

## CyPhy Works takes wraps off long-endurance UAVs (w/ video)

December 6 2012, by Nancy Owano

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(Phys.org)—Massachusetts-based CyPhy Works has unveiled two types of Unmanned Aerial Vehicles (UAVs) that it has designed for use by military and emergency personnel. Its EASE UAV (short for Extreme Access System for Entry) is designed for tight-squeeze situations. The device is only one foot in diameter and stands 16 inches tall. While, for example, military or emergency personnel stand at a safe distance, this indoor flying UAV can hover, using machine-vision stabilization, into a building while relaying high-definition video footage via integrated cameras to an operator outside. Able to fly into tight spaces, the UAV navigates easily through both doors and windows. It also has a thermal imaging device.

The company noted that EASE carries no GPS; the vehicle is stationed at any particular location via a thin wire [filament](#) that trails behind, providing the power to remain skulking about. Just please do not call the filament a "[tether](#)." According to the company. "We differentiate microfilament from traditional tethered systems. The word tether means a rope or chain used to restrict movement, and that is the exact opposite of what microfilament does for its users. Microfilament enables movement, it doesn't restrict it."

The company has made much of the microfilament advantage. As long as the wire stays intact, signals cannot be interrupted or interfered with. High quality, high definition video can be streamed through them. The microfilament enables the use of sensors that are superior, said the company, with high data throughput. The microfilament enables video that is unbroken; commands and receiving [sensor data](#) will be reliable; GPS denial is not an issue.

Helen Greiner, the company CEO, summed it up in saying "With the filament, basically you get high-definition [video images](#) all the time, and then it has the added advantages in that it can't be jammed, it can't be spoofed, it can't be intercepted."



The company has also unveiled a larger UAV, which is a quadrotor air vehicle called PARC (short for Persistent Aerial Reconnaissance and Communications), able to reach higher altitudes than EASE. This is designed to fly vertically and to stay in hovering mode for long durations. It can fly up to 1,000 feet above ground. The PARC vehicle is powered from the ground; the flight duration is not limited by battery life. It can stay aloft on a single ground station battery for twelve hours. The PARC system can accept power input from a variety of ac and dc sources.

**More information:** [cyphyworks.com/](http://cyphyworks.com/)

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