

PRODUCT CATALOG



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VERSION 20830

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AEROVIRONMENT HAS DELIVERED THE
VAST MAJORITY OF ALL UNMANNED AIRCRAFT
IN THE U.S. DEPARTMENT OF DEFENSE INVENTORY*

35,000+
UNITS DELIVERED WORLDWIDE

4 MILLION+
ACCUMULATED UAS FLIGHT HOURS (EST)

50+
ALLIED NATIONS USE OUR UAS, UGV & SUPPORT SERVICES

WHO WE ARE

At AeroVironment, we are relentless in our efforts to deploy technology in ways that push beyond the realm of what's possible. With each innovation, we are always striving to broaden our customers' horizons and elevate their capacity to make smarter, quicker decisions.

We develop technologies and solutions that enable customers to operate beyond the horizon, enabling them to see the world in powerful new ways, complete ever-more ambitious missions and overcome seemingly intractable challenges. By pushing the boundaries of future-defining technologies, we move beyond what is currently possible to create a powerful, interlocking family of products spanning missions, domains and worlds.

* Source: United States Department of Defense Unmanned Systems Roadmap 2013-2038, page 5

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GLK-OFF ///



JUMP 20

T-20

PUMA LE

PUMA 3 AE

SUNGLIDER



PUMA VTOL KIT



RAVEN B



WASP AE

MULTI-DOMAIN ROBOTIC SYSTEMS



VAPOR 55

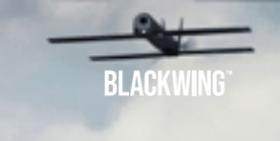
VAPOR 55 MX



QUANTIX RECON



SWITCHBLADE 600



BLACKWING



SWITCHBLADE 300



DDL NETWORK ANTENNAS



CRYNALIS GCS



telemax EVO UGV

tEODor EVO

TACTICAL × MISSILE SYSTEMS

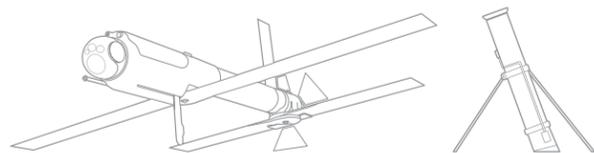


+ TMS

AeroVironment's Switchblade® tactical missile systems (TMS) close the gap between observation and action, giving troops the ability to identify threats and precisely deliver a lethal payload with minimal collateral damage. Their small size and low acoustic, visual and thermal signature make them difficult to detect or track, even at close range.

Rapidly deployable and highly maneuverable with high-performance optics and scalable munition payloads, our loitering missile systems enable warfighters to easily launch, track and engage beyond-line-of-sight targets including light armored vehicles across domains. These qualities made the Switchblade the "kamikaze drone" of choice in Ukraine.

SWITCHBLADE® 600 LOITERING MISSILE



DIMENSIONS

Length: 50 in (1.3 m)

WEIGHT

AUR: 50 lb (22.7 kg)
System [1 AUR and FCS]: 120 lb (54.4 kg)



» **RANGE**
40+ km



» **ENDURANCE**
40+ min



» **SPEED**
Cruise: 70 mph
Dash: 115 mph



» **EFFECTS ON TARGET**
Anti-armor & anti-personnel effects

| | |
|----------------------------|---|
| FIRE CONTROL SYSTEM | Tablet-based FCU with tap-to-target guidance & built-in mission planner & trainer |
| TARGETING OPTICS | 2-axis, 4-sensor gimbal (Dual EO/IR) integrated sensor suite |
| OPERATING ALTITUDE | Below 650 ft AGL (ceiling >15,000 ft MSL) |
| LAUNCH METHOD | Self-contained launcher for ground, air & maritime |
| LETHALITY | Precision strike with anti-armor warhead |

KEY FEATURES

- » Patented wave-off feature & recommit capability
- » Intuitive touch tablet controller
- » < 10 minute system setup & launch

ALL-IN-ONE, MAN-PORTABLE, ANTI-ARMOR, SMART MISSILE SYSTEM



Best-in-Class Target Acquisition Sensor Suite



Anti-Armor Warhead



Self-Contained Tube-Launcher



Mission Planning on Tablet Controller

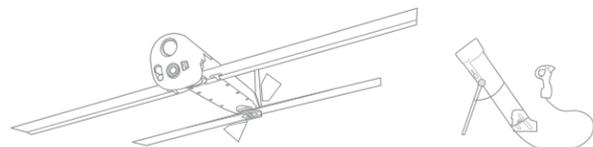


Integrated Training Simulator (T-sim)



Antenna & GCS

SWITCHBLADE® 300 LOITERING MISSILE



DIMENSIONS

Wingspan: 27 in (68.6 cm)
Length: 19.5 in (49.5 cm)

WEIGHT

AUR: 5.5 lb (2.5 kg)



» **RANGE**
10 km



» **ENDURANCE**
15 min



» **SPEED**
Cruise: 63 mph
Dash: 100 mph



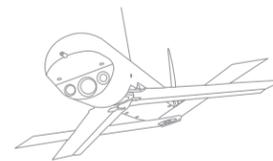
» **EFFECTS ON TARGET**
Anti-personnel effects

| | |
|------------------------------|---|
| GROUND CONTROL SYSTEM | Interoperable with common ground control system for Puma™ AE, Raven® & Wasp® AE |
| TARGETING OPTICS | Dual front & side-look EO cameras & IR nose camera, stabilized electronic pan-tilt-zoom |
| OPERATING ALTITUDE | Below 500 ft AGL (ceiling >15,000 ft MSL) |
| LAUNCH METHOD | Self-contained ground launch & multipack |
| LETHALITY | Precision strike with Northrop Grumman advanced munition |

KEY FEATURES

- » Patented wave-off feature & recommit capability
- » Automated waypoint navigation
- » Backpackable
- » < 2 minute setup & launch

BLACKWING™ LOITERING RECONNAISSANCE SYSTEM



DIMENSIONS

Wingspan: 27 in (68.6 cm)
Length: 19.5 in (49.5 cm)
Diameter: 3 in (7.6 cm)

WEIGHT

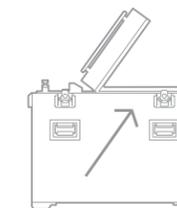
4 lb (1.8 kg)

| | |
|----------------------|--|
| SENSORS | Integrated EO/IR sensors—day/night operations |
| LAUNCH METHOD | Underwater-to-air delivery canister, tube, MPL |

KEY FEATURES

- » Rapid response ISR
- » C3 tactical data relay from UAS to UUV
- » Modular payload

MPL MULTIPACK LAUNCHER



DIMENSIONS

36 in D x 30 in W x 36 in H

WEIGHT

~130 lb empty
~160 lb loaded

| | |
|-----------------------|--|
| CONFIGURATIONS | 6-pack Standard (Alternates for 2-20 AURs possible) |
| MOUNTING | Hold downs for vehicle or shipboard use |
| POWER | Solar panel & internal battery, Shore/TacVeh power augments to maintain internal operating temps |
| CONTROL | 100 ft remote operation control cable (FOB/COP ops cell bunker/buildings, tactical vehicles, ship CIC) |

KEY FEATURES

- » Compatible platforms: Switchblade® 300, Blackwing™
- » Rapid Reload —< 30 seconds per round
- » Low observable remote ops
- » Tactical vehicle/MRAP



SWITCHBLADE® 300 SENSOR TO SHOOTER KIT

Switchblade® Sensor to Shooter (S2S) combines the superior ISR capabilities of Puma™, Raven® and Wasp® small unmanned aircraft systems (SUAS) with the precision strike capabilities of the Switchblade loitering missile system. Through S2S software, target coordinates are instantly transferred from the SUAS to Switchblade, reducing engagement timelines and cognitive load on the operators. S2S provides Switchblade operators with real-time video downlinks for a clearer view of the area of operation and the ability to scene-match SUAS ISR and Switchblade 300 camera feeds on one screen.

The Switchblade 300 Sensor to Shooter Kit allows operators to quickly update FalconView® with the S2S software on a ruggedized laptop, such as a Toughbook® CF-33, and connect to the included pDDL™. The Switchblade 300 operator simply taps the screen to initiate machine-to-machine target coordinate transfer, creating an automated mission plan and confirming launch sequence.



» PORTABILITY
Backpackable



» LINK RANGE
10 km



» SETUP TIME
Under 10 min

SPECIFICATIONS

SOFTWARE

| | |
|------------------|--|
| APPLICATION | FalconView®: Sensor to Shooter software update |
| OPERATING SYSTEM | Windows® 10 |

HARDWARE

| | |
|---------------------|---|
| DIMENSIONS | Pelican Case: 16.9 in x 13.2 in x 4.5 in (42.9 cm x 33.6 cm x 11.4 cm) |
| WEIGHT | System: ~6.5 lb (2.95 kg)* Operational: 0.6 lb (0.27 kg)** |
| COMPATIBLE UAS | Puma™ LE, Puma™ 3 AE, Raven®, Wasp® AE |
| COMPATIBLE ANTENNAS | pDDL™ |
| REQUIRED HARDWARE | Ruggedized laptop |

SYSTEM PERFORMANCE

| | |
|-----------------|--------|
| FREQUENCY BANDS | M1/2/5 |
|-----------------|--------|

*System consists of all kit components

**Operational setup consists of pDDL™, antennas, USB Y-cable

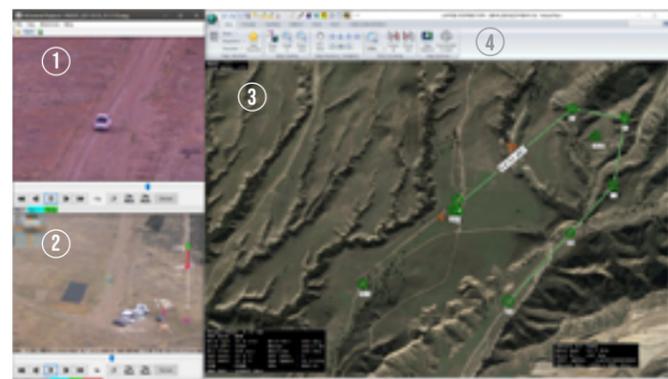
KEY FEATURES

- » *Reduced engagement timelines with instant target coordinate transfer from SUAS to Switchblade® 300*
- » *View ISR & TMS downlink, FalconView® UI & Mission Map on one screen for streamlined operations*
- » *Scene-match SUAS ISR & TMS camera feeds to instantly reassess targets, mission plan & conduct BDA*
- » *Identify threats at greater standoff range; find, fix & prosecute high-value targets with lethal effects*

KIT COMPONENTS



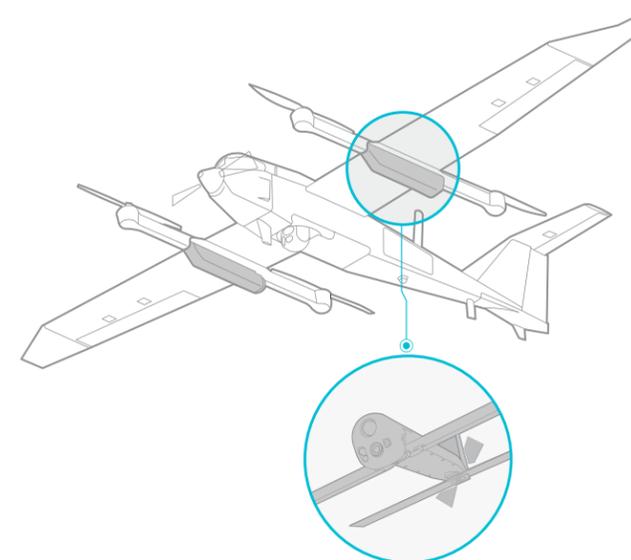
| | | | |
|---|---------------------------|---|--|
| A | Pelican Carrying Case (1) | E | Assy, SSD hard drive software installation (1) |
| B | Antenna, M1/2/5 pDDL™ (2) | F | Velcro® tape hook & loop (2) |
| C | RFU, M1/2/5 pDDL™ (1) | G | USB Y-cable (1) |
| D | Pouch pDDL™ (1) | | User Guide (2) - Not shown |



- ① UAS Live Video Downlink Window
- ② Switchblade® 300 Live Video Downlink Window
- ③ Mission Map Data Points
- ④ Switchblade® 300-FalconView® Downlink Window



UAS/TMS INTEROPERABILITY



S2S provides an integrated multi-domain ISR and precision strike capability for increased mission autonomy and efficacy, combining the extended range of Puma™ SUAS (shown above), or the JUMP® 20 MUAS (shown left) with organic Air-Launched Effects (ALE) of the Switchblade® 300 loitering missile system. This end-to-end solution provides the warfighter with greater time on station to conduct persistent ISR and prosecute multiple targets with lethal effects.

SMALL UNMANNED AIRCRAFT SYSTEMS ✕

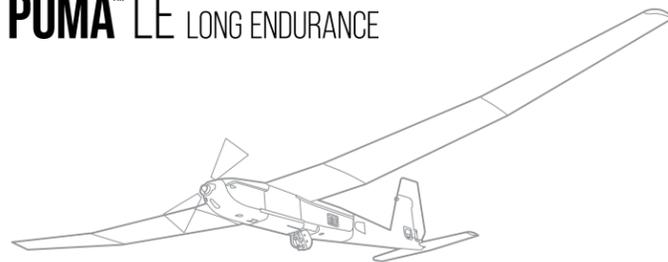


+ SUAS

Over the last decade, members of AeroVironment's growing family of small unmanned aircraft systems (SUAS) — Puma™ LE, Puma™ 3 AE, Raven®, Wasp® AE, Quantix™ Recon and VAPOR® Helicopter UAS — have been adopted by more than 50 allied nations.

The reason for their appeal is straightforward. Under battlefield conditions, they have proven themselves ideal for low-altitude intelligence, surveillance and reconnaissance missions. Lightweight, rugged and easy-to-operate, they deliver real-time color and/or infrared imagery to ground control and remote viewing stations. With their enhanced communications and interoperability, they are a critical building block for multi-domain operations.

PUMA™ LE LONG ENDURANCE



DIMENSIONS

Wingspan: 15 ft (4.6 m)
Length: 7.3 ft (2.2 m)

WEIGHT

23.5 lb with Mantis™ i45/i45 N (10.7 kg)

LINK RANGE
20 km, 60 km with LRTA

ENDURANCE
6.5 hr with Puma™ Smart 2500 Battery*

TOTAL PAYLOAD CAPACITY
5.5 lb (2.5 kg)**

| | |
|---------------------------|---|
| SPEED | Cruise: 47 km/h (25 kts) Dash: 76 km/h (41 kts) |
| OPERATING ALTITUDE | 300-500 ft (91-152 m) AGL, typical Max. launch 10K ft (3,048 m) MSL |
| GCS | Crysalis™ and legacy common GCS |
| LAUNCH METHOD | Hand-launched, bungee or vehicle launch |
| RECOVERY METHOD | Autonomous or manual deep-stall, land or sea |

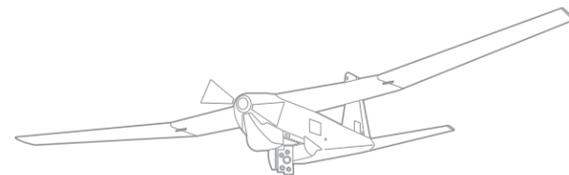
*Puma™ Smart 2500 Battery is not compatible with other Puma™ AE aircraft

**Payload capacity is reduced by 0.3 lb (140 g)

KEY FEATURES

- » 6.5 hours of ISR capability & full-motion video in all environments
- » Support two flights with 2-case mission packout
- » Dedicated secondary payload bay with power supply & Ethernet

PUMA™ 3 AE ALL ENVIRONMENT // RQ-20C



DIMENSIONS

Wingspan: 9.2 ft (2.8 m)
Length: 4.6 ft (1.4 m)

WEIGHT

15.4 lb with Mantis™ i45/i45 N (7 kg)

LINK RANGE
20 km, 60 km with LRTA

ENDURANCE
2.5 hr with Mantis™ i45

TOTAL PAYLOAD CAPACITY
4 lb (1.8 kg)

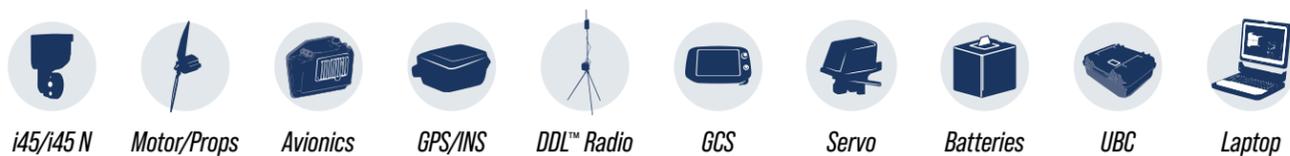
| | |
|---------------------------|---|
| SPEED | Cruise: 49 km/hr (26 kts) Dash: 76 km/h (41 kts) |
| OPERATING ALTITUDE | 300-500 ft (91-152 m) AGL, typical Max. launch 10K ft (3,048 m) MSL |
| GCS | Crysalis™ & legacy common GCS |
| LAUNCH METHOD | Hand-launched, optional rail or bungee launch |
| RECOVERY METHOD | Autonomous or manual deep-stall, land or sea |

KEY FEATURES

- » Increased payload capacity with optional underwing transit bay for secondary payloads
- » Shares Mantis™ i45/i45 N gimbal payload & common LRUs with Puma™ LE
- » Single-case mission packout provides two full flights

INTEROPERABLE LRU SHARING ACROSS PUMA™ PRODUCT LINE

Puma™ 3 AE and Puma™ LE share many of the same Line Replaceable Units (LRUs), retaining similar operation, transport and logistics support within the Puma™ family.



PUMA™ KITS AND ACCESSORIES

COMPATIBLE WITH PUMA™ PRODUCT LINE

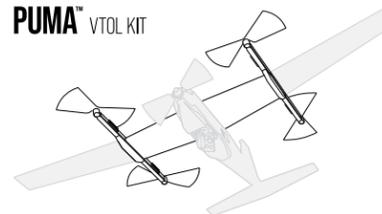
PUMA™ BUNGEE LAUNCH SYSTEM



- » For environmental scenarios where hand launch is not preferred
- » Setup & operational in less than 10 min
- » Multiple ground fastener options securely installed in a variety of soil types or mounted to low, immovable objects

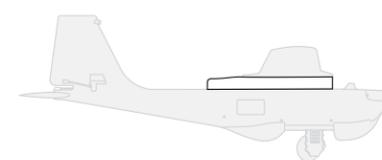
COMPATIBLE WITH PUMA™ 3 AE ONLY

PUMA™ VTOL KIT



- » Automated one-button launch & recovery in confined environments
- » Fixed-wing to VTOL in minutes
- » Available as add-on or retrofit kit

PUMA™ UNIVERSAL TRANSIT BAY



- » Optional under-wing transit bay for additional payload capacity
- » Easy integration of third-party payloads
- » Three heights available: 1.75 in, 2.25 in & 3 in

PUMA™ VNS VISUAL NAVIGATION SYSTEM

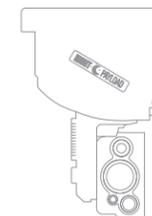


- » Seamless mission continuity through GPS-denied environments
- » Low-SWAP retrofit kit on existing & new Puma™ AE
- » Enables integration of future autonomy capabilities

MANTIS™ IMAGING PAYLOAD SENSORS

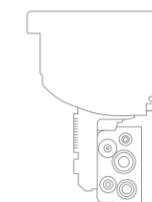
COMPATIBLE WITH PUMA™

MANTIS™ i45 N



- » Maximum visibility during night & low-light ISR
- » Wide & narrow LWIR camera imagers
- » 5 MP monochrome Low Light camera
- » Enhanced laser illuminator

MANTIS™ i45



- » Superior daylight & low-light capabilities
- » Dual 15 MP high-res EO cameras
- » Low Light, LWIR cameras
- » Laser illuminator

COMPATIBLE WITH RAVEN®

MANTIS™ i23 D



- » High-performance daytime imaging
- » Dual 18 MP high-res EO sensors
- » 25x digital zoom

MANTIS™ i23



- » Daylight & thermal imaging system
- » 5 MP EO camera imager
- » Laser illuminator

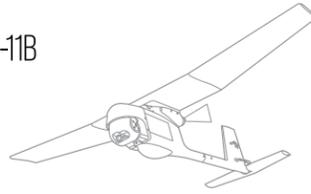
COMPATIBLE WITH WASP®

MANTIS™ i22



- » Advanced EO/IR imaging system
- » 5 MP EO camera
- » LWIR camera for night operations

RAVEN® B RQ-11B



DIMENSIONS
Wingspan: 4.5 ft (1.4 m)
Length: 3 ft (0.9 m)

WEIGHT
4.8 lb (2.2 kg)

LINK RANGE
10 km

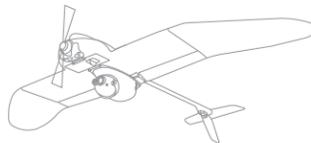
ENDURANCE
75+ min

| | |
|---------------------------|---|
| SPEED | Cruise: 32 km/h (17 kts), Dash: 81 km/h (44 kts) |
| OPERATING ALTITUDE | 100-500 ft (30-152 m) AGL, typical Max. launch 14K ft (4,267 m) MSL |
| GCS | Crysalis™ & legacy common GCS |
| LAUNCH METHOD | Hand-launched |
| RECOVERY METHOD | Autonomous or manual deep-stall |

KEY FEATURES

- » Backpackable, lightweight & hand-launched
- » Autonomous navigation & autoland
- » Rugged for extended, reliable use in harsh environments

WASP® AE ALL ENVIRONMENT // RQ-12A



DIMENSIONS
Wingspan: 3.3 ft (1 m)
Length: 2.5 ft (0.8 m)

WEIGHT
2.9 lb (1.3 kg)

LINK RANGE
5 km

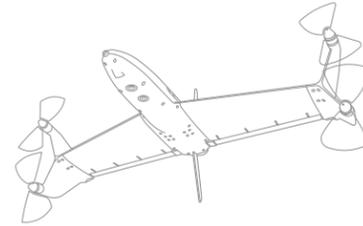
ENDURANCE
50 min

| | |
|---------------------------|---|
| SPEED | Cruise: 43 km/h (23 kts), Dash: 83 km/h (45 kts) |
| OPERATING ALTITUDE | 300 ft (91 m) AGL, typical Max. launch 10K ft (3,048 m) MSL |
| GCS | Crysalis™ & legacy common GCS |
| LAUNCH METHOD | Hand-launched |
| RECOVERY METHOD | Deep-stall landing in a confined area |

KEY FEATURES

- » Backpackable, lightweight & hand-launched
- » All-environment recovery with deep-stall landing in confined areas
- » Quiet operation to avoid detection

QUANTIX™ RECON



DIMENSIONS
Wingspan: 3.2 ft (97.5 cm)

WEIGHT
5 lb (2.3 kg)

MISSION COVERAGE
Area: 400 acres
Linear: 20 km (out & back)

NAVIGATION
Automatic navigation - Area, Waypoint, Linear

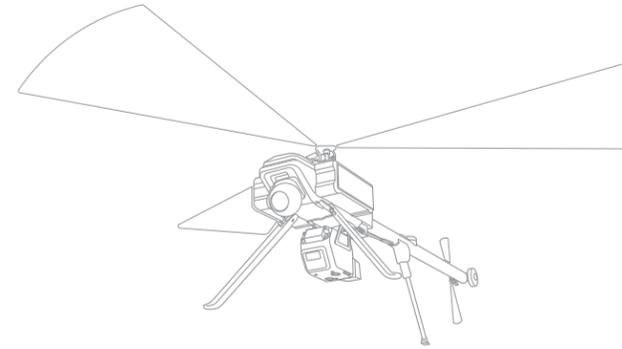
RF SILENT MODE

| | |
|----------------------------|---|
| MAX FLIGHT TIME | 45 min |
| RANGE | 2 km radio limit (up to 40 km without radio link) |
| PROPULSION | 4 direct electric drive motors |
| MAX ALTITUDE | 7,500 ft (2,286 m) MSL (Density Altitude) |
| CAMERA | 18 MP RGB & Multispectral Cameras, Simultaneous Capture |
| COMMUNICATIONS | 900 MHz Encrypted & WiFi |
| LAUNCH AND RECOVERY | Vertical takeoff & landing (VTOL) |

KEY FEATURES

- » RF Silent Mode prevents detection
- » Dual 18 MP cameras for complete hands-free data collection
- » Ready to fly in ~5 minutes & accurate up-to-date maps within minutes of landing
- » Rapid mission planning & verification with no connectivity required

VAPOR® 55 MX ALL-ELECTRIC HELICOPTER UAS



DIMENSIONS
Aircraft: 6 ft x 2.2 ft x 2.1 ft (1.8 m x .67 m x .64 m)
Rotor Diameter: 7.5 ft (2.29 m)

WEIGHT*
55 lb (24.9 kg) for commercial use**
65 lb (29.5 kg) defense missions with less endurance**

RANGE
Up to 32 km with Silvus & MPU5 radios

ENDURANCE
Cruise: 75 min
Hover: 60 min

USABLE PAYLOAD
Up to 12 lb (5.4 kg) @ 55 lb**
Up to 22 lb (10 kg) @ 65 lb**

| | |
|---------------------------|---|
| GROUND SPEED LIMIT | 33 mph (15 m/s) |
| OPERATING ALTITUDE | 0-12,000 ft (3,657 m) MSL (density) |
| MAX WIND PEAK | Sustained: 23 mph (30 kts), Gust: 45 mph (40 kts) |
| DATA LINKS | 900 MHz, 2.4 GHz or 5.8 GHz (Video), Satellite Silvus, TrellisWare, Persistent Systems, MicroHard |

EXAMPLES OF POSSIBLE PAYLOADS



EO/IR Sensor



SIGINT



Drop Mechanism



Lidar



Hyperspectral



PPK Mapping



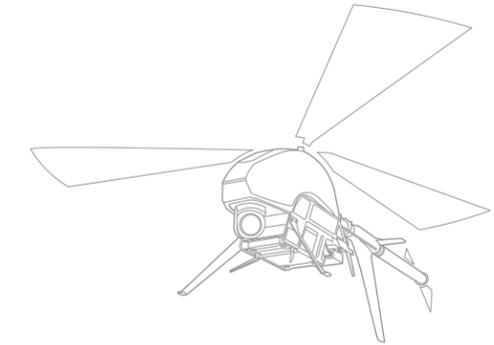
Multi-Payload

* FAA restricts the max GTOW of drones operating in the NAS to 55 lb unless you have special authorization
**Gross Takeoff Weight (GTOW)

KEY FEATURES

- » Payload flexibility—new payload modules with rail design enables quick & easy payload integration for increased mission flexibility
- » New sleek modular airframe design—stealthy low-profile design easier to assemble & disassemble
- » More portable design—features a telescoping tail & folding landing gear

VAPOR® 55 ALL-ELECTRIC HELICOPTER UAS



DIMENSIONS
Aircraft: 8.4 ft x 2.2 ft x 1.9 ft (2.56 m x 0.67 m x 0.58 m)
Rotor Diameter: 7.5 ft (2.29 m)

WEIGHT
55 lb (24.9 kg)

RANGE
8 km standard GCS

ENDURANCE
Cruise: 60 min
Hover: 45 min

USABLE PAYLOAD
10 lb (4.5 kg)

| | |
|---------------------------|---|
| GROUND SPEED LIMIT | 22 mph (10 m/s) |
| OPERATING ALTITUDE | 0-12,000 ft (3,657 m) MSL (density) |
| MAX WIND PEAK | Sustained: 16.7 mph (15 kts), Gust: 23 mph (20 kts) |
| DATA LINKS | 900 MHz, 2.4 GHz, 5.8 GHz, Satellite |

KEY FEATURES

- » Purpose-built for multi-mission operations
- » VTOL Automated Mission Execution—plan, simulate & execute
- » Versatile payload bay for integration of sensors & third-party payloads
- » Configurable to perform single and/or multiple payload missions

MEDIUM UNMANNED AIRCRAFT SYSTEMS

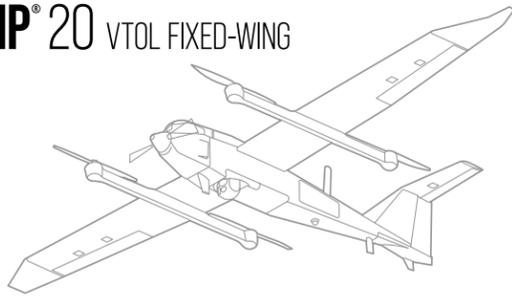


+ MUAS

With their 185-mile range, AeroVironment's fixed-wing medium unmanned aircraft systems (MUAS)—JUMP® 20 and T-20™—are excellent choices for exacting reconnaissance, surveillance and target acquisition applications, thanks to their ability to carry some of the most powerful and versatile imaging sensors available.

The JUMP® 20 is the first fixed-wing UAS extensively employed by U.S. forces capable of vertical takeoff and landing (VTOL). It features a 30-pound payload capacity and more than 14 hours of uninterrupted flight.

JUMP® 20 VTOL FIXED-WING



DIMENSIONS
Wingspan: 18.8 ft (5.7 m)
Length: 9.5 ft (2.9 m)

WEIGHT
215 lb MGTOW* (97.5 kg)
Fuel & Payload

LINK RANGE
185 km (115 mi)

ENDURANCE
14+ hr

USABLE PAYLOAD CAPACITY
Up to 30 lb (13.6 kg)

POWER SUPPLY
MOGAS, 190 cc EFI Engine
Battery Powered VTOL Jump

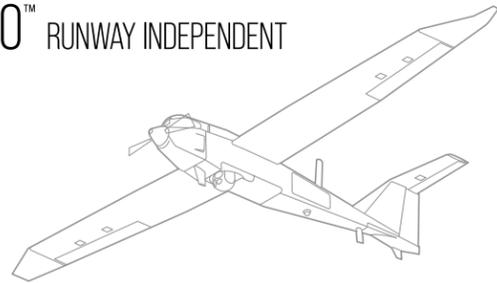
| | |
|---------------------------|--|
| OPERATING ALTITUDE | 17,000 ft DA |
| GCS | Common GCS with T-20™ |
| LAUNCH METHOD | No launch system or runway required; vertical takeoff & landing (VTOL) |
| RECOVERY METHOD | VTOL landing |

*MGTOW - Maximum Gross Takeoff Weight

KEY FEATURES

- » Multi-INT/Multi-Domain in a single integrated aircraft
- » Best-in-class range & endurance, delivering superior performance
- » Fully Integrated Payload Options—Synthetic aperture radar, mapping capabilities, laser designation, anti-jamming, COMINT/SIGINT

T-20™ RUNWAY INDEPENDENT



DIMENSIONS
Wingspan: 18.8 ft (5.7 m)
Length: 9.5 ft (2.9 m)

WEIGHT
225 lb MGTOW* (102 kg)
Fuel & Payload

LINK RANGE
185 km (115 mi)

ENDURANCE
24+ hr

USABLE PAYLOAD CAPACITY
Up to 50 lb (22.7 kg)

POWER SUPPLY
MOGAS, 190 cc EFI Engine

| | |
|---------------------------|-----------------------------------|
| OPERATING ALTITUDE | 20,000 ft DA |
| GCS | Common GCS with JUMP® 20 |
| LAUNCH METHOD | Catapult-launched |
| RECOVERY METHOD | Autonomous or manual skid landing |

*MGTOW - Maximum Gross Takeoff Weight

KEY FEATURES

- » Runway Independent—small operational footprint with PLS (catapult)
- » High-Performance Optics—Long-range day/night imaging, onboard tracking & stabilization
- » Class-leading endurance & payload flexibility in a Group 3 UAS
- » Group 4 capabilities in a Group 3 footprint

SENSOR OPTIONS // COMPATIBLE WITH ALL JUMP® 20 & T-20™ SYSTEMS

HOODTECH-45D
JUMP® 20 ONLY

EO
SPOTTER

WESCAM MX-8

EO
MWIR

TRILLIUM HD80

EO
MWIR
H.264

TASE 400 LRS

EO/IR
MWIR

SWAPPABLE IMAGING SYSTEMS

» Superior long-range day and night imaging systems that offer onboard tracking, MWIR, image stabilization, analog and digital output with H.264/5 compression.

DATA LINKS

» Provides ISR support, MUM-T interoperability, OSRVT downlink to ground or air forces, and the ability to communicate across multiple channels and bands.

COMMUNICATIONS RELAY

» Provides unobstructed ground-to-ground and pilot-to-ground voice/video communication in urban environment or challenging terrain.



ISR SERVICES

AeroVironment's ISR services can provide everything from supply chain management, mission planning and onsite operational support to maintenance and repairs, ensuring uninterrupted asset operations and mission success. Our highly trained staff of over 100 Field Service Representatives (FSRs) are ready to mobilize quickly, 24-hours a day, to support customer mission requirements in any theater of operation.

- » Fully Equipped & Staffed Turn-Key Solutions for COCO & GOCO operations
- » OEM-SME remote pilot certified operators, instructors & maintainers
- » Design & Development of mission-tailored TTPs & SOPs
- » Development of on-site sustainment operations & delivery
- » Total Logistical & Operational Support mission planning, coordination & monitoring
- » Maintenance & Repair Services onsite to ensure mission sustainment & success



TRAINING AND FIELD SERVICES

FORT SOFTWARE: Fort is an iPad-based tool that tracks checklist compliance and reports system readiness.

STUDENT TRAINING

- » 8 maintainers
- » 8 air vehicle operators
- » 10 weeks of flight & maintenance training

FIELD SERVICE

- » Factory support program
- » Ongoing global logistics support
- » Component replacement tracking with FORT
- » Onsite FSR
- » Currency training support

NETWORK × CONNECTIVITY

+ NETWORK CONNECTIVITY

Reliable, real-time, secure communications are fundamental for accurate situational awareness and rapid response. Accordingly, we developed Crystals™, our next-generation ground control solution, in conjunction with our broadband digital network module, Digital Data Link™, for enhanced command and control in a network-centric battlefield.

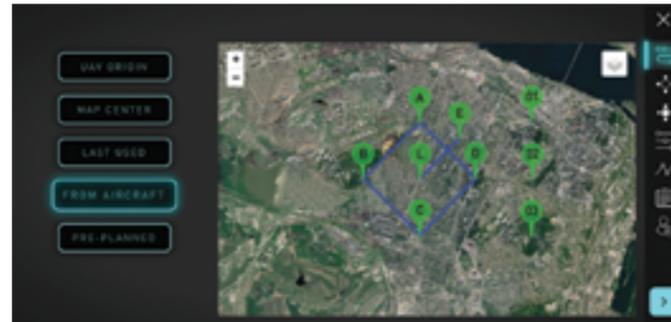
Featuring robust data encryption across multiple frequency bands, this IP-based module is designed for maximum flexibility and interoperability between small airborne systems and ground systems with limited power requirements. It ensures that bandwidth is available to maximize the number of systems that can operate in a given area.

CRYSalIS™ GCS



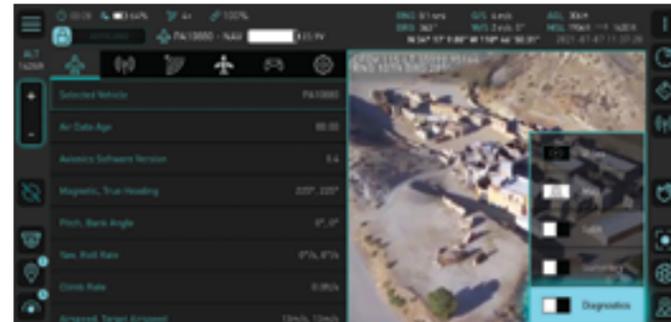
AeroVironment's next-generation ground control solution streamlines command and control of compatible UAS and their payloads through an intuitive user experience. Built around three core elements – software, hardware and antennas – CRYSalIS™ offers complete interchangeability, either as a network of 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.

CRYSalIS™ CONTROL



MISSION PLANNING WIZARD

Takes operators through a step-by-step process to set flight operations and mission waypoints, identify any DTED conflicts, or quickly re-fly missions previously saved to the UAS or GCS.



MISSION FLIGHT DIAGNOSTICS AND CAMERA MODES

View aircraft, GPS, telemetry, radio, GCS and mission plan diagnostics at any time with dynamic retasking. Select from multiple view options including Real-time Video, Map, Split Screen and Summary mode to customize your viewing experience.



BUILT-IN PRE-FLIGHT CHECKLIST

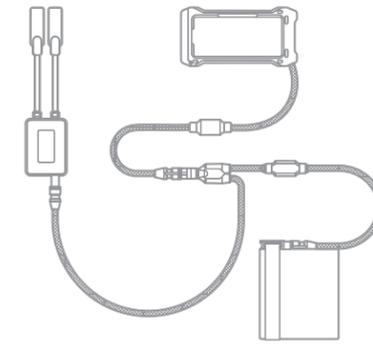
Comprehensive checklist covering avionics and navigation systems, radio systems, mission waypoints, aircraft and payload control and aircraft instrumentation reducing the time from set-up to deployment.



PAYLOAD CONTROL

Quickly access multiple camera and payload status and control options with zoom capability.

CRYSalIS™ RVT

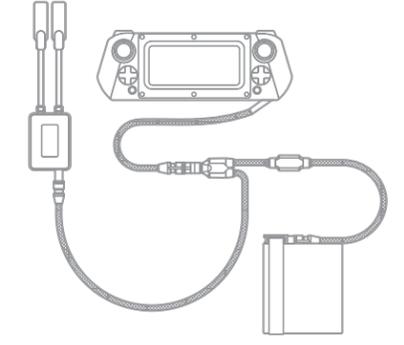


- PORTABILITY**
Wearable
- SETUP TIME**
5 min
- LINK RANGE**
5 km
- WEIGHT**
System: 3.3 lb (1.5 kg)

USE CASE

Single operator (wearable), situational awareness, battlefield coordination and support to large and/or small teams; passive downlink video viewing and UAS telemetry data.

CRYSalIS™ ULTRALIGHT GCS

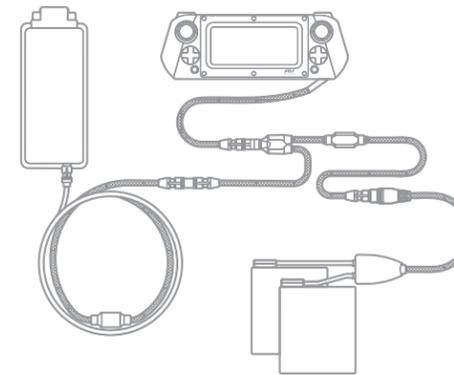


- PORTABILITY**
Wearable
- SETUP TIME**
5 min
- LINK RANGE**
5 km
- WEIGHT**
System: 4.7 lb (2.1 kg)

USE CASE

Single operator (wearable); ideal for on-the-move and mobile ISR operations; virtual touchscreen or tactile joystick control of UAS and payloads.

CRYSalIS™ TACTICAL GCS

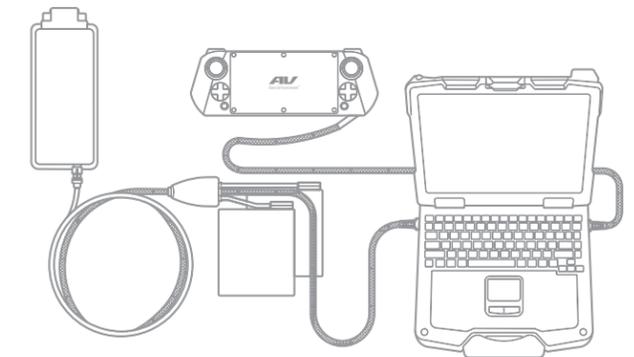


- PORTABILITY**
Backpackable
- SETUP TIME**
10 min
- LINK RANGE**
20 km
- WEIGHT**
System: 8.6 lb (3.9 kg)

USE CASE

Single operator deployment and launch, full control of UAS and payloads through virtual or tactile joysticks; backpackable, lightweight and rugged for use in any environment with an operational range up to 20 km.

CRYSalIS™ COMMAND GCS



- PORTABILITY**
Man-packable
- SETUP TIME**
15 min
- LINK RANGE**
20 km
- WEIGHT**
System: 14.3 lb (6.49 kg)

USE CASE

Single or dual operator deployment; all-in-one modular and flexible ground control system and payloads through tactile joysticks; ideal for command-level operations; semi-fixed positions.

DDL™ NETWORK ANTENNAS

AeroVironment's Digital Data Link™ (DDL™) is a small, lightweight, broadband digital network module enabling enhanced command and control of SUAS. DDL is IP-based, allowing maximum flexibility and interoperability between small airborne and ground systems with limited power and bandwidth to maximize the number of systems that can operate in a given area. DDL is compatible with AeroVironment's network connectivity solutions and antennas, providing command and control ranges that extend from the wearable, short-range pDDL™ (5 km) to the Long Range Tracking Antenna (60 km).

| | |
|---|--|
| <p>DDL™ FREQUENCIES</p>  <p>M1/2/5 OR M3/4/6</p> | <p>COMPATIBLE UAS</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>PUMA™ LE</p> </div> <div style="text-align: center;">  <p>PUMA™ 3 AE</p> </div> <div style="text-align: center;">  <p>RAVEN®</p> </div> <div style="text-align: center;">  <p>WASP® AE</p> </div> </div> |
|---|--|

LONG RANGE TRACKING ANTENNA



PORTABILITY // MAN-PORTABLE

RANGE // 60 km

EXTENDED RANGE ANTENNA



PORTABILITY // MAN-PACKABLE

RANGE // 40 km

STANDARD PATCH ANTENNA



PORTABILITY // BACKPACKABLE

RANGE // 20 km

STANDARD OMNI ANTENNA



PORTABILITY // BACKPACKABLE

RANGE // 10 km

pDDL™ ANTENNA



PORTABILITY // POCKETABLE

RANGE // 5 km



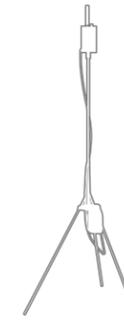
pDDL™ ANTENNA



DIMENSIONS
4 in x 2.25 in x 0.75 in
(10.2 cm x 5.7 cm x 1.9 cm)

WEIGHT
7.1 oz (201g)

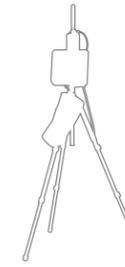
STANDARD RANGE ANTENNA



DIMENSIONS
Height: 6.5 ft (2 m)
Base Diameter: 3 ft (0.9 m)

WEIGHT
3 lb (1.3 kg)

ERA EXTENDED RANGE ANTENNA



DIMENSIONS
Height: 4.25-7 ft (1.3-2.2 m)
Base Diameter: 3.75-8.2 ft (1.1-2.5 m)

WEIGHT
10.8 lb (4.9 kg)

Note: excludes the GCS RF Head, hub and system battery

LRTA LONG RANGE TRACKING ANTENNA



DIMENSIONS
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)

WEIGHT
M1/2/5: 304 lb (138 kg)
M3/4/6: 300 lb (136 kg)

| | Up to 5 km | Up to 20 km | Up to 40 km | Up to 60 km |
|------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---|
| LINK RANGE | Up to 5 km | Up to 20 km | Up to 40 km | Up to 60 km |
| OPERATING BANDS | M1/2/5 or M3/4/6 | M1/2/5 or M3/4/6 | M1/2/5 or M3/4/6 | M1/2/5 or M3/4/6 |
| RX SENSITIVITY | -98 dBm @ 2 Mbps -93 dBm @ 6 Mbps | -98 dBm @ 2 Mbps -93 dBm @ 6 Mbps | -98 dBm @ 2 Mbps -93 dBm @ 6 Mbps | -98 dBm @ 2 Mbps -93 dBm @ 6 Mbps |
| POWER CONSUMPTION | 9 W | 20 W | 20 W (pass through, not additional) | 275 W (nom., heater off) 460 W (max., heater on) |
| OPERATING VOLTAGE | 5.5-16 V | 5.5-16 V | 5.5-16 V | 90-250 V ac, 47-65 Hz |
| DATA RATE | 4.5 Mbps | 4.5 Mbps | 4.5 Mbps | 4.5 Mbps |
| SUPPORTED COMPRESSION | MPEG2 or H264 SD |
| INTERFACES | USB | Ethernet/RS-232/RS-485 | Ethernet/RS-232/RS-485 | Ethernet/RS-232/RS-485 |
| ENCRYPTION | AES-128/AES-256 | AES-128/AES-256 | AES-128/AES-256 | AES-128/AES-256 |

UNMANNED GROUND VEHICLES



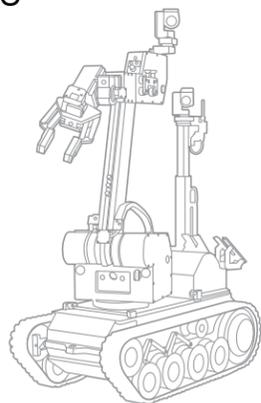
+ UGV

Our family of Telerob unmanned ground vehicles (UGV) share the same purpose as our unmanned aircraft and tactical missile systems: to keep operators out of harm's way.

Our UGVs have proven themselves in a variety of dangerous ground applications, including the localization and mitigation of threats due to explosive ordnance disposal (EOD), hazardous materials handling (HAZMAT), chemical, biological, radiological and nuclear (CBRN) threat assessments, and special weapons and tactics (SWAT) team operations.

With their advanced, specialized, precision manipulators, autonomous functionality and intuitive operation, our rugged, all-terrain UGVs accommodate a high degree of mission flexibility. That's why they have been adopted in 45 countries for homeland security, emergency response and defense purposes.

tEODor™ EVO



DIMENSIONS
54 in x 27 in x 44 in
(1370 mm x 685 mm x 1130 mm)

WEIGHT
844 lb (383 kg)

LIFTING CAPACITY
220 lb (100 kg)

GRIPPER WIDTH
12 in (300 mm)

MANIPULATOR
6-axis manipulator with linear axis

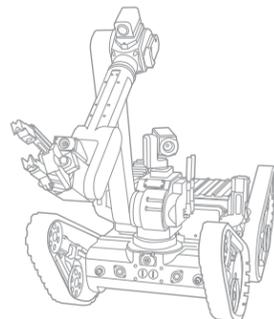
CLIMB STAIRS & SLOPES
45°

| | |
|-------------------------------|--|
| TOTAL PAYLOAD CAPACITY | 771 lb (350 kg) |
| SPEED | 1.8 mph (3 km/h) |
| DRIVE MECHANISM | Dual track—dependent high-torque motors |
| FUNCTION-ALITY | Upward Reach with Vertical Gripper: 113 in (2860 mm) Upward Reach with Horizontal Gripper: 95 in (2410 mm) Forward Reach: 73 in (1860 mm) Downward Reach: 50 in (1260 mm) |
| GCS | Robo Command |

KEY FEATURES

- » Laser rangefinder, video input & data interface integrated into gripper
- » Universal interfaces—multiple firing system connection options
- » Expansive payload bay eliminates round-trip load-outs

telemax™ EVO PLUS



DIMENSIONS
34 in x 27 in x 29 in
(870 mm x 680 mm x 740 mm)

WEIGHT
249 lb (113 kg)

LIFTING CAPACITY
176 lb (80 kg)

GRIPPER WIDTH
8 in (200 mm)

MISSION DURATION
Up to 12 hr

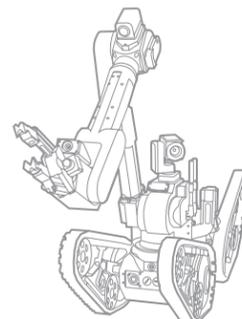
CLIMB STAIRS & SLOPES
45°

| | |
|-------------------------------|--|
| TOTAL PAYLOAD CAPACITY | 154 lb (70 kg) |
| SPEED | 3.1 mph (5 km/h) |
| DRIVE MECHANISM | 4-track running gear with individually adjustable flippers |
| FUNCTION-ALITY | Obstacle Height: 16 in (400 mm) Gap Width: 20 in (500 mm) |
| GCS | Robo Command |

KEY FEATURES

- » Heavy lift capable precision 6-axis manipulator
- » Tool Center Point Control provides maximum movement flexibility of the manipulator
- » Double payload bay provides space for additional batteries & sensors

telemax™ EVO HYBRID



DIMENSIONS
32 in x 16 in x 30 in
(815 mm x 400 mm x 770 mm)

WEIGHT
Max. 176 lb (80 kg)

LIFTING CAPACITY
82 lb (37 kg)

GRIPPER WIDTH
8 in (200 mm)

MISSION DURATION
Up to 10 hr

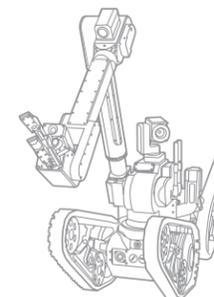
CLIMB STAIRS & SLOPES
45°

| | |
|-------------------------------|---|
| TOTAL PAYLOAD CAPACITY | 68 lb (31 kg) |
| SPEED | Max. 6.2 mph (10 km/h) |
| DRIVE MECHANISM | 4-track running gear with individually adjustable flippers; optional wheels |
| FUNCTION-ALITY | Obstacle Height: 20 in (500 mm) Gap Width: 24 in (600 mm) |
| GCS | Robo Command |

KEY FEATURES

- » Compact design suited for confined spaces, e.g., airplanes, underground trains & buses
- » Tool Center Point Control provides maximum movement flexibility of the manipulator
- » Pre-programmed manipulator & flipper motion sequences

telemax™ EVO PRO



DIMENSIONS
31 in x 16 in x 29 in
(775 mm x 400 mm x 750 mm)

WEIGHT
Max. 169 lb (77 kg)

LIFTING CAPACITY
44 lb (20 kg)

MANIPULATOR
7-axis with telescopic reach

MISSION DURATION
Up to 10 hr

CLIMB STAIRS & SLOPES
45°

| | |
|-------------------------------|--|
| TOTAL PAYLOAD CAPACITY | 77 lb (35 kg) |
| SPEED | Max. 6.2 mph (10 km/h) |
| DRIVE MECHANISM | 4-track running gear with individually adjustable flippers; optional wheel |
| FUNCTION-ALITY | Obstacle Height: 20 in (500 mm) Gap Width: 24 in (600 mm) Gripper Width: 4.7 in (120 mm) Reach Height: 150 in (2690 mm) |
| GCS | Robo Command |

KEY FEATURES

- » Telescopic joint allows for extended horizontal & vertical reach
- » Tool Center Point Control provides maximum movement flexibility of the manipulator
- » Pre-programmed manipulator & flipper motion sequences

MISSION VARIANTS



EOD
Explosive Ordnance Disposal



HAZMAT
Hazardous Materials



CBRNE
Chemical, Biological, Radiological, Nuclear & Explosives



SWAT
High Risk Law Enforcement Operations

INTERCHANGEABLE ACCESSORIES



Optics/Visual Augmentation



UGV Communications



Power Sources



Wheels/Tracks



Tooling & Hauling



Render Safe Options



FIELD OPERATIONS AND CUSTOMER SUPPORT

SUPPORT SERVICES

FIELD OPERATION SERVICES

» AeroVironment provides world-class field operation services on a global scale. Our field operation services include fully-equipped and staffed turnkey solutions and outstanding OEM-certified operators, instructors and maintainers.

FIELD SERVICE REPRESENTATIVES

» Our Field Service Representatives (FSRs) provide on-site field service support and act as the liaison between customers and our engineering team. The FSRs are highly qualified to provide on-site flight standardization program development and training support package development.

PROGRAM MANAGEMENT AND SME SUPPORT

» We supply customer-focused program management and subject matter expert (SME) support. Our exceptionally skilled staff provides tailored mission planning and operational support, and we include engineering support from the original equipment manufacturer. We also offer on-site sustainment operations development and delivery.

SUSTAINMENT OPERATION

» We support our customers with sustainment operations, including professional inventory control and comprehensive logistical services. Our logistical support includes extensive planning, coordination and monitoring to successfully plan and maintain operations.

AIRWORTHINESS

» AeroVironment's airworthiness organization monitors and evaluates airworthiness regulation initiatives in key markets and regions across the globe to ensure our products conform to our customers' airworthiness certification needs.

TRAINING

» We specialize in student-centered learning using state-of-the-art, interactive 3D digital training media that aids in the retention of information and promotes student participation. Courses include simulator-focused mission scenarios providing a real world digital experience, hands-on practical exercises, mission planning and live flight field operations. We offer all levels of operator training from basic to advanced courses in a safe and controlled environment. Our distinctive training program is recognized both domestically and internationally.

QUALITY

» AeroVironment's ISO-9001:2008 production and service facility ensures the highest level product and support quality. The company's unmatched experience and technology roadmap combine to deliver an outstanding customer experience in situations where reliability and effectiveness can make the difference between success and failure.