



ARK™ AUTONOMY RETROFIT KIT

AeroVironment's Autonomy Retrofit Kit (ARK) is a quick-connect payload introducing a suite of new mission capabilities for currently fielded Group 1+ PUMA™ SUAS. Operators can task single UAVs or teams with autonomous missions, distributing intelligence and oversight to dismounted units using a mesh network and ATAK. ARK also enables networked remote tasking for powerful control of aircraft and sensors between primary operators and command personnel - wherever they are located.

This payload brings AV's accelerated autonomy to fielded assets and future uncrewed platforms, providing critical advantages to warfighters on complex battlefields.



Smarter ISR with Reduced Cognitive Load



DISTINCTIONS



» COMPATIBILITY
Puma™ 3 AE & Puma™ LE



» INTEGRATION
ATAK and MANET Radio

SPECIFICATIONS

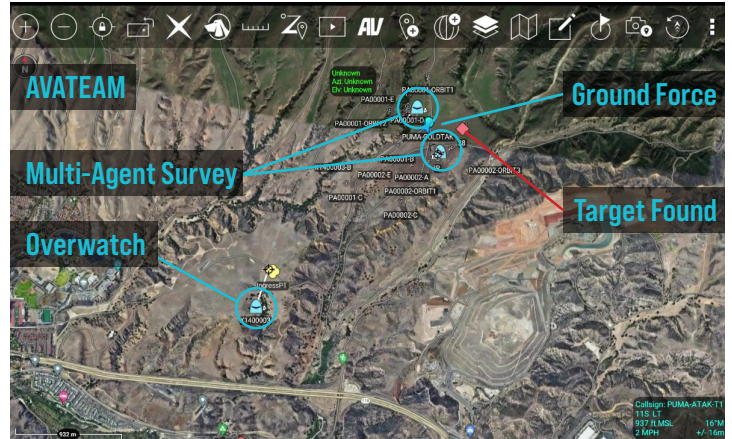
	BASE CONFIGURATION	MPU5 CONFIGURATION
SWaP		
WEIGHT	536 g (1.18 lb)	1,375 g (3.03 lb)
POWER	20 W max continuous	60 W max continuous
INPUT VOLTAGE	6 to 50 VDC	8 to 28 VDC
OUTER DIMS	180 mm x 110 mm x 70 mm (7.0 in x 4.3 in x 2.7 in) with heat sink	

SINGLE- OR MULTI-AGENT CAPABILITIES

MULTI-REGION SEARCH	Terrain-aware sensor coverage of multiple search regions using onboard AI target detection
AREA SURVEY	Create 3D area map with EO or IR imagery
OVERWATCH	Persistent observation of desired area for target detection
TRACK & FOLLOW	Track and follow targets, including evasive targets
ISTAR WITH STRATEGIC COMMS	Automatically configure UAV radio to comply with geo-tagged EMCON rules while conducting autonomous ISTAR missions
TRIPWIRE	Event or condition-based responses to real-time perception
CROSS-CUE	Accept and/or send target information from/to other assets
COMPOSITE MISSIONS	Combine above capabilities for composite multi-stage missions

KEY FEATURES

- » AVACORE™ autonomy software provides an open framework for rapid development and adoption of new autonomy behaviors
- » SPOTR-Edge™ computer vision software for onboard detection, classification, localization, and tracking of people, vehicles, and ships, day or night
- » NVIDIA compute capabilities in an IP-67 for All Environment operations in mission-relevant temperatures



Through AVACORE, ATAK with SPOTR-Edge™ provides multi-agent collaborative autonomy



ATAK plug-in provides mission data and command interface



Modular to support mission specific or third-party AI models