Quadshot Team Seeks Support for New Remote-Controlled Aircraft on Kickstarter

Groundbreaking Open-Source craft blends helicopter and airplane capabilities, can carry small camera to capture aerial footage

SANTA CRUZ, CA -- August 10, 2011 -- We are excited to announce the Quadshot, a remote-controlled aircraft that melds advanced Open-Source hardware and software with a unique airframe design.

"The Quadshot represents a breakthrough in the area of remote-controlled aircraft in that it can both fly forward like an airplane and hover like a helicopter - but without many complicated, expensive, and fragile moving parts," said Pranay Sinha, the aerospace engineer responsible for aerodynamics and controls.

The Quadshot developers have built several working prototypes and are raising funds on Kickstarter to facilitate production. Pledging $300 secures a pre-order for a complete ready-to-fly model which has an anticipated retail price of $400. There are also kits and other models available for pledges ranging from $50 to $1500.

The Quadshot differs from a typical remote-controlled airplane or helicopter in that it contains an advanced flight computer system, dubbed Lisa, that assists in stabilizing the aircraft in flight. Hundreds of times per second, Lisa combines sensor data with the pilot's commands to determine the correct speed for each of its four motors. This allows the Quadshot to take off vertically and hover like a helicopter, fly slowly and steadily like a trainer airplane, or unlock full control for aerobatics - all at the flip of a switch.

The Quadshot is powerful enough to carry a small camera slung under its wing, and includes a standard threaded mount to allow pilots to capture aerial photos or video.

The Quadshot is a one-meter (39 inch) tailless flying wing, with four pylons - two above the wing and two below - spaced along the span. Each pylon supports a brushless motor and propeller, which work in concert to propel and control the aircraft.

"I wanted the Quadshot to be lightweight, yet durable," said Jeff Gibboney, the mechanical engineer that designed the airframe. The wing is made from expanded polypropylene (EPP) foam, with a carbon-fiber spar for strength. The pylons are plastic-reinforced EPP foam which

act as landing gear, motor mounts, and tail fins. The flight computer, battery, and other electronics mount into a plastic enclosure inset into the wing's center.

"The Quadshot appeals to me because it solves many of the problems vertical take-off airplanes typically have," said Chris Forrette, the Quadshot test pilot and prototype builder. "It is also more responsive than many aerobatic planes that I have flown while having a really easy learning curve."

The Quadshot project embraces the Open-Source philosophy: the flight computer and IMU electronics are Open-Hardware, and the flight software is based on the Open-Source Paparazzi project. "We really encourage people to experiment with and hack their Quadshots" said Piotr Esden-Tempski, the electrical and software engineer responsible for the Quadshot's avionics and embedded software. "We can't wait to see all the things people do with them!"

For additional information, please contact the Quadshot team at quadshot-team@thequadshot.com.

ABOUT THE QUADSHOT TEAM

Piotr Esden-Tempski, Chris Forrette, Jeff Gibboney, and Pranay Sinha met while working at Joby Robotics in Santa Cruz, CA, where they developed the first prototype as a test platform for control software. Being coffee fiends, they compared flying aerobatics with the Quadshot to being amped up on four shots of espresso, and decided they had to share it with the world.

PRESS CONTACT:

Jeff Gibboney
340 Woodpecker Ridge
Santa Cruz, CA 95060
(831) 426-3733

quadshot-team@thequadshot.com
http://thequadshot.com
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