### AEROVIRONMENT, INC. CORPORATE OVERVIEW

AeroVironment is a global leader in intelligent, multi-domain robotic systems. Serving defense, government and commercial customers, AeroVironment provides technology solutions at the intersection of robotics, sensors, software analytics and connectivity. With a purpose to secure lives and advance sustainability through transformative innovation, the company has become a leader in unmanned aircraft systems (UAS), unmanned ground vehicles (UGV), loitering munition systems (LMS) and high-altitude pseudo-satellites (HAPS). For more information, visit avinc.com.





### **FOUNDED**

July 27, 1971 1,259 full-time employees as of April 30, 2023

### **CORPORATE HEADQUARTERS**

241 18th Street South, Suite 415 Arlington, VA 22202

### **OPERATIONS**

Huntsville, AL; Simi Valley, CA; Moorpark, CA; Petaluma, CA; Lawrence, KS; Wilmington, MA; Crystal City, VA; Manassas, VA; Erie, PA; Stuttgart, Germany; San Diego, CA; Centreville, VA

### **EXECUTIVE LEADERSHIP TEAM**

### Wahid Nawabi

Chairman, President and Chief Executive Officer

### Kevin McDonnell

Senior Vice President and Chief Financial Officer

### Sean Woodward

Vice President of Global Operations Financer

### Melissa Brown

Vice President, General Counsel and Chief Compliance Officer

### **Scott Newbern**

Vice President and Chief Technology Officer

### Cris Sapera

Vice President of Global Engineering and Program Management

### Colin Walker

Vice President of Fulfillment

### Charlie Dean

Vice President of Global Business Development and Marketing

### **Trace Stevenson**

Vice President and Product Line General Manager, Unmanned Systems

### **Brett Hush**

Vice President and Product Line General Manager, LMS

### **Jeff Rodrian**

Vice President of Advanced Systems Group

### **Michael Cross**

Vice President and Product Line General Manager, HAPS

### **Shane Hastings**

Vice President and Product Line General Manager, MUAS

### **Brian Young**

Vice President and Product Line General Manager, UGVs



# UNMANNED AIRCRAFT SOLUTIONS

In the 1980s, AeroVironment created the first portable, hand-launched drone for information collection and transmission. Beginning in the 2000s, the company competed for and won every U.S. Department of Defense competition for small unmanned aircraft system programs of record. Today, AeroVironment develops, supplies and supports an integrated portfolio of UAS for all military services within the U.S. Department of Defense, as well as more than 55 allied nations, and has delivered more than 35,000 units to customers worldwide.

AeroVironment's portfolio of UAS includes small footprint and runway-independent unmanned aircraft systems. The JUMP® 20, T-20™ and Puma™ LE provide extended range and multi-payload capabilities. The Puma™ 3 AE RQ-20, Raven® RQ-11B, and VAPOR® Helicopter and deliver highly tactical, frontline situational awareness. These solutions deliver increased, multi-mission capabilities and the option of selecting the appropriate aircraft based on the type of mission to be performed. These capabilities have the potential to provide significant force protection and force multiplication benefits to small tactical units and security personnel, as well as greater safety, scalability and cost savings to commercial operators.

PRODUCT	IMAGE	WEIGHT	NOMINAL ENDURANCE	PAYLOAD
JUMP®20		215 lb (97.5 kg)	14+ hr	<ul> <li>» EO/MWIR sensors with onboard tracking</li> <li>» Synthetic aperture radar</li> <li>» Mapping capabilities</li> <li>» Laser designation</li> <li>» Anti-jamming and COMMINT/SIGINT</li> </ul>
Τ-20™		225 lb (102 kg)	24+ hr	<ul> <li>» EO/MWIR sensors with onboard tracking</li> <li>» Synthetic aperture radar</li> <li>» Mapping capabilities</li> <li>» Laser designation</li> <li>» Anti-jamming and COMMINT/SIGINT</li> </ul>
Puma™ LE		23.5 lb (10.7 kg)	6.5 hr	<ul><li>» Mantis i45 Gimbaled EO/IR sensor</li><li>» Low Light camera</li><li>» High Power Laser Illuminator</li></ul>
Puma™ 3 AE RQ-20	A	15.4 lb (7 kg)	2.5 hr	<ul><li>» Mantis i45 Gimbaled EO/IR sensor</li><li>» Low Light camera</li><li>» High Power Laser Illuminator</li></ul>
Raven® RQ-11B		4.2 lb (1.9 kg)	90 min	<ul><li>» Mantis i23 Gimbaled EO/IR sensor</li><li>» Low Light camera</li><li>» Laser Illuminator</li></ul>
VAPOR® 55 MX		65 lb (29.5 kg)	75 min	<ul><li>» Gimbaled EO and IR sensors</li><li>» LiDAR, Hyperspectral</li><li>» PPK Mapping</li><li>» Drop/Delivery Mechanism</li></ul>

## UNMANNED GROUND VEHICLE SOLUTIONS

With the acquisition of Telerob GmbH, a leader in UGVs, AeroVironment now offers advanced, proven ground robotic solutions to complement the company's existing, market leading tactical unmanned aircraft solutions and tactical missile systems. This expanded portfolio of intelligent, multi-domain robotic systems can address a broader set of missions for our customers.

AeroVironment's UGVs safely and effectively perform a variety of dangerous missions, including explosive ordnance disposal (EOD), hazardous materials handling (HAZMAT) and chemical, biological, radiological and nuclear (CBRN) threat assessment. AeroVironment's ruggedized UGVs possess all-terrain capabilities and offer some of the most advanced, specialized, precision manipulators available with autonomous functionality and intuitive operation to deliver a high degree of mission flexibility.

PRODUCT	IMAGE	LIFTING CAPACITY	TIME OF OPERATION	KEY FEATURES
tEODor EVO		220 lb (100 kg)	4 hr	<ul> <li>» Successor of the proven EOD robot tEODor</li> <li>» Precision 6-axis manipulator with telescopic reach</li> <li>» 12 in Gripper with integrated laser rangefinder</li> <li>» Payload capacity up to 287 lb (130 kg) with Automatic Tool Exchange</li> <li>» Stable 2 Track Drive System – Independent High-Torsion Electrometers</li> <li>» Intuitive to use Robo Command Control System –interoperable with all telemax EVO UGVs</li> </ul>
telemax™ EVO PLUS		176 lb (80 kg)	Up to 12 hr	<ul> <li>» Heavy-lift capable</li> <li>» Precision 6-axis manipulator with Tool Center Point (TCP) control</li> <li>» 8 in Gripper with integrated camera</li> <li>» Double payload bay – Automatic Tool Exchange</li> <li>» 4-track drive system with a top speed of up to 3.1 mph (5 km/h)</li> <li>» Intuitive to use Robo Command Control System</li> </ul>
telemax™ EVO PRO		44 lb (20 kg)	Up to 10 hr	<ul> <li>Compact design – superior mobility and extended reach</li> <li>Precision 7-axis manipulator with Tool Center Point (TCP) control</li> <li>4.7 in Gripper with integrated camera</li> <li>Telescopic joint allows for increased reach of manipulator</li> <li>Payload bay – Automatic Tool Exchange</li> <li>4-track drive system with a top speed of up to 6.2 mph (10 km/h)</li> <li>Intuitive to use Robo Command Control System</li> </ul>
telemax™ EVO HYBRID		82 lb (37 kg)	Up to 10 hr	<ul> <li>Compact and powerful</li> <li>Precision 6-axis manipulator with Tool Center Point (TCP) control</li> <li>8 in Gripper with integrated camera</li> <li>Payload bay – Automatic Tool Exchange</li> <li>4-track drive system with a top speed of up to 6.2 mph (10 km/h)</li> <li>Intuitive to use Robo Command Control System</li> </ul>

### LOITERING MUNITION SYSTEMS

AeroVironment's LMS close the gap between observation and action, giving troops the ability to identify threats and deliver a precision lethal payload with minimal collateral damage. Their small size and low acoustic, visual and thermal signature make them difficult to detect, recognize or track, even at close range.

Rapidly deployable and highly maneuverable with high-performance optics and scalable munition payloads, AeroVironment's <a href="Switchblade@300">Switchblade@600</a> loitering munition systems enable the warfighter to easily launch, fly, track and engage beyond-line-of-sight targets and light armored vehicles across land, maritime and air-launched scenarios. Operators can also instantly transfer target coordinates from small UAS to Switchblade 300 Block 20 using the <a href="Sensor to Shooter Kit">Sensor to Shooter Kit</a>, reducing engagement timelines and increasing mission success and operational safety.

AeroVironment's <u>Blackwing™</u> loitering reconnaissance system is a variant of Switchblade that can be deployed from a submarine using an underwater-to-air delivery canister, shipboard or mobile ground vehicle via tube-launch or Multipack Launcher (MPL).

When every second counts, AeroVironment's loitering munition systems deliver the actionable intelligence and precision firepower needed to achieve mission success across multiple domains.

PRODUCT	IMAGE	WEIGHT	LAUNCH METHOD	KEY FEATURES
Switchblade® 300 Block 20		AUR: 8 lb (3.6 kg)	Self-contained launcher for ground, air and maritime. Optional Multipack Launcher	<ul> <li>» Patented "wave-off" feature and recommit ability</li> <li>» Automated waypoint navigation</li> <li>» Backpackable</li> <li>» &lt;2 minute setup and launch</li> </ul>
Switchblade® 600		AUR: 50 lb (22.7 kg)	Self-contained launcher for ground, air and maritime	Patented "wave-off" feature and recommit ability     Intuitive touch tablet controller     <10 minute system setup and launch
Blackwing™		4 lb (1.8 kg)	Underwater-to-air delivery canister, tube, MPL	<ul> <li>» Rapid launch—rapid response ISR</li> <li>» C3 Tactical data relay—         manned and unmanned vehicles</li> <li>» Modular payload</li> </ul>



### SUNGLIDER™

Building on decades of experience developing and demonstrating high-altitude, solar-powered, UAS, AeroVironment established a Master Design & Development Agreement with SoftBank, the Japanese telecommunications company. In 2019, we assembled the first Sunglider™, a solar-powered high-altitude platform-station (HAPS) designed to serve a 200-kilometer area from a position 20 kilometers in the atmosphere. The ultimate vision for HAPSMobile is to create a network of Sungliders, reaching the billions of people worldwide who lack even basic wireless communications, and provide the additional bandwidth needed to support the emerging 5G standard and the Internet of Things. In 2020, Sunglider successfully reached an altitude of more than 60,000 feet above sea level and successfully demonstrated mobile broadband communication from the stratosphere.

# NETWORK CONNECTIVITY

AeroVironment's next-generation ground control solution streamlines command and control of compatible unmanned aircraft systems (UAS) and their payloads through an intuitive user experience. Built around three core elements – software, hardware and antennas – Crysalis offers complete interchangeability, either as a network of modular elements or turnkey systems optimized for the warfighter. The result: an adaptable, operationally simplified GCS solution that improves battlefield communications and collaboration by enabling users to easily share real-time information and coordinate mission-critical decisions.

PRODUCT	IMAGE	LINK RANGE	SETUP TIME	WEIGHT	USE CASE
Crysalis™ RVT		Up to 5 km	5 Min	System: 3.3 lb (1.5 kg)	<ul> <li>Real-time situational awareness &amp; battlefield coordination</li> <li>Passive downlink video viewing and UAS telemetry data</li> <li>Single operator wearable</li> </ul>
Crysalis™ Ultralight GCS		Up to 5 km	5 Min	System: 4.7 lb (2.1 kg)	<ul> <li>» Single operator wearable flight operations</li> <li>» Full control of UAS/payloads through virtual or tactile joysticks</li> <li>» Ideal for small, mobile teams</li> </ul>
Crysalis™ Tactical GCS		Up to 20 km	10 Min	System: 8.6 lb (3.9 kg)	Single or dual operator deployment and launch; Semi-fixed to wearable     Full control of UAS/payloads through virtual or tactile joysticks     Ideal for ISR missions at squad, platoon or company level
Crysalis™ Command GCS		Up to 20 km	15 Min	System: 14.3 lb (6.49 kg)	» Dual Operator deployment and launch; Semi- fixed positions     » Full control of UAS/payloads through tactile joysticks/ruggedized laptop     » Ideal for use at squad, platoon or company level

AeroVironment's airborne unmanned aircraft systems are connected to their operators through reliable, high-performance network connectivity solutions that extend situational awareness, provide actionable intelligence and bring confidence to users to Proceed With Certainty in their missions. AeroVironment offers a suite of antennas to meet diverse mission needs with connection ranging from 5 km up to 60 km utilizing the LRTA. Antennas are full AES-256 bit encryption capable which enables secure command and control connectivity and are designed primarily for surface operations and are either M1/2/5 or M3/4/6 capable.

PRODUCT	IMAGE	DIMENSIONS	WEIGHT	LINK RANGE	OPERATING BANDS
Pocket DDL™ Antenna (pDDL)		4 in x 2.25 in x 0.75 in (10.2 cm x 5.71 cm x 1.9 cm)	7.1 oz (200 g)	Up to 5 km	
Standard Antenna		Height: 6.5 ft (2 m) Base Diameter: 3 ft (0.9 m)	M1/2/5: 8.6 lb (3.9 kg) M3/4/6: 8.5 lb (3.9 kg)	Up to 20 km	
Extended Range Antenna (ERA)	À	Height: 4.25-7 ft (1.3-2.2m) Base Diameter: 3.75-8.2 ft (1.1-2.5 m)	10.8 lb (4.9 kg)	Up to 40 km	M1/2/5 or M3/4/6
Long-Range Tracking Antenna (LRTA)		Height: M1/2/5: 5.8-9.4 ft (1.8-2.9 m) M3/4/6: 5.25-8.8 ft (1.6-2.7 m) Base Diameter: 5.3 ft (1.6 m),legs not extended	M1/2/5: 304 lb (138 kg) M3/4/6: 300 lb (136 kg)	Up to 60 km	



### INTELLIGENCE, SURVEILLANCE & RECONNAISSANCE (ISR) SERVICES

AeroVironment is dedicated to providing a full range of ISR services that are both cost efficient and operationally effective. Our team is ready to mobilize quickly, 24-hours a day, to support customer operations and protect lives, property, resources and critical infrastructure. We are committed to meeting our customers' requirements and mission needs, and offer:

- » Fully-equipped and staffed turn-key solutions
- » OEM-SME FAA remote pilot certified operators, instructors and maintainers
- » Design and development of mission-tailored TTPs and SOPs
- » Development of on-site sustainment operations and delivery
- » Mission planning and operational support
- » Logistical planning, coordination and monitoring
- » On-site maintenance services to ensure mission sustainment & success

### **TRAINING**

AeroVironment specializes in student-centered learning using state-of-the-art, interactive, 3D digital training media that aid in the retention of information and promote student participation. Courses include simulator-focused mission scenarios that provide a real world digital experience, hands-on practical exercises, mission planning and live unmanned operations in a safe and controlled environment.

### LOGISTICS

AeroVironment's logistics personnel ensure customers achieve mission success by providing quality products and the best-value logistics support, anywhere in the world. Whether it's establishing a forward depot downrange to support large UAS operations or supporting a single mission in the United States, our commitment to customer success is the same. Our logistics support solutions include:

- » Planning
- » Upgrades, UAS spares & repairs
- » Technical expertise
- » Material management
- » Supply chain management
- » Military and commercial

# **MACCREADY WORKS ADVANCED SOLUTIONS**

Named after our founder, Dr. Paul B. MacCready, Jr., AeroVironment created MacCready Works Advanced Solutions to ensure that creativity and long-term thinking remain at the core of our culture. With a focus on the future, this group of select, visionary scientists and engineers partner with our customers to explore breakthrough technologies that open new, more powerful ways to tackle difficult challenges. Together, they research and develop advanced technologies in robotics, sensors, software analytics and connectivity to identify innovative solutions that push beyond the current applications.

These revenue-generating projects significantly contribute to the growth of the company and stretch our imaginations to spawn new inventions. Once conceptualized, we can apply these new technologies to other projects, keeping us and our customers at the forefront of cutting-edge innovation.

With the acquisition of Progeny Systems Corporation's Intelligent Systems Group (ISG), a leader in the development of artificial intelligenceenabled computer vision, machine learning and perceptive autonomy technologies, MacCready Works Advanced Solutions is currently shaping tomorrow's solutions by creating highly autonomous, mission-centered products that operate jointly across multiple domains, and position our customers at the leading edge of intelligent, interconnected systems.

### **50+ YEARS OF INNOVATION**

After founding AeroVironment in 1971, Dr. Paul B. MacCready, Jr., became the first to design and build an aircraft that successfully achieved controlled human-powered flight, strengthening the company's reputation for achieving the impossible in aerospace engineering.

Among a number of accolades, Dr. MacCready was selected as one of Time Magazine's "20th Century's Greatest Minds." Seven of AeroVironment's innovations are part of the Smithsonian Institution's collection.

AeroVironment's historical and notable innovations that form the foundation for today's leading market positions and tomorrow's new opportunities include:

- » The world's first effective human-powered and manned solar-powered airplanes
- » GM Impact: prototype for the first modern consumer electric car
- » Helios solar-powered unmanned aircraft: world's highest flying airplane in level flight that reached more than 96,000 feet in 2001
- » Global Observer prototype: world's first liquid hydrogen-powered unmanned aircraft system
- » Pointer: first man-portable unmanned aircraft system, developed in 1986
- » Raven® RQ-11B: first small unmanned aircraft system selected for the U.S. Army's program of record in 2005
- » Nano Hummingbird: first flapping wing Nano unmanned aerial vehicle with tri-axis control
- » Switchblade®: first operation deployment of a back-packable tactical missile system in 2012
- » Blackwing™: first submarine launched loitering unmanned aircraft system developed for reconnaissance
- » Mars Ingenuity Helicopter: AeroVironment developed critical components for the first powered aircraft transported to another planet for its planned, history-making flight

