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## **Advanced Tactics Announces the Release of the AT Panther Drone First Aerial Package Delivery Test with a Safe Drive-up-to-your-doorstep Video**

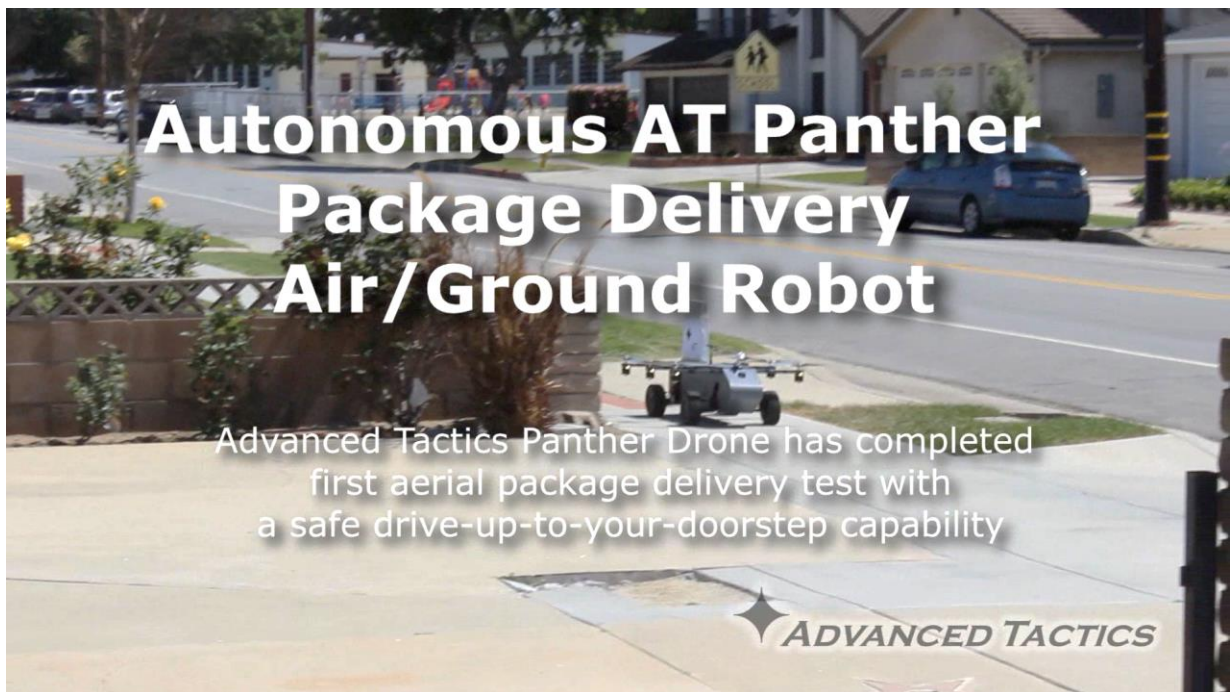


Figure 1: This is the introduction scene from the just now publicly released video of the AT Panther Air/Ground Robot conducting a commercially available delivery box for safe door step delivery test. The AT Panther is shown driving down the sidewalk after landing at a designated safe landing zone. Please note that the Advanced Tactics has not made any contact with FedEx. The FedEx box is used only for demonstration purposes.

TORRANCE, California, 03 April 2017 – Don Shaw, CEO of Advanced Tactics Inc. (AT), that has been a research and rapid development company in Southern California for the last 10 years, announces today that the first aerial package delivery test with a safe drive-up-to-your-doorstep capability video of the AT Panther Air/Ground Robot is now released to the public. This video shows that AT has successfully completed their first aerial package delivery test with a flying drone that can land with up to a 5-pound in weight package and safely drive up to the door with no propellers turning to deliver a package to the doorstep of a customer. It is believed this is the first successful test of its kind. This vehicle is called the AT Panther Small Unmanned Aircraft System (sUAS) VTOL Air/Ground Robot. The Panther package delivery and pickup robot can uniquely drive like a 1/5 scale RC off-road car on rough terrain as well as on sidewalks and fly

like a helicopter while carrying commercially available package delivery boxes of varying sizes and weights. It can carry over 15 pounds of payload however FAA regulations keep it under 5 pounds in cargo in order stay within the (sUAS) category that requires the vehicle to be under 55 pounds in weight.



**Figure 2:** As seen in the now publicly released video the AT Panther Air/Ground Robot can land in remote locations with varying terrains that would be considered safe for UAV operations and then drive to congested areas to delivery packages to the door step of customers autonomously or with an operator at the controls while seeing through First Person Video (FPV) Goggles.



**Figure 3:** World's First 1/5 Scale Car that can fly with a commercial delivery package for safe door step deliveries. The AT Panther is shown on the test customer's front lawn.



Figure 4: Multiple doorstep tests have been conducted with the AT Panther as a package delivery robot. In this test a cell phone is being used to let the test customer know when the package is about to arrive and has arrived at his home. Same day delivery is possible with this method. The air/ground mobile Panther drives up quietly to doorstep of test customer John Olson of Torrance, California to demonstrate safe and easy hassle-free package delivery.



Figure 5: AT Panther in package delivery in flight testing



**Figure 6: The AT Panther suspension is designed for landings and operation in rough terrain like no other vertical takeoff and landing (VTOL) flying vehicle**



**Figure 7: The AT Panther operates well in the air and is also well balanced for ground operation as well**



Figure 8: The AT Panther vehicle safely conducts test landings in an open clearing away from structures and people



Figure 9: The AT Panther VTOL Air/Ground Robot shown during high speed fly by with package

### **World's Most Mobile Package Delivery Robot**

Ten years ago in 2007, Advanced Tactics Inc. (AT) first began developing air/ground robot technology intended to aid U.S. military forces in the Iraq and Afghanistan wars. Today, building on a family of patented core technologies, AT has created a revolutionary, commercially available Unmanned Aerial System (UAS) that is both ground- and air- mobile that are suitable for extended surveillance and package delivery purposes for the commercial market. The combination of Vertical Take-Off and Landing (VTOL) flight with off-road driving capabilities in a package delivery drone make the Autonomous AT Panther VTOL Air/Ground Robot unlike anything else previously seen.

Featuring off-road car suspension, lifting capability over 15 pounds of package payload over the empty weight, and autonomous waypoint navigation, the AT Panther Robot is expected to

dramatically expand the operational scope of current commercially available drones. Modern cameras can be utilized with this robot for unique views from the air and ground. Robotic arms (shown at end of press release) for package delivery have been tested on the AT Panther and other AT air/ground mobile robots. Advanced Tactics specialized kits are currently being developed for first-person video (FPV), audio surveillance, ground and air obstacle avoidance, microphone, loudspeaker accessories and customer service. Accessories are being designed to easily attached to the vehicle (i.e. video screens and signature pads).

For package delivery, the eventual system will have both air and ground obstacle avoidance and do all operations autonomously with an operator only acting as a safety pilot/driver. Upon landing the vehicle will proceed autonomously to the destination. The system then deploys the package autonomously or an operator can talk to the customer through voice and video communication and hand or drop off their package by remote control. Panther then returns to the safe takeoff and landing area and heads back to base to receive the next package at up to 70 mph.

The AT Panther lands safely away from obstacles before approaching customers as a ground mobile vehicle for delivery. Propeller guards will be attached to prevent injury during customer interaction. The vehicle can also be operated directly by a customer service delivery team or courier for quick turnaround of the delivery vehicle with possible video interaction with a live representative. In urban areas, where traffic could slow traditional couriers, the AT Panther offers a safe delivery system that can safely bypass delays associated with congested road conditions.

The AT Panther's driving capability also offers the flexibility for the vehicle to easily access doorways, delivery ports, and loading bays (i.e. shipping and receiving centers).

#### **A Note on Advanced Tactics Package Delivery Company Associations:**

AT is not having and has not had any talks with any package delivery companies, however we are very open to partnerships that may occur in-the-near future. We would like package delivery companies to contact us if they have interest in working together in modernizing package delivery. AT is currently working on what it believes is the ultimate solution to urban and rural package delivery and will soon disclose the company plan and vehicles to the public during 2017. AT would like to assist an interested package delivery company in- the-near-future to accomplish their needs and future goals in modernizing package delivery.

#### **Current AT Panther Vehicle Package Delivery Performance:**

The Flying Range: The current AT Panther can fly at over 70 mph and has a flight time with a 5 pound package of well over 6 minutes. With a 2 pound package and larger battery it can fly well over 9 minutes. The range of the Panther with a 5 pound package is over 6 miles. The range of the Panther with a 2 pound package is well over 9 miles with the larger battery. With a 2 pound package the delivery radius is 3 miles and with a 5 pound package the delivery radius is over 4 miles. The AT Panther is ideal for urban area operations with these ranges. Other air only

drones may fly a little longer but they cannot easily overcome the safety concerns of urban package deliveries that Panther will cover naturally with its drive-up ground delivery capability.

**The Driving Range:** The Panther can drive for hours on the ground and at 3 to 5 miles per hour it could cover a lot of ground. Please note that the Panther can also drive on the ground at over 30 mph by changing to a heavier ground drivetrain motor. With an autonomous air and ground obstacle avoidance system installed on the Panther it can then travel to any location safely on the ground and air while always avoiding collisions.

### **An AT Panther Serious Safety Advantage Over Other Package Delivery Drones:**

The AT Panther can safely and quietly drive up to the customers and not have to hang in the air or parachute packages over people's heads in urban areas and can also operate in high winds to drop off packages safely since it can drive up like a courier to drop off packages. The AT Panther can also safely pick up packages from customers at their doorstep as well without rotors or propellers turning.

### **Different from Any Other Drone on the Market**

Today's commercial drone manufacturers have mostly focused their efforts towards developing flying-only robots however the AT Panther can also drive on the ground with payloads.

Like other common drones available to the public the FAA also considers the AT Panther a small unmanned aircraft system UAS (sUAS) since it is under 55 pounds in weight like other drones. As an sUAS the AT Panther will be Part 107 eligible. No waivers will be required for Class G airspace. It is battery powered and is capable of fully autonomous takeoff and landing and could soon have obstacle avoidance capability as well.

The Panther drone was a bit more complicated than other drones to develop since it had to not only fly and be controlled like a multi-copter but also had to carry a ground mobility drivetrain that needed to be powered and controlled as well. This took some real out of the box thinking to make it all work. One thing that many people do not understand is that the small size and heavy payload of this vehicle required much more design consideration than any other drone on the market today.

The AT Panther provides operators much greater operation times over other sUAS's by employing the driving mode, and gaining the ability to explore an area more quietly than any other conventional flying-only sUAS. Suited especially for drop off and pickup locations in difficult-to-reach areas, yet needing quiet or extended observation, the Autonomous AT Panther Air/Ground Robot sUAS fills a niche role not yet realized in the commercial market.

**The Autonomous AT Panther is now available to the public to own:**

The new Autonomous AT Panther Air/Ground Robot sUAS is now in production for commercial sale, and is being offered at an attractive introductory price until April 10<sup>th</sup> so that the public can now afford their own AT Panther. This limited time one time only offer will end once 200 individual AT Panthers have been sold by April 10<sup>th</sup>. As the world's only 1/5<sup>th</sup> scale car that can fly, this introductory price is kept low so it can compete with air-only camera drone prices and be available for the general public. Orders are planned to be filled within 120 days of payment. Flying is as simple as a quad copter control system with an RC controller and autonomous waypoint navigation planning is accomplished through the ground control station software that is downloaded onto your standard laptop computer. With a flip of a switch and the aircraft can switch from autonomous flight to manual radio controlled ground mobility driving.

**Order your own AT Panther at:**

<https://www.advancedtacticsinc.com/panther-suas-ground-robot-on-sale/>



Figure 10: The AT Panther is shown driving out of the testing area over to the transportation vehicle while an AT engineer monitors its performance at the ground control station.



Figure 11: The Panther is ready for package delivery and can now be owned by the general public.



## How to see the video:

The AT Panther Drone First Aerial Package Delivery Test with a Safe Drive-up-to-your-doorstep: <https://www.advancedtacticsinc.com/videos-page/>

## Company Expertise

Advanced Tactics Inc. has extensive experience developing unmanned air/ground mobile robotic vehicles with respected partners such as the U.S. Marine Corps Warfighting Laboratory, U.S. Air Force Research Laboratory, U.S. Army Telemedicine and Technology Research Center, and U.S. Navy Naval Air Systems Command. AT previously developed the Black Knight Transformer,



Figure 12: Black Knight Transformer Flying



Figure 13: Black Knight Transformer Driving

demonstrating its patented air/ground mobility technologies on a 2-ton manned or unmanned air/ground vehicle with VTOL flight and on and off-road driving capabilities designed for casualty evacuation and is also C-130 cargo aircraft transportable since it can drive right into the aircraft with no disassembly.

Now, AT has successfully miniaturized and developed its proprietary technologies to create the new Autonomous AT Panther Air/Ground Robot for commercial and consumer use. AT is interested in partnering with package delivery companies and private distributors.

## About Advanced Tactics:

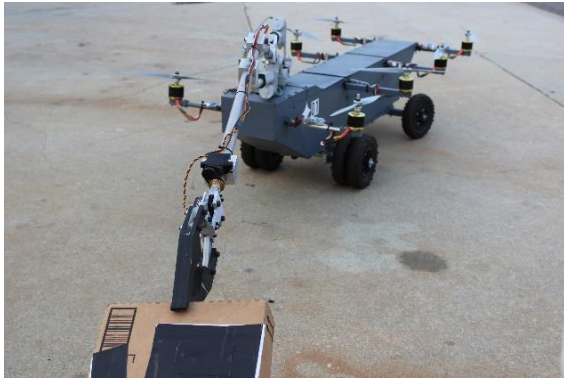
Advanced Tactics Inc. (AT) is based in Torrance, CA and has been specializing in research and development of next-generation military and commercial robotic vehicles. AT is now focusing on the production of commercial products. A unique set of patented technologies drive the company's progress towards providing game-changing capabilities to the world. For more information, please visit [www.advancedtacticsinc.com](http://www.advancedtacticsinc.com).

For phone inquiries please call: (310) 325-0742

**Images of AT Robotic Arm Tests on AT VTOL flight ground mobile robots:**



**Figure 14: AT Panther robotic arm test**



**Figure 15: AT King Scorpion robotic arm test**