UAV Common Automatic Recovery System - Version 2

UCARS-V2 for Shipboard Operations

Sierra Nevada Corporation's (SNC) Unmanned Aerial Vehicle (UAV) Common Automatic Recovery System - Version 2 (UCARS-V2) provides precision automatic launch and recovery control during shipboard operations with rotary-wing and/or fixed-wing UAVs. The UCARS-V2 provides precision approach, guidance and control all the way to touchdown in adverse weather conditions. UAV external pilots are no longer required. The UCARS-V2 has been designed for sustained operations in the shipboard environment. The UCARS-V2 has its own ship motion stabilization equipment and does not require GPS or position information from the ship.

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Ground Track Subsystem

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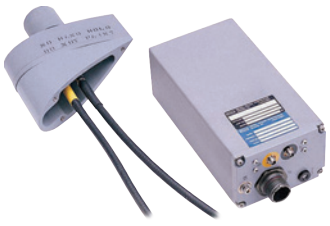
FEATURES

- Performs takeoff & recovery in all weather: fog, rain, at night & in most sea conditions
- Flexible architecture for integration with any shipboard or land-based UAV system
- 35 GHz airborne subsystem to track subsystem communication is difficult to jam & detect
- Practical & proven technology for deck motion stabilization without external position information or local GPS
- Comprehensive BIT, straightforward trouble-shooting, corrective maintenance in less than 60 minutes
- Common interfaces across ground control stations & UAVs
- High reliability & availability with minimal preventive maintenance
- Meets strict shipboard & airborne E3 requirements (Mil-Stds-461 & 464)
- No special equipment required for operation or maintenance
- Fast position update rates with minimal lags
- Interfaces with NATO STANAG 4586

AIRBORNE TRANSPONDER SUBSYSTEM

- Provides point source for precision tracking
- Approximately four pounds (1.8 kg)
- Transponder dimensions: 3.50" x 3.90" x 7.90" (6.35 cm x 9.34 cm x 19.83 cm)
- Antenna assembly contains omni-directional & directional antennas
- Requires 28 VDC aircraft power at 25 watts

Airborne Transponder Subsystem



TRACK SUBSYSTEM

- Locates and tracks airborne transponder
- Built to survive in topside environment
- Supports flight deck or pedestal installation configuration
- Small footprint (32" x 39" x 42" - 44") (81.28 cm x 99.06 cm x 106.68 - 111.76 cm)
- Integrated state-of-the-art ship motion sensor (Does not require ship's GPS data)
- Ship motion sensor initialization in ten minutes or less
- Boresight camera provides real-time UAV approach information to ship's command and control operator
- Compatible with ship's power – UPS recommended

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