

Product Catalog

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

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UNITS DELIVERED WORLDWIDE

55 ALLIED NATIONS USE OUR LMS, UAS, UGV & SUPPORT SERVICES

WHO WE ARE

At AV, we are relentless in our efforts to deploy technology in ways that push beyond the realm of what's possible. With each innovation, we strive 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

ACCUMULATED UAS FLIGHT HOURS (EST)

000000000000000.02341 7593-3923-2305-1103-4051 GLK-OFF ///

JUMP[°]20-X

JUMP[°]20

P550

Switchblade[®] 600

Switchblade 300 BLOCK 20

Blackwing

VAPOR° **55** мх

T-20[™]





Tomahawk[™] Ground Control Stations

Uncrewed Ground Vehicles



LoiteringMunitionSystems

LMS

AV's Switchblade[®] loitering munition systems (LMS) close the gap between observation and action, giving troops the ability to identify threats and precisely deliver a lethal payload with minimal collateral effects. Their small size and low acoustic, visual and thermal signatures make Switchblade systems difficult to detect or track, even at close range.

S ar Weat

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

Switchblade 600 LOITERING

LAUNCHER DIMENSIONS Length: 60 in (1.5 m) Diameter: 7.5 in (19.2 cm)

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RANGE

WEIGHT Munition: 33 lb (15 kg) AUR: 65 lb (29.5 kg)

>>>> RANGE		
37.2 mi (60+ km) 56+ mi (90+km) w/ Forward Pass	FIRE Control System	Tablet-based FCU with tap-to-target guidance & built-in mission planner & trainer
40+ min	TARGETING Optics	2-axis, 4-sensor gimbal (Dual EO/IR) integrated sensor suite
Loiter: 70 mph (113 km/h) Sprint: 115 mph (185 km/h)	OPERATING Altitude	Below 650 ft (198 m) AGL; ceiling >15,000 ft (4572 m) MSL
Seffects on target Anti-armor & anti-personnel effects	LAUNCH Method	Self-contained launcher for ground, air & maritime
	LETHALITY	Precision strike with anti-armor warhead

Switchblade 300 BLOCK 20 LOITERING MUNITION



Munition: 3.69 lb (1.68 kg) AUR: 7.2 lb (3.27 kg)

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tap-to-target guidance & built-in mission planner & trainer Enhanced EO/IR with forward to left hand panning camera suite Flight <500 ft (152.4 m) **OPERATING** AGL; supports ALTITUDE operation >15,000 ft (4572 m) ASL Self-contained launcher for ground, air & maritime: configurable multipack capability Anti-personnel effects; **LETHALITY** precision strike with low collateral effects

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

KEY FEATURES

- » Patented wave-off feature & recommit capability
- ≫ Enhanced frequency hopping Digital Data Link[™] covering more frequencies & supporting AES-256-bit encryption
- Intuitive touch screen tablet Fire Control Unit (FCU)
- » <10 minute system setup & launch

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





KEY FEATURES

- » Patented wave-off feature & recommit capability
- » Enhanced frequency hopping Digital Data Link™ covering more frequencies & supporting AES-256-bit encryption
- >>> Intuitive touch screen tablet Fire Control Unit (FCU)
- » Advanced Munition-multiple commit angles, user-selectable point of detonation, left hand commit with continuous Positive Identification (PID)





MPL MULTIPACK



DIMENSIONS 36 in D x 30 in W x 36 in H WEIGHT ~130 lb empty ~160 lb loaded

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

KEY FEATURES

- Compatible with Switchblade[®] 300 & Blackwing™
- Rapid Reload—<30 seconds per round
- Low observable remote ops
- Tactical vehicle/MRAP

Small UAS

SUAS

Over the last decade, members of AV's growing family of small uncrewed aircraft systems (SUAS) – P550[™], Puma[™] LE, Puma[™] 3 AE, Raven[®] and VAPOR[®] Helicopter UAS – have been adopted by more than 55 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, our SUAS deliver real-time color and/or infrared imagery to ground control and remote viewing stations. With their enhanced communications and interoperability, they are critical for multi-domain operations.

P550[™] ALL-ELECTRIC



Up to 60 km with DDL range depending on GCS Radio



ENDURANCE



PAYLOAD CAPACITY Up to 15 lb (6.8 kg)

LAUNCH & VTOL RECOVERY

SPEED

GCS

OPERATING (4267 m)

ALTITUDE Max. Launch DA 10K ft

GCS

(3000 m)

15-27 m/s (30-52 kts)

Max. Flight DA 14K ft

Vigilant Spirit GCS with

Quattro STANAG 4586

(Baseline) & Kinesis





WEIGHT Up to 55 lb (24.9 kg) MGTOW

KEY FEATURES -

- » Advanced mission system enabling secure ATR/ Autonomous missions
- » mDDL-FH // Advanced Day-Night VIO Navigation for A2/ AD Ops
- » Modular architecture supporting 3rd party payloads, radios, and control options

SUAS WEIGHT DIMENSIONS 23.8 lb (10.8 kg) with Mantis™ i45/i45 N Wingspan: 15 ft (4.6 m) Length: 7.3 ft (2.2 m) **Solution** LINK RANGE Cruise: 29 mnh 12.4 mi (20 km) standard (47 km/h) 25 kts SPEED I 24.8 mi (40 km) with ERA Dash: 47 mph 37.3 mi (60 km) with LRTA (76 km/h) 41 kts 300-3000 ft (91-914 m) **OPERATING** AGL, typical **ENDURANCE** ALTITUDE Max, launch 10K ft 6.5 hr with Mantis i45/ i45 N (3.048 m) DA Tomahawk or Legacy GCS

» 6.5 hours of ISR capability & full-motion video in all environments

>> Dedicated secondary payload bay with power supply & Ethernet

» Support two flights with 2-case mission packout



KEY FEATURES

GCS Hand-launched. LAUNCH bungee or vehicle METHOD launch Autonomous or manual RECOVERY skid landing; land METHOD or sea

PumaTM 3AE ALL ENVIRONMENT

WEIGHT

15.6 lb (7.1 kg)

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

Solution Range 12.4 mi (20 km) standard L 24.8 mi (40 km) with ERA

37.3 mi (60 km) with LRTA **Sendurance** 2.5 hr with Puma[™] Smart Battery* 3 hr with PS2500 Battery*

» TOTAL PAYLOAD CAPACITY 4 lb (1.8 kg); 6.5 lb (2.9 kg) with Heavy Lift Software *with the Mantis i45

KEY FEATURES

- *Increased payload capacity with optional underwing transit bay for* secondary payloads
- » Single-case mission packout provides two full flights





Raven[®] B_{R0-11B}



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

WEIGHT 4.8 lb (2.2 kg)



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	Tomahawk GCS
LAUNCH METHOD	Hand-launched
RECOVERY METHOD	Autonomous or manual deep-stall

Puma[™] KITS AND ACCESSORIES

COMPATIBLE WITH PUMA PRODUCT LINE

Puma[™] Bungee LAUNGEE SYSTEM

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

COMPATIBLE WITH PUMA 2 AE AND PUMA 3 AE

Puma[™]VTOL Kit

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

COMPATIBLE WITH PUMA 3 AE ONLY

- » 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

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

*Puma VTOL kit and Puma VNS cannot be installed and operated at the same time.

Mantis[™] IMAGING PAYLOAD SENSORS

COMPATIBLE WITH PUMA[™] PRODUCT LINE

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

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- 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





>>> ENDURANCE

75+ min

VAPOR[®] 55 MX ALL-ELECTRIC HELICOPTER UAS

GTOW WEIGHT

with less endurance

GROUND

SPEED

LIMIT

PEAK*

55 lb (24.9 kg) for commercial use

68 lb (30.8 kg) for defense missions

OPERATING 0-12,000 ft (3.657 m)

MAX WIND Sustained: 34.5 mph

DATA LINKS Persistent Systems

(30 kts)

900 MHz, 2.4 GHz

or 5.89 GHz (video).

MPU5 (Standard),

options Silvus, DTC

ALTITUDE* MSL (density)

33 mph (15 m/s)

DIMENSIONS

Aircraft: 6 ft x 2.2 ft x 2.1 ft (1.8 m x 0.67 m x 0.64 m) Rotor Diameter: 7.5 ft (2.29 m)



» RANGE Up to 19.8 mi (32 km)

ENDURANCE

Cruise: 75 min, Hover: 60 min [2-batteries]* Cruise: 105 min, Hover: 80 min [3-batteries]*

>>> USABLE PAYLOAD*

Up to 10 lb (4.5 kg) @ 55 lb Up to 24 lb (10.9 kg) @ 68 lb

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

KEY FEATURES -

- Payload Flexibility-payload modules with rail design enables quick & easy payload integration for increased mission flexibility
- Sleek, modular airframe design for easy assembly & disassembly
- » Telescoping tail & folding landing gear for greater portability



**With HD-25 - up to a 15-18 lbs droppable payload





Medium UAS

MUAS

With a 185-kilometer operating range, AV's fixed-wing medium uncrewed aircraft systems (MUAS)– JUMP[®] 20-X, JUMP[®] 20 and T-20[™] —are excellent choices for exacting reconnaissance, surveillance and target acquisition applications, due to their ability to carry some of the most powerful and versatile imaging sensors available.

JUMP 20-X is an advanced, Group 3 VTOL UAS designed for unmatched flexibility and precision to meet the demands of evolving missions. Featuring a multi-fuel, multi-payload design, it excels across all domains. Its modular, open-system approach (MOSA) supports payload-agnostic, radio-agnostic, and STANAG-compliant communications ensuring seamless integration and adaptability.

JUMP 20-X HEAVY-FUEL VTOL FIXED-WING





PAYLOAD CAPACITY Up to 30 lb (13.6 kg)



KEY FEATURES

- » Multi-fuel, multi-INT/multi-domain in a single aircraft
- » Engineered for extreme maritime conditions
- \gg Fully autonomous precision landing
- >> Modularity supporting 3rd party payloads, radios & control options
- >>> Beyond-line-of-site (BLOS)—multiple SATCOM options

MODULAR VERSATILE MULTI-PAYLOADS



JUMP[®] 20 VTOL FIXED-WING



WEIGHT

Fuel & Payload

OPERATING

ALTITUDE

LAUNCH

METHOD

RECOVERY

METHOD

GCS

215 lb (97.5 kg) MGTOW*

17,000 ft DA

Common GCS with

No launch system

or runway required;

vertical take-off &

landing (VTOL)

VTOL landing

*MGTOW - Maximum Gross Take-off Weight

T-20, JUMP 20-X

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

Common GCS with

No launch system

or runway required;

vertical take-off &

landing (VTOL)

VTOL landing

*MGTOW - Maximum Gross Take-off Weight

T-20, Jump 20

GCS

LAUNCH

METHOD

RECOVERY

METHOD



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
- Compatible with ACE[™] (Autonomous Control Engine) enabling fullyautonomous launch & landing from a moving vehicle or vessel



T-20TM RUNWAY INDEPENDENT



WEIGHT

Fuel & Payload

OPERATING

ALTITUDE

GCS

LAUNCH

225 lb (102 kg) MGTOW*

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

Ţ	» LINK RANGE 115 mi (185 km)

>>> ENDURANCE 24+ hr

PAYLOAD CAPACITY

Up to 50 lb (22.7 kg)

POWER SUPPLY

MOGAS. 190 cc EFI Engine

METHOD Cataput Chauterieu RECOVERY Autonomous or METHOD manual skid landing

20,000 ft DA

Common GCS with

JUMP 20, JUMP 20-X

Catapult-launched

*MGTOW - Maximum Gross Take-off 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



ISR SERVICES

AV's ISR services ensures uninterrupted operations and mission success through effective mission planning, on-site operational support, maintenance, repairs, and timely supply chain management. Our highly trained staff of Field Service Representatives (FSR) are ready to quickly mobilize to support customer mission requirements in any theater of operation.

- FULLY EQUIPPED & STAFFED TURNKEY 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 on-site to ensure mission sustainment & success





Autonomy & Perception

AV's Al-driven autonomy and perception technologies provide warfighters with critical advantages from reduced cognitive load to faster decisions across any domain and platform – accelerating autonomy on every level.

For currently fielded Group 1+ UAVs, the ARK[™] (Autonomy Retrofit Kit) is a quick-connect payload that introduces a new suite of AI-enabled mission capabilities and collaborative teaming operations, safely bringing critical intelligence and oversight to warfighters.

Pre-installed with AVACORE[™] and SPOTR-Edge[™] software, ARK enables rapid development of autonomy behaviors and delivers one of the most powerful computer vision platforms in defense.





ARK MAUTONOMY RETROFIT KIT

ARK is a quick-connect payload that brings AV's accelerated autonomy to fielded Group 1+ UAV assets and future uncrewed platforms, providing critical advantages to warfighters. Directly compatible with Puma[™] 3 AE and Puma[™] LE, ARK is designed as an open and modular system that also enables easy integration of Al-driven autonomy and computer vision on a wide range of uncrewed platforms.

The ARK system accelerates autonomy across uncrewed platforms, allowing defense forces to accomplish various tasks without constant operator oversight. ARK enhances mission efficiency while enabling faster responses to dynamic situations.

ENABLING TEAM COLLABORATION

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.





ATAK & MANET Radio

SINGLE- OR MULTI-AGENT CAPABILITIES

MULTI-REGION Search	Terrain-aware sensor coverage of multiple search regions using onboard Al 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



adopting new behaviors and algorithms for these missions.





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





AVACORE is AV's autonomy software that implements autonomous missions for uncrewed systems. It provides a framework for rapidly

PLUG-INS

- Plug-in interfaces allow alternative waypoint planning, target detection, team behaviors, and other algorithms
- Discovered at run-time to dynamically enhance behaviors

AVACORE

- Executes complex, adaptable missions for single agent or team autonomy
- Missions are defined by behavior trees that can be loaded at run-time, delivering maximum flexibility for users
- Common message definitions provide the canonical data model for adapting specialized platform hardware to mission

BRIDGE

Software interface adapters for each of the platform devices

PLATFORM

Uncrewed vehicle platform to be enhanced by AVACORE

- Autopilots
- Radios
- Sensors
- Drop Mechanisms
- Emitters/Designators
- User Interfaces
- Kinetic Payloads



Modular to support mission specific or third-party AI models



SPOTR-Edge[™] COMPUTER VISION SOFTWARE

SPOTR-Edge is a suite of computer vision and video analytics capabilities for embedded applications including robotic systems, edge devices, and other low size, weight and power (SWaP) environments. Core functions include object detection, classification, localization / geolocation, tracking, and reidentification – day or night. SPOTR-Edge consumes video and metadata sources in standard formats and outputs real-time data products to the onboard autonomy software and/or other downstream consumers.

Messaging APIs adhere to an interface control document (ICD) and streaming outputs include MISB-compliant KLV (key-lengthvalue) metadata for platform and target track data. The baseline software includes a library of operationally relevant object classes including persons and different types of vehicles and maritime vessels; additional models can be provided to meet mission-specific requirements and use cases. Target models are swappable in the field and online for maximum flexibility, and to allow for upgrades and extensibility.









ALEC AUTONOMY LEARNING AND EXPERIMENTATION CLASS

TRAIN TODAY. LEAD TOMORROW. As a leading innovator in mission autonomy, AV has resources to help your organization train, trial and integrate advanced AI solutions such as ARK[™] and AVACORE[™] into your fielded Puma[™] assets or other UAS.

As a leading innovator in this space, AV has developed resources to help your organization train, trial and integrate advanced AI solutions such as ARK and AVACORE into your uncrewed operations.

Train with our experts at our place or yours. AV offers an educational training and experimentation course designed to empower your organization with practical knowledge and skills required to integrate AI and unlock its unlimited potential.

4-DAYS AT AV

Visit AV! Hosted at our East or West Coast locations, this handsone experience pairs your team with multiple Pumas enhanced with ARK.

Fly Al-enabled single or multi-agent missions and more. Training developed for up-to 10 participants.

ACE MAUTONOMOUS CONTROL ENGINE

ACE (Autonomous Control Engine) is a vision-based navigation solution that enables fully-autonomous UAS operation, including push-button takeoff and landing from confined spaces, moving vehicles, and moving vessels. ACE enables centimeter-level precision landing in dynamic conditions without GPS.

KEY FEATURES

- » Suitable for UAS that needs to operate from moving vehicles and vessels on land or at sea
- » GPS-optional operation
- Standard open interfaces for compatibility with third-party and legacy systems
- » Enables mobile tethered UAS for long duration missions



This optical guidance system enables fully autonomous UAS launch and recovery onto a small passive optical marker, without GPS.



ACE system tracks a passive visual fiducial called a "tag" during takeoff and landing to achieve centimeter-level accuracy and real-time operation.

AVACORE SDK RAPIDLY BUILD AUTONOMY

LEVERAGE PRE-BUILT RESOURCES. The AVACORE SDK enables UxS development teams to build custom autonomy tasks and behaviors for robotic systems and teams. It allows for quick deployment of new AI-powered mission capabilities to multiple UxS platforms working the tactical edge. Each SDK release includes a dev container environment with all necessary dependencies and tools, ensuring efficient setup and project initiation.

JUMPSTART DEVELOPMENT. The AVACORE SDK includes apowerful starter project template for development, with instructions for building:

- \cdot Custom packages Modular software units within the stack
- Bridge applications Interface layer applications
- Plug-ins Custom mission- and platform-specific applications

TRIAL TODAY. AVACORE SDK is available at no cost to any government lab or AV customer for trial.



4-DAYS ON-SITE

AV brings the action to you? This immersive course held at your location, features multiple Pumas equipped with ARK.

Run a variety of Al-enabled missions under real-world scenarios relevant to your operation. Train up-to 12 participants.



Network Connectivity

AV's small UAS feature a completely refreshed ground control experience through integration with Tomahawk's Grip controller and Kinesis software ecosystem. All AV Group 1 and 2 offerings, including next-gen LMS products, will come standard with the Tomahawk GCS solution. Tomahawk[™], an AV product line, provides operators with a new core GCS software architecture and tactical hardware.

The Tomahawk GCS is radio-agnostic and seamlessly integrates with the broadband digital network module, Digital Data Link[™], or any IP-based MANET RF 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.

Tomahawk[™] Grip TA5



The Grip TA5 is Tomahawk's next-generation 8" tactical controller, built to enhance situational awareness and precision strike capabilities. Designed around the Samsung Tab Active 5 Tactical Edition, the Grip TA5 delivers seamless command cand control with enhanced processing power, security, and connectivity. Its ergonomic improvements and streamlined tablet installation reduce operator fatigue and setup time, ensuring mission success in dynamic environments.

KEY FEATURES

- » 8 in ruggedized controller optimized for precision strike & multidomain operations
- » Supports ISR and fire control functions
- » Seamless integration with the Samsung Tab Active5 Tactical Edition
- *» Enhanced software security & advanced networking capability*
- *»* Ergonomic design with optimized button placement for ease of use
- » Toolless USB-C access for fast, reliable connectivity
- Simplified tablet installation for rapid deployment

Tomahawk[™] Ground Control Stations



The Tomahawk GCS is an Al-enhanced, open-architecture common control system providing multi-domain, multi-robotic command-and-control capabilities. Tomahawk's Kinesis software and Kinesis SDKs enable rapid development, integration, and deployment of 3rd-party technology to the warfighter at the edge, and unlock an extensive ecosystem of protocols, comms, robotic platforms, and Al to the warfighter.

Tomahawk Hardware

A GRIP S20

Grip S20 is a rugged controller designed around the Samsung Galaxy S20 Tactical Edition smartphone. Grip S20 is military-hardened and provides an intuitive UI to simplify UxV control. Available with an optional hinged MOLLE chest mount.

B KxM

KxM is a 4-port hub and edge processor providing users with a ruggedized platform to ingest large amounts of data for high-speed, body-worn computation at the tactical edge, reducing cognitive load, and fusing raw intelligence data for real-time decision-making. KxM can host a federated TAK/ATAK server while performing Al-based video classification.

C MxC-MINI

MxC-Mini is a Nett Warrior-compliant data link that seamlessly integrates with the leading tactical UxVs. Available with multiple operating frequencies and radio modules including Wi-Fi - choose your uncrewed system, strap the corresponding MxC-Mini to your kit, and deploy the UxV with the knowledge that the link is secure and reliable across the tactical network.

D RAID

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RAID is a modular, all-in-one tactical GCS designed to provide advanced networking, edge processing, and Al-driven C2 capabilities. With hotswappable radios and batteries, it supports adaptable, multi-robotic control via the Grip and TA5 controllers. Built with a Modular Open Systems Approach (MOSA), RAID enables seamless integration of future technologies, ensuring a scalable, mission-ready solution. It consolidates the full functionality of the KxM and Kinesis ecosystem into a lightweight, snag-free backpack.

Kinesis Software

At the heart of the Tomahawk GCS is Kinesis, a powerful tactical software solution enabling multi-robotic command-and-control, tacticallyoptimized mission planning, TAK/ATAK integration to provide video rebroadcasting, COT messaging, and bi-directional syncing of POIs. Kinesis optimizes the vehicle pairing process, enables UxV formations and control, and a map engine that supports multiple sources via layers, DTED, and coordinates in both Lat Long and MGRS.

Tomahawk[™]Ultralight GCS



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

Tomahawk[™] Common Control GCS



USE CASE

Single operator (wearable); provides situational awareness, battlefield coordination and support to large and/or small teams; multi-domain and multi-robotic control

Configure to Order

Each Tomahawk GCS configuration supports various operational needs, from wearable ISR solutions to full-scale command deployments. The configure-to-order process allows operators to tailor their GCS setup by selecting compatible controllers, networking modules, radios, and power solutions to meet mission-specific requirements. For streamlined procurement and deployment, customers can work with Tomahawk representatives to configure their ideal GCS package, ensuring seamless integration with existing systems and maximizing operational effectiveness in multi-robotic, multi-domain environments.

Tomahawk [™] Tactical GCS
SETUP TIME Backpackable
 ≫ 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; wearable, lightweight, rugged for use in any environment with an operational range up to 20 km
Tomahawk [™] Command GCS
Image: Second system Image: Second system
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DDL[™] Network Antennas

AV's Digital Data Link[™] (DDL[™]) is a small, lightweight, broadband digital network module enabling enhanced command and control of SUAS and LMS. 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 AV'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).





Standard Range Antenna

DIMENSIONS

WEIGHT

3 lb (1.3 kg)

Height: 6.5 ft (2 m)

Base Diameter: 3 ft (0.9 m)







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



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)

STANDARD RANGE	ERA	LRTA
Up to 20 km	Up to 40 km	Up to 60 km
M1/2/5 or M3/4/6	M1/2/5 or M3/4/6	M1/2/5 or M3/4/6
-98 dBm @ 2 Mbps -93 dBm @ 6 Mbps	-98 dBm @ 2 Mbps -93 dBm @ 6 Mbps	-98 dBm @ 2 Mbps -93 dBm @ 6 Mbps
20 W	20 W (pass through, not additional)	275 W (nom., heater off) 460 W (max., heater on)
5.5-16 V	5.5-16 V	90-250 V ac, 47-65 Hz
4.5 Mbps	4.5 Mbps	4.5 Mbps
MPEG2 or H264 SD	MPEG2 or H264 SD	MPEG2 or H264 SD
Ethernet/RS-232/RS-485	Ethernet/RS-232/RS-485	Ethernet/RS-232/RS-485
AES-128/AES-256	AES-128/AES-256	AES-128/AES-256

Uncrewed Ground Vehicles

UGV

Our family of uncrewed ground vehicles (UGV) share the same purpose as our uncrewed aircraft and loitering munition 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.





telemax[™] Evo Hybrid



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

LB

간

WEIGHT Max. 176 lb (80 kg)

>>> LIFTING CAPACITY 82 lb (37 kg)	TOTAL Payload Capacity
Seripper WIDTH 8 in (200 mm)	SPEED
Source of the second se	DRIVE Mechanis
≫ CLIMB STAIRS & Slopes 45°	FUNCTION ALITY
	GCS

68 lb (31 kg) Max. 6.2 mph (10 km/h) 4-track running gear with individually M adjustable flippers: optional wheels

Obstacle Height: 20 in (500 mm) Gap Width: 24 in (600 mm)

Robo Command

MISSION VARIANTS



EOD Explosive Ordnance Disposal





CBRNE Chemical, Biological, Radiological, Nuclear & Explosives



SWAT High Risk Law Enforcement Operations

KEY FEATURES

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

INTERCHANGEABLE ACCESSORIES





Optics/Visual Augmentation UGV



Communications

Power Sources



Pre-programmed automatic manipulator & flipper motion sequences



Wheels/Tracks (Wheels for Hybrid & Pro only)



Tooling & Hauling



Render Safe Options



Field Operations and Customer Support

SUPPORT SERVICES

FIELD OPERATION SERVICES

» AV 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

» AV'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

» AV's ISO-9001:2015 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.