

## HORNET MICRO™ UAS:

Superior Visual Intelligence from the World's Smartest, Smallest Helicopter

When lives depend on what you know and how quickly you can react, Adaptive Flight's Hornet delivers the superior visual intelligence needed to make critical operational decisions. Unmatched maneuverability and ease of use allow the Hornet to capture real-time video and high-resolution digital images from any position. Sophisticated flight control, and on-board processing for advanced operations make Hornet the smartest, smallest helicopter ever.



The Hornet Micro delivers real-time video from a distance and maneuvers at street-level to get the detailed images you need.

## There's no hiding from a Hornet

Weighing in at 2.4 pounds with a 28-inch rotor diameter, the Hornet Micro can stop, drop, hover and reverse to provide the real-time video and high-resolution digital images needed to complete dangerous operations safely and successfully. Operators can window, pan and zoom to capture regions of interest from the high resolution digital image sensor. Images can be transmitted to ground station for near real-time viewing, or stored on-board for download at touchdown.



## Anticipate danger, minimize risk.

Easy to transport and operate, the Hornet can be launched anywhere to make high-risk operations safer and more effective. For military, SWAT teams, police, firefighters and rescue workers, the Hornet provides immediate visual intelligence to:

- Document area for planning entry points and escape routes
- Inspect perimeter immediately ahead of soldiers/SWAT/police
- Locate threats and identify persons or objects of interest
- Follow targets/suspects
- Search for hostages or trapped civilians
- Inspect suspicious vehicles and objects
- Inspect otherwise inaccessible objects/structures
- Document incident location for evidence



**Unsurpassed surveillance for critical, short-range operations in urban terrain**

**Position Hornet anywhere to hover and watch unobtrusively from a distance**

**React quickly to track targets at close range, in any direction, and at variable speeds**

**Monitor real-time video of large areas, or move in close to focus on a precise location – from any position**

**Window, pan and zoom to capture region of interest from high-resolution digital image**

**Fly easily, quietly and safely with ultra small size and robust, automatic flight control**

### **Be where you couldn't be and see what you couldn't see**

Unlike fixed-winged aircraft, the Hornet can hover quietly in one place, maintaining close focus on one location, while it captures video and high-resolution images. Or it can drop to street level, peer under awnings and over-hangs, see into recessed doorways, down alleys and into courtyards.

### **The Hornet focuses on flying—so you can focus on intelligent surveillance**

Advanced flight control technology makes flying the Hornet as easy as navigating a video game with take-offs and landings at the push of a button. Hover or fly in any direction including reverse, straight up and straight down—and change speeds abruptly—all while maintaining stable flight and continuous video surveillance.

The Hornet can be pre-programmed with simple waypoint entry for autonomous flight or flown semi-autonomously via intuitive operator controls. Sophisticated, yet easy-to-use software keeps the Hornet on course without operator intervention, even in challenging terrain and weather. In semi-autonomous mode, the Hornet has unparalleled flight stability and ease of control, so operators can fly as easily as navigating a video game, while controlling speed, direction and altitude.

Proven through more than 500 flights, the Hornet's advanced flight control software was developed at the Georgia Tech UAV Research Facility, a world leader in rotorcraft flight control systems and UAS research, and is licensed exclusively to Adaptive Flight. With approximately 6 GFLOPS of processing power, the Hornet's integrated flight control system, the FCS20, supports advanced flight and mission capabilities far beyond other small UAS. Moreover, its semi-open architecture is designed for easy integration with third-party applications.



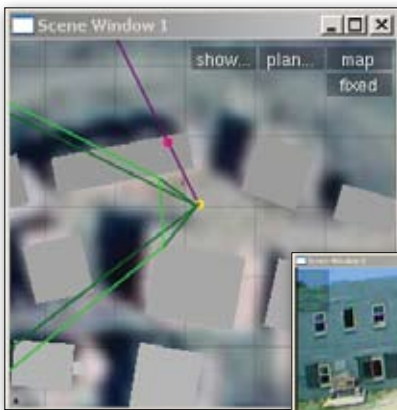
## You're virtually on-board

The ground control video interface is designed so the operator 'sees' the Hornet's flight position and vehicle status as if they are actually on-board. With precise camera pointing and agile maneuvering, the Hornet flies where other unmanned aircraft cannot go—close to objects, under wires and between buildings—to get the real-time information needed for mission success. A high-fidelity simulator enables realistic training and rehearsal of missions.

The Hornet Ground Control Station, housed in a Panasonic Toughbook™ or other Windows-based PC, allows users to view real-time video and capture regions of interest from digital, high-resolution images. The compact Hornet Micro system, including two vehicles, ground control station with hand-held controller, antennas and extra batteries fits into a single backpack or military-grade case.



*The Hornet's maneuverability and high-resolution digital images enhance ability to identify objects of interest.*



Move safely into close proximity of objects of interest with the Hornet's highly accurate and maneuverable flight controls. Visual data overlay shows flight position on real-time video and correlates position easily on moving map.

# Hornet Micro UAS Product Specifications

Specifications	Hornet Micro UAS
Weight	2.4 lbs (1.1 kg)
Height	9.4" (240 mm)
Length	25" (630 mm)
Rotor Diameter	28" (710 mm)
Power Plant	Electric motor, rechargeable lithium polymer quick-swap battery packs
Speed	55 km/hr (30 kts)
Launch Method	Auto take-off
Recovery	Auto landing
Range	1-3 km typical operating range
Operating Altitude	Typical operating altitude: 3-500 ft AGL (1-150 meters)
Flight Endurance	20+ minutes
Payload	EO camera, high-resolution digital image sensor
Datalink	Data up/downlink, video downlink
Flight Control	Adaptive Flight FCS20 Integrated Flight Control System
Operating Modes	Autonomous flight with pre-programmed waypoints or semi-autonomous joystick control of position and heading
Ground Control Station (GCS)	PC-based Ground Control Application with advanced simulation and interface capabilities; video-text overlay; DVR; digital frame capture and storage; hand controller
Ground Control Station Capabilities	
<ul style="list-style-type: none"> <li>▮ Vehicle Displays</li> </ul>	<ul style="list-style-type: none"> <li>▮ Multiple vehicle position and status displays: map, heads-up display, status panel and video overlay mode</li> </ul>
<ul style="list-style-type: none"> <li>▮ Flight Planning and Execution</li> </ul>	<ul style="list-style-type: none"> <li>▮ Advanced flight planning and execution tools including preprogrammed waypoints, semi-autonomous joystick mode and record / simulation mode</li> </ul>
<ul style="list-style-type: none"> <li>▮ Video/Image</li> </ul>	<ul style="list-style-type: none"> <li>▮ Display of real-time video and high-resolution digital images captured with window, pan and zoom</li> </ul>
Displays	Monitor or optional handheld LCD display, video goggles
Hornet System Components	Compact, portable system includes two Hornet vehicles with advanced FCS20 Flight Control Systems, FCS20 GCS software loaded on Toughbook™ or other standard laptop, hand controller, small antennas on lightweight tripod, extra batteries, waterproof case



## About Adaptive Flight

Headquartered in Atlanta, Adaptive Flight, Inc., designs and manufactures the world's smallest and most advanced helicopter surveillance systems. The Hornet Unmanned Aircraft System (UAS) is ideal for short-range, tactical military and civilian reconnaissance and surveillance operations. Small, quiet and highly maneuverable, the Hornet delivers superior visual intelligence with real-time video, high-resolution images and other advanced operations. For more information, visit us at [www.adaptiveflight.com](http://www.adaptiveflight.com).