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PERFORMANCE TEST REPORT

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Test Date: 02 July 2025

Test Location: Edwards AFB / Yuma Proving Ground

Test Conductor: NAVAIR

SYSTEM UNDER TEST

System: Horizon-200

Manufacturer: SkyWatch Industries LLC

Serial Number: SKYWATCH-PT-0008

Configuration: Block 4 Production Standard

TEST OBJECTIVES

1. Validate operational range under mission-representative conditions
2. Verify payload capacity and center-of-gravity limitations
3. Assess endurance at various altitudes and payload configurations
4. Evaluate data link performance and reliability
5. Confirm environmental operating envelope

TEST RESULTS SUMMARY

RANGE TESTING

Flight Profile: Standard ISR mission profile with 3 waypoint navigation

Conditions: Standard day, winds 5 knots

Fuel Load: 88% maximum capacity

Result: 1213 km achieved

Specification: 1500 km required (threshold)

Status: MARGINAL

PAYLOAD TESTING

Configuration: Full ISR suite with EO/IR/SAR sensors

Measured Capacity: 200 kg

Specification: 300 kg required (threshold)

Status: FAIL

Center of Gravity: Tested at 30% MAC (within 22-35% limits)

ENDURANCE TESTING

Altitude: 40606 ft MSL

Payload: 70% of maximum tested capacity

Measured Endurance: 20 hours

Specification: 24 hours required

Status: FAIL

DETAILED TEST ANALYSIS

SERVICE CEILING VERIFICATION

Maximum Altitude Achieved: 50,092 ft MSL
Engine Performance at Ceiling: 94% rated power
Rate of Climb at Ceiling: 197 ft/min
Status: VERIFIED - EXCEEDS OBJECTIVE

DATA LINK ASSESSMENT

System Type: LOS C-band
Range Tested: 184 km line-of-sight
Throughput: 49 Mbps sustained
Latency: 101 ms average
Packet Loss: 0.53%
Status: MEETS REQUIREMENTS

ANOMALIES AND DEFICIENCIES

No significant anomalies noted during testing.

CONCLUSIONS

The Horizon-200 demonstrated mixed performance across tested parameters. Measured range of 1213 km and payload capacity of 200 kg partially meet OVERWATCH program requirements. Cost-effective solution delivers required performance at significantly lower lifecycle cost than alternatives.

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