



## CQ-10B Cargo UAS

### AT A GLANCE

#### WHAT IS IT?

- Deliver 500 pounds of cargo up to 200 miles.
- Low cost UAV capable of airdrop.
- Runway independent, capable of taking off and landing in almost any condition on almost any terrain.

#### HOW DOES IT WORK?

- Modify existing CQ-10A.
- Replace parafoil with autogyro rotor system.
- Upgrade GN&C.
- Add rudder & stabilizers.
- Develop advanced C2 for handover from seabase to field base.

#### WHAT WILL IT ACCOMPLISH?

- Increased safety through using UAV for routine cargo flights.
- Ability to provide immediate response to emergency cargo demands.
- Low-cost alternative, freeing up helicopter and tilt-rotor assets for other critical missions.

#### POINT OF CONTACT:

Billy Short  
ONR Code 30  
billy.short@navy.mil



The CQ-10B is a lightweight, inexpensive flying cargo UAV capable of transporting up to 500 lbs of supply approximately 200 nautical miles. This UAV rotor is powered during liftoff. Once airborne, the rotor turns into an autogyro, acting as the aerofoil for an efficient and controlled autonomous journey.

Ultimately, the CQ-10B will travel automatically to its destination, operating both autonomously and with pilot-in-the loop Ground Control Station capabilities, landing safely on its own to deliver logistic supplies.

Offering many novel advantages, this aircraft is truly a “flying truck.” Cheap, effective, and practical, this UAV will offer an alternative low-risk approach to conventional logistic connectors.

#### Research Challenges and Opportunities:

- Self-takeoff and landing algorithms for a powered helicopter
- Hybrid powered-and-unpowered autogyro mechanism for takeoff and landing
- Advanced power and flight control algorithms.