# SPIRIT

Ascent AeroSystems' coaxial UAVs can be scaled larger or smaller to accommodate a wide range of payloads, power sources, and launch methods to support your missions. Our expert team can work with you to take advantage of the cylindrical design and integrate specific payloads to tackle missions exactly to your specifications

UNPARALLELED PERFORMANCE AND FLEXIBILITY WITH A MINIMAL AIRFRAME DESIGN.

## QUICK CHANGE MODULES

Quick-connect fittings at the top and bottom of the core allow for almost any combination of batteries and payload modules, adaptable to your mission-specific requirements. Exchangeable in seconds, modules can be stacked above and below the core to provide the custom configurations for your missions today and tomorrow.

### TOP & BOTTOM CONNECTIVITY
240 pins distribute power and data to the top and bottom of the core, providing maximum flexibility for mission equipment. Included protocols include all Pixhawk connections, highspeed ethernet (2), HDMI and spares.

### BATTERY
Ultra high-density Lithium-Ion cells (6AH, 12S 44.4v) mount to the top and bottom of the core.

### PAYLOAD DEVELOPMENT KIT
A free technical documentation package and CAD files are available for custom payload development. Hardware kits are also available.

### CAMERAS
Several RGB, Thermal, and EO/IR optical modules are available.

### PAYLOADS & SENSORS
A variety of sensors are available now, other modules available soon.

### LANDING GEAR
Optional landing gear module provides pass-through capability.

### AIRFRAME ENHANCEMENTS
Tethered operations, high speed, extended range flight, launch sleeve, and more.

www.ascentaerosystems.com

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## THE ULTIMATE UAS PLATFORM FOR HARSH ENVIRONMENTS



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|---|---|
| **TYPE & CONSTRUCTION** | Coaxial Unmanned Aerial Vehicle.<br>Polycarbonates, composites, aluminum |
| **DIMENSIONS** | 12.0 inches (257mm) x 4.2 inches (106mm)<br><br>Tip-to-tip diameter w/blades extended 25.5 inches (650mm) |
| **MAX TAKEOFF WEIGHT** | 13.5 lbs (6.1 kg) |
| **PAYLOAD** | Maximum available payload: 6.5 lbs. (3.0 kg)<br><br>Supports dual payloads (top and bottom) |
| **EMPTY WEIGHT** | Core Vehicle (no battery or payload) 4.1 lbs. (1.8 kg) |
| **DRIVE SYSTEM** | Direct drive with 2x brushless motors |
| **POWER** | 12S 44.4 volts Lithium Ion |
| **FLIGHT ENDURANCE** | ONE BATTERY: 38 min with no payload / 16 min w/max payload<br>TWO BATTERIES: 53 min with no payload / 32 min w/max payload |
| **MAX ALTITUDE** | 14,600 feet above MSL (5,000m) |
| **MAX SPEED** | Manual: >60 mph (100 kph, 27 m/s)<br>Auto (Recommended): 40 mph (65 kph, 18 m/s) |
| **ENVIRONMENTAL** | IP56 RATED<br>OPERATING TEMP: -40 to 130F (-40 to 54C)<br>WIND RESISTANCE: CLASS 8 (40mph+) |

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| **AUTOPILOT** | NDAA/BlueSUAS 2.0 compliant<br>MAVLink compatible<br>Commercial specifications standard, Domestic & MIL-spec<br>Other autopilots and encrypted communications standards are available |
| **GPS** | GPS, GLONASS, BEIDUO + RTK support |
| **GROUND CONTROL STATION** | Integrated manual mode 2-stick control, autonomous navigation w/integrated 1920 x 1080 touchscreen LCD<br>Alternative options include ruggedized Windows PCs, Android, iOS |

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| **C2** | RFD900x, DoodleLabs, MIcrohard, Silvus, Persistent Systems + custom applications |
| **AIRBORNE VIDEO INPUTS** | Dual HDMI inputs support simultaneous use of two airborne sensors |