

SPIRIT

ASCENT AEROSYSTEMS

UNMATCHED MODULARITY

What you need, when you need it,
wherever it's needed .

ADAPT, CUSTOMIZE AND UPGRADE

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.



GOVERNMENT

Rapidly deployable, rugged & efficient UAV for mission-critical operations

- Communications relay
- Target identification and tracking
- Intelligence, Surveillance, and Reconnaissance
- Chemical, Biological, Radiological agent detection



PUBLIC SAFETY

Reliable response in any environment

- Search & rescue operations
- Law enforcement
- Firefighting / Rogue gas detection
- Disaster response



INDUSTRIAL

Coaxial system designed for quick & dependable deployment in extreme conditions

- Security
- Inspection
- Incident response
- LiDAR 3D Mapping

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Ascent AeroSystems designs and manufactures rugged "coaxial" drones right here in the US. More than seven years of development have made Ascent AeroSystems the world's only source for coaxial vehicles, and hundreds have been delivered to professional, commercial, government and military customers worldwide.

SPIRIT | SPECIFICATIONS & PERFORMANCE

CORE

TYPE & CONSTRUCTION	Coaxial Unmanned Aerial Vehicle. Polycarbonates, composites, aluminum
AVAILABLE PAYLOAD MOUNTS	Top and bottom mounts can accept wide combination of batteries or payload (stackable)
DIMENSIONS (NO BATTERY OR PAYLOAD)	1. 12.0 inches (257mm) x 4.2 inches (106mm) (Other payload diameters are supported) 2. Tip-to-tip diameter w/blades extended 25.5 inches (650mm)
DRIVE SYSTEM	Direct drive with 2x brushless motors
MAXIMUM TAKEOFF WEIGHT	13.5 lbs (6.1 kg)
EMPTY WEIGHT	Core Vehicle (no battery or payload) 4.0 lbs. (1.8 kg)
SYSTEM VOLTAGE	12S 44.4 volts
BATTERY OPTIONS	<ul style="list-style-type: none">• Single (6.0 Ah) Double (2x 6.0 Ah)• Battery weight 3.0 lbs. (1.4 kg) 6.0 lbs. (2.7 kg)• Maximum available payload 6.5 lbs. (3.0 kg) 3.5 lbs. (1.6 kg)
FLIGHT ENDURANCE	ONE BATTERY: 38 min with no payload / 16 min w/max payload TWO BATTERIES: 53 min with no payload / 32 min w/max payload
ENVIRONMENTAL	MAX DENSITY ALTITUDE: 14,600 feet above MSL (5,000m) OPERATING TEMP: -40 to 130F (-40 to 54C)
ENVIRONMENTAL RATING	IP56
MAXIMUM FORWARD AIRSPEED*	Max (manual mode): >60 mph (100 kph, 27 m/s) Auto (Recommended): 40 mph (65 kph, 18 m/s)
MAXIMUM RECOMMENDED WIND	Recommended 40 mph (65 kph, 18 m/s) or operator's discretion

STANDARD AUTOPILOT & NAVIGATION Other Options Available

STANDARD AUTOPILOT	<ul style="list-style-type: none">• Pixhawk 2 (Cube) Ardupilot/MAVLink. Commercial specifications standard, Domestic & MIL-spec available.• Other autopilots and encrypted communications standards are available
GUIDANCE SENSORS	Redundant sensors (barometer, compass, accelerometers, gyroscope)
SATELLITE	GPS, GLONASS
GROUND CONTROL STATION	<ul style="list-style-type: none">• Integrated manual mode 2-stick control, autonomous navigation w/integrated 1920 x 1080 touchscreen LCD• Alternative options include ruggedized Windows PCs, Android, iOS available
COMPATIBLE GCS SOFTWARE	All Windows, Android and iOS versions of Mission Planner, QGroundControl, Tower, U.S. DoD ATAK

STANDARD WIRELESS COMMUNICATION & VIDEO Other Options Available

MANUAL FLIGHT CONTROL FREQUENCY	2.4GHz Range: 12 miles (20 km) FCC; 7 miles (12 km) CE & SRRC
VIDEO LINK	1080p @60/30 fps, 720p @30 fps. Latency <110ms from input source to GCS display
AIRBORNE VIDEO INPUTS	Dual HDMI inputs support simultaneous use of two airborne sensors

BLUE sUAS COMPATIBILITY

AIR VEHICLE	NDAA and Executive Order 13981-compliant
GROUND CONTROL STATION	Compatible with multiple Blue sUAS-approved Ground Control Stations
SENSORS	NDAA-compliant sensors available