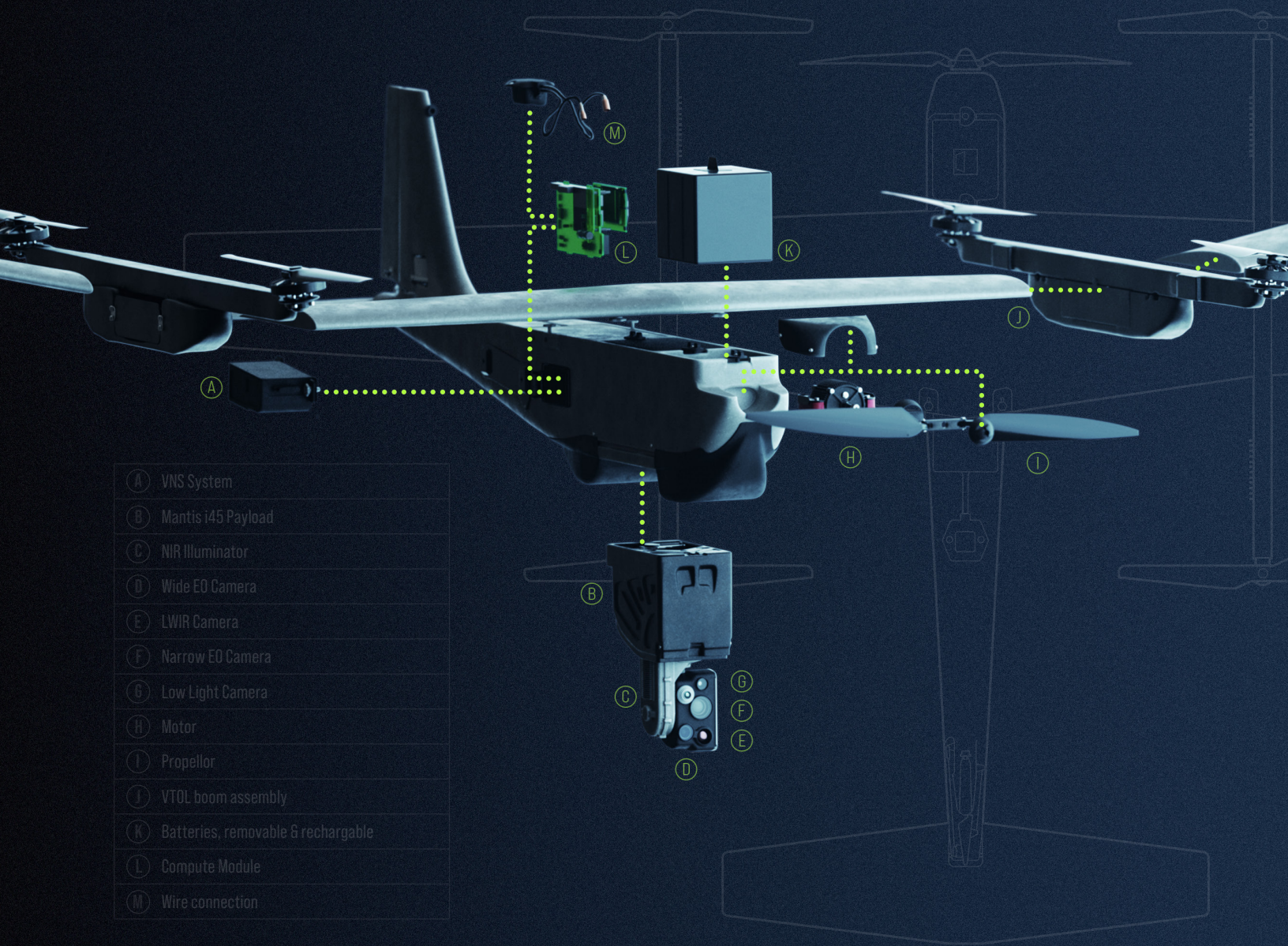


# PUMA™ 3 AE

PACKING MORE CAPABILITY

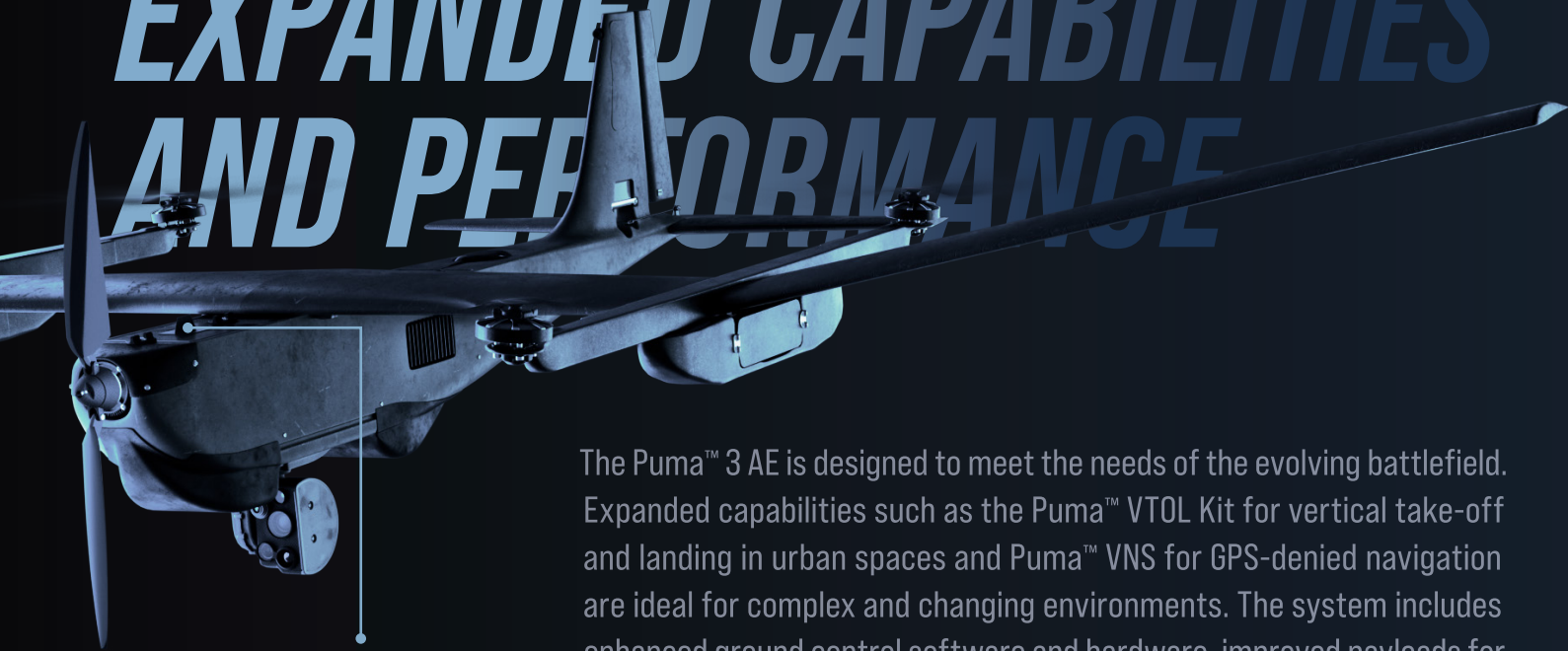


- A VNS System
- B Mantis i45 Payload
- C NIR Illuminator
- D Wide EO Camera
- E LWIR Camera
- F Narrow EO Camera
- G Low Light Camera
- H Motor
- I Propellor
- J VTOL boom assembly
- K Batteries, removable & rechargeable
- L Compute Module
- M Wire connection

Meeting Needs of Evolving Battlefields  
*Small Uncrewed Aircraft Systems (SUAS)*

**AV**  
AeroVironment™

# EXPANDED CAPABILITIES AND PERFORMANCE



2.5 hr with Puma™ Smart Battery  
3 hr with PS2500 Battery

The Puma™ 3 AE is designed to meet the needs of the evolving battlefield. Expanded capabilities such as the Puma™ VTOL Kit for vertical take-off and landing in urban spaces and Puma™ VNS for GPS-denied navigation are ideal for complex and changing environments. The system includes enhanced ground control software and hardware, improved payloads for superior day and night operations, increased communications resilience, and an upgraded motor offering more power and maneuverability.

## EXTENDED FLIGHT ENDURANCE

### PS2500 BATTERY

The optional PS2500 Battery extends Puma 3 AE flight time up to 3 hours. This increased endurance provides operators with greater time on station, maximizing multi-mission capabilities across land and maritime environments.

## LAUNCH ANYWHERE, ANYTIME

### PUMA™ VTOL KIT

Designed for plug-and-play integration with Puma 2 AE and Puma 3 AE systems, the Puma VTOL (vertical takeoff and landing) Kit expands operational capabilities as no runway or large space is required for launch and recovery. This kit allows operators to quickly transition between fixed-wing and VTOL configurations to suit varying mission needs with a single aircraft. Available as an add-on or retrofit kit for Puma 2 AE and Puma 3 AE systems.

#### KEY FEATURES

- » Automated one-button launch & recovery in confined environments
- » Fixed-wing to VTOL in minutes
- » Maintains Puma™ all-weather rating (excludes water landing)



## GROUND CONTROL REDEFINED

### TOMAHAWK® KINESIS



Tomahawk KINESIS Grip 20 Controller

Puma now features a completely refreshed ground control experience and integration with Tomahawk Robotics' Grip controller and Kinesis software ecosystem. Tomahawk Robotics, an AeroVironment product line, provides operators with a new core GCS software architecture and tactical hardware. With Tomahawk's KxM, a GCS option, warfighters can use an intuitive, common, and simultaneous control of their uncrewed systems from one "pane of glass," and with the addition of a tactical network, critical intel [video and location information] from the uncrewed vehicle is distributed to teammates over TAK/ATAK.



## ASSURED POSITION AND TIMING

### NAVIGATE CONTESTED AREAS

#### PUMA™ VNS

Designed to adapt to a continuously changing battlefield, the Puma Visual Navigation System (VNS) enables GPS-denied navigation across GPS-contested environments. The system performs Visual Inertial Odometry (VIO) through a suite of integrated sensors and an onboard compute module to determine the precise location of the aircraft during flight. Available as an add-on option for new Puma 3 AE system orders and as a retrofit kit for fielded Puma 2 AE and Puma 3 AE aircraft.

#### KEY FEATURES

- » Zero pilot input required for seamless mission continuity through GPS-contested environments
- » Two-piece low-SWAP retrofit kit on existing & new Puma AE systems
- » Enables integration of future autonomy capabilities

### IMPROVED POSITIONING, TIMING

#### INS/GNSS RECEIVER

AeroVironment's new INS / GNSS Receiver provides improved Assured Position and Timing (APNT) with simultaneous tracking of multiple constellations to maintain accurate positioning and timing information under adverse conditions. Ideal for fleet updates, this receiver is plug-and-play ready and backward compatible with Puma 2 AE, Puma 3 AE, and Puma LE systems, retaining their all-environment capability. No additional hardware or software updates required.

#### KEY FEATURES

- » Receives L1 and L2 frequency bands while tracking multiple constellations simultaneously
- » Improves attitude and positioning estimation
- » Enhances jamming or spoofing signal rejection

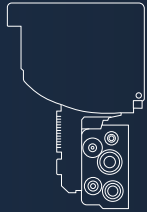
#### SUPPORT FOR MULTIPLE CONSTELLATIONS

The INS / GNSS Receiver acquires signals from multiple constellations: GPS L1, L2 / GLONAS L1, L2 / Galileo E1, E5b / BeiDou B1, B2, / QZSS L1, L2



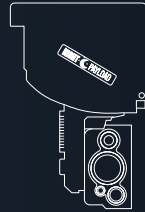


The field-swappable Mantis™ line of compact payloads provide application flexibility and deliver superior imagery in any operational environment—day or night. Compatible with Puma 2 AE or Puma 3 AE aircraft.



### MANTIS™ i45

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



### MANTIS™ i45 N

- » Max visibility during night & low-light ISR
- » Wide & narrow LWIR camera imagers
- » 5 MP monochrome low-light camera
- » 7.4x stronger laser illuminator



High-resolution, low-light



Laser Illuminator at 250 m slant range



Electro/optical extreme wide-view



Downlink imagery from low-light camera

## INCREASED POWER & MANEUVERABILITY NEXT-GENERATION MOTOR



The next-generation Puma motor offers more power than ever before for increased climb rate and improved maneuverability.

- » Maximizes system performance

- » Maintains industry-leading reliability

## SPECIFICATIONS

### PUMA VTOL KIT

<b>TOTAL PAYLOAD CAPACITY</b>	Mantis i45 or Mantis i45 N (2 lb) Up to 2 lb of additional payload
<b>ENDURANCE</b>	1.5 hr w/PS2500 battery, 1.2 hr w/Puma Smart Battery
<b>OPERATING ALTITUDE</b>	Launch & recovery 7K ft Density Altitude (DA) Max. flight altitude 10K ft DA

### PUMA VNS

<b>ENDURANCE</b>	2 hr (Puma 3 AE + VNS)
<b>INSTALLATION</b>	Initial factory or depot-level retrofit installation of external mounting pad then plug & play field installation & removal
<b>WEATHERIZATION</b>	All-weather (excluding water landing)

### MANTIS i45

<b>ELECTRO/OPTICAL (EO)</b>	Resolution: Dual 15 MP color HFOV: 56° to 1.2°, Zoom: 6 Levels; 50x
<b>THERMAL IR</b>	Resolution: 640x512 px HFOV: 21.4° to 10.8°, Zoom: 3 Levels; 2x
<b>LOW LIGHT (LL)</b>	Resolution: 1.2 MP HFOV: 10.7° to 4.7°, Zoom: 3 Levels; 4.6x
<b>LASER ILLUMINATOR</b>	Beam power: 500 mW Wavelength: 860 nm, Class: 4 laser

### MANTIS i45 N

<b>THERMAL IR</b>	Resolution: Dual LWIR 640x512 px HFOV: 40° to 5.3°, Zoom: 6 Levels; 7.6x
<b>LOW LIGHT (LL)</b>	Resolution: 5 MP HFOV: 17.8° to 2.3°, Zoom: 6 Levels; 7.6x
<b>LASER ILLUMINATOR</b>	Beam power: 450 mW Wavelength: 860 nm, Class: 4 laser