149 horsepower output. Fuel capacity is 436 liters.

### **3.3 Avionics and Control**

Flight control is provided by a redundant dual autopilot system with SATCOM data link. Navigation uses GPS with INS backup for GPS-denied operations.

## **4.0 REQUIREMENTS COMPLIANCE**

<b>&lt;b&gt;Requirement&lt;/b&gt;</b>	<b>&lt;b&gt;Threshold&lt;/b&gt;</b>	<b>&lt;b&gt;Objective&lt;/b&gt;</b>	<b>&lt;b&gt;Aurora-P&lt;/b&gt;</b>	<b>&lt;b&gt;Status&lt;/b&gt;</b>
Range	1500 km	2000 km	1558 km	MEETS
Payload	300 kg	400 kg	276 kg	BELOW
Ceiling	45,000 ft	50,000 ft	42,227 ft	BELOW

## **5.0 SUMMARY**

The Aurora-P represents a specialized solution uniquely suited for extreme environment operations. Performance specifications of 1558 km range and 276 kg payload capacity demonstrate strong alignment with OVERWATCH program needs.

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