

USE CASE



SNOWBIRD ENVIRONMENTAL CONTROL UNITS

Capability Focus: Support Navy amphibious operations by delivering reliable, high-capacity cooling to LCAC operator compartments in extreme maritime environments

The **Snowbird Environmental Control Unit (ECU)** provides LCAC crews with a mission-critical cooling capability that mitigates heat stress, protects onboard electronics, and sustains operator performance in high-temperature, high-humidity environments. Designed for rugged military applications, the ECU delivers reliable climate control despite salt spray, vibration, and continuous-duty demands typical of amphibious operations.

LOCATION: Amphibious Ready Groups / Expeditionary Strike Groups (Ship-to-Shore Operations)

APPLICATION: United States Navy Landing Craft Air Cushion (LCAC) — LCACs operate in extreme maritime and littoral climates where solar loading, turbine heat, confined bridge spaces, and salt-laden air create significant thermal stress. Elevated cabin temperatures can degrade operator endurance, reduce situational awareness, and impact mission effectiveness. **Snowbird's ECU integrates into the LCAC operator compartment to deliver conditioned air directly to crew stations and avionics spaces, maintaining safe and sustainable operating temperatures during transit and over-the-beach operations.**

RESULTS: Utilizing the Snowbird LCAC ECU maintains operator cabin temperatures within safe performance thresholds in ambient conditions exceeding 120°F, reducing crew heat stress and fatigue during extended missions. The ECU protects mission-critical electronics from thermal overload and enhances operational readiness and mission duration capability. The Snowbird LCAC ECU provides corrosion-resistant, shock- and vibration-tolerant performance suitable for maritime environments. **By delivering reliable environmental control at the point of operation, Snowbird ECUs directly enhance crew survivability, sustain cognitive performance, and increase mission effectiveness for Navy amphibious assault operations.**

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