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AeroVironment Successfully Conducts Maritime Demonstration of Puma-Switchblade Automated Sensor-to-Shooter Capability to Counter Swarm Attacks

April 9, 2018

- Patent pending technology was demonstrated and evaluated for operational effectiveness aboard a US Navy Coastal Riverine Craft against high-speed unmanned target boats
- Tightly integrated system effectively finds, identifies, fixes and defeats fast-moving surface vessels approaching a host vessel
- Existing RQ-20B Puma Block 2 All-Environment small unmanned aircraft system with Mantis i45 sensor gimbal quickly and accurately locates and identifies threats on land or at sea
- Automatic coordinate handoff to battle-proven Switchblade lethal loitering missile precisely targets moving threats with pinpoint precision
- Delivers unprecedented ability to identify threats at long ranges, limit collateral damage and “wave off” targets subsequently deemed neutral or friendly
- Simultaneously displayed Puma and Switchblade imagery dramatically elevates operator situational awareness and reduces the chances of mis-targeting

NATIONAL HARBOR, Md.--(BUSINESS WIRE)--Apr. 9, 2018-- [AeroVironment, Inc.](#) (NASDAQ: AVAV), a global leader in unmanned aircraft systems (UAS) for both defense and commercial applications, today announced the successful maritime demonstration of a [Puma™-Switchblade®](#) automated sensor-to-shooter (S2S) capability from a US Navy Coastal Riverine Craft for increased mission autonomy to counter threats.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20180409005555/en/>

AeroVironment's Puma AE small UAS combined with automatic coordinate transmission to the battle-prov ...

AeroVironment's Puma AE small UAS combined with automatic coordinate transmission to the battle-proven Switchblade lethal loitering missile (Graphic: Business Wire)

The tightly integrated walk-on/walk-off system uses existing RQ-20B Puma Block 2 All-Environment small UAS with the new [Mantis i45](#) sensor gimbal combined with automatic coordinate transmission to the battle-proven Switchblade lethal loitering missile to quickly and accurately surveil and respond to threats on land

or at sea.

“This new combination of our Puma unmanned aircraft system with our Switchblade loitering missile system gives commanders unprecedented ability to identify threats at long ranges, limit collateral damage and wave off targets subsequently deemed neutral or friendly,” said Rick Pedigo, vice president of AeroVironment’s Tactical Missile Systems business.

In a sensor-to-shooter mission, Puma, as a long-endurance intelligence, surveillance and reconnaissance (ISR) small UAS asset with a high-resolution day/night camera, positively identifies a target of interest and automatically passes the target location to Switchblade prior to its launch. Once Switchblade is launched, Puma continuously transmits the target location throughout the engagement sequence. When the target is in the field of view of Switchblade’s optical sensors, the Switchblade mission operator confirms the target and the Switchblade vehicle operator engages the threat. Switchblade continues to offer regret (wave-off) capability if, at any time, the target is identified as neutral or friendly.

In the Maritime demonstration, Puma identified a series of fast-attack craft moving toward a host platform and transmitted their target coordinates to Switchblade prior to launch. Once launched, Switchblade automatically flew to the fast-moving target and the operator defeated the threat by engaging it with an inert payload.

“Our sensor-to-shooter solution greatly enhances Switchblade’s capability to positively identify targets and reduce engagement timelines by performing target identification and location functions prior to launch,” said Pedigo. “By continuously updating the target location throughout the engagement, S2S significantly reduces the Switchblade operator’s workload.”

Sensor-to-shooter combines AeroVironment’s fielded Puma Block 2 (the “sensor”) and Switchblade loitering munition (the “shooter”) with additional equipment – a ruggedized laptop with S2S software, a [Pocket DDL™](#) data link module and a larger gain antenna – to forward the Puma payload’s center field of view (CFOV) electronically to Switchblade as its target coordinate. On the laptop, the simultaneous Puma and Switchblade video dramatically elevates operator situational awareness and reduces the chances of mis-targeting.

“With future enhancements, multiple simultaneous threats can be defeated,” said Pedigo. Future enhancements will include a multi-pack launcher that holds up to six Switchblade munitions and software that allows operators to control multiple air vehicles simultaneously.

S2S currently is a prototype with plans for product release in the fall of 2018. Currently fielded Switchblade systems can be upgraded with the S2S capability.

About AeroVironment

AeroVironment (NASDAQ: AVAV) provides customers with more actionable intelligence so they can proceed with certainty. Based in California, AeroVironment is a

global leader in unmanned aircraft systems, tactical missile systems and electric vehicle charging and test systems, and serves militaries, government agencies, businesses and consumers. For more information visit www.avinc.com.

Safe Harbor Statement

Certain statements in this press release may constitute "forward-looking statements" as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements are made on the basis of current expectations, forecasts and assumptions that involve risks and uncertainties, including, but not limited to, economic, competitive, governmental and technological factors outside of our control, that may cause our business, strategy or actual results to differ materially from those expressed or implied. Factors that could cause actual results to differ materially from the forward-looking statements include, but are not limited to, our ability to perform under existing contracts and obtain additional contracts; our reliance on sales to the U.S. government; changes in the timing and/or amount of government spending; changes in the supply and/or demand and/or prices for our products and services; changes in the regulatory environment; the activities of competitors; failure of the markets in which we operate to grow; failure to expand into new markets; failure to develop new products or integrate new technology with current products; and general economic and business conditions in the United States and elsewhere in the world. For a further list and description of such risks and uncertainties, see the reports we file with the Securities and Exchange Commission, including our most recent Annual Report on Form 10-K and Quarterly Reports on 10-Q. We do not intend, and undertake no obligation, to update any forward-looking statements, whether as a result of new information, future events or otherwise.

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