

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

Requirement	Threshold	Objective	Aurora-P	Status
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.

UNCLASSIFIED // FOR OFFICIAL USE ONLY