

SPIRIT

Dependable, All-weather Unmanned Aerial Vehicle. Designed and Built in the USA.

As the flagship platform of the world's only family of **aircraft-grade coaxial UAVs**, the Spirit's modular, open-architecture design makes it easy to deploy the newest software and payloads to meet mission-critical requirements, today and tomorrow.

Whether your task is to inspect, detect, measure, or transport, Ascent AeroSystems has a high-performance coaxial UAV platform and payload option that can get the job done. **When not flying is not an option.**



SENSOR CAPABILITIES: *

EO/IR Sensors

NextVision, Gremsy

Inspection, Mapping & Photogrammetry

Sony ILX-LRI Industrial Camera, LiDAR

Modular Command & Control (C2)

Herelink, Microhard, DoodleLabs, L3Harris, Others

Swarm

Data Blanket, Autonodyne, and others

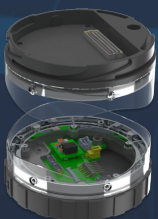
Ground Control Systems

UXV Navigator Tab 5, Herelink

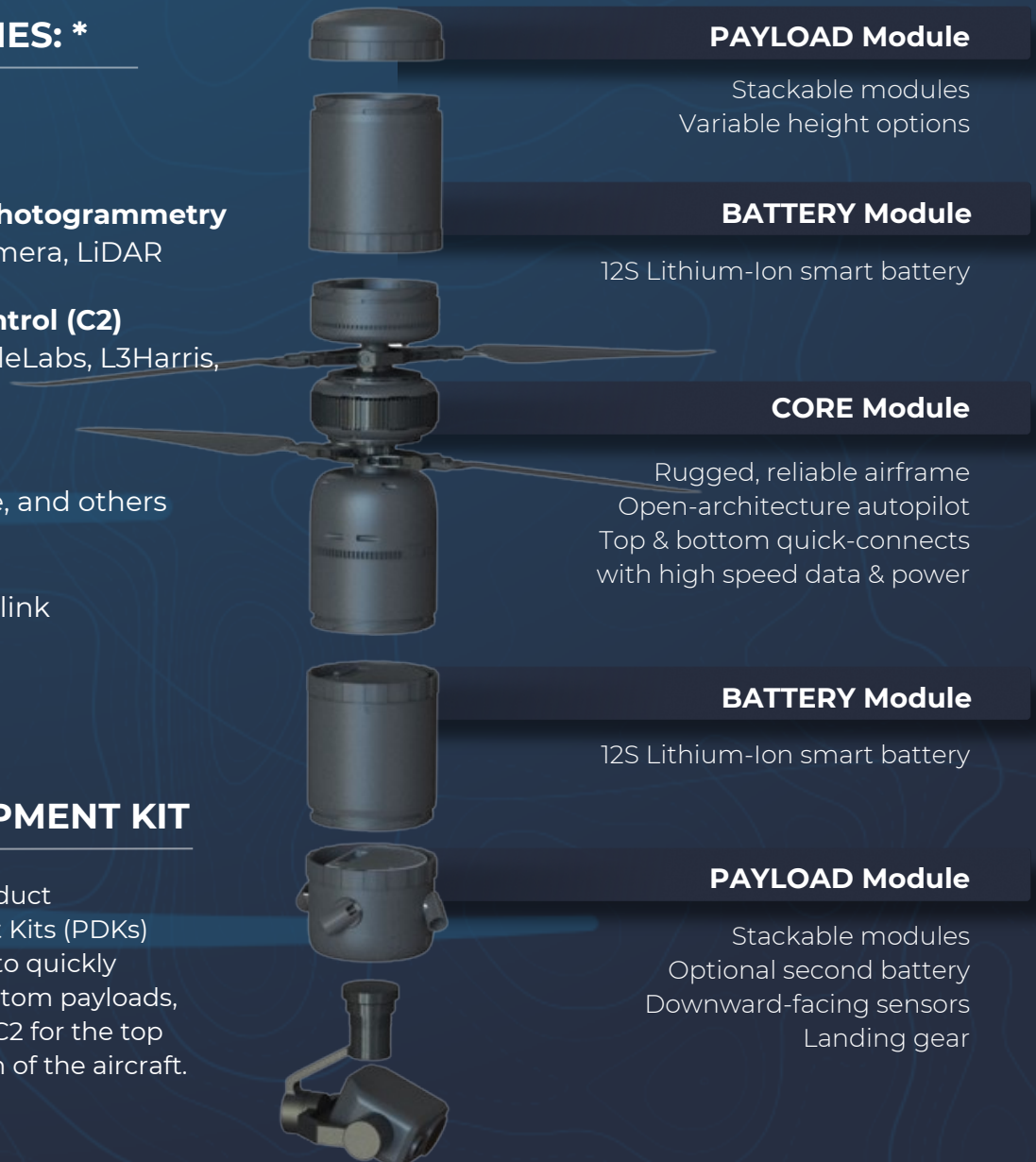
Software

AscentQ, VOTIX

PAYLOAD DEVELOPMENT KIT



Available Product Development Kits (PDKs) make it easy to quickly configure custom payloads, sensors, and C2 for the top or the bottom of the aircraft.



* The Spirit's modular open systems approach to both hardware and software enables the integration of virtually any custom payload.

SPIRIT PLATFORM SPECIFICATIONS

AIRFRAME

AIRFRAME DESIGN	Coaxial Unmanned Aerial Vehicle
MATERIALS	Polycarbonates, composites, aluminum 12.0
CORE HEIGHT	inches (305 mm) no battery or payloads
CORE DIAMETER	4.2 inches (106 mm)
TIP-TO-TIP SPAN	25.5 inches (648 mm) when rotating

PERFORMANCE

MAX TAKEOFF WEIGHT	13.5 lbs. (6.1 kg)
CORE WEIGHT	Core Vehicle (no battery or payload) 4.1 lbs. (1.8 kg)
MAX PAYLOAD	Maximum payload: 6.5 lbs. (3.0 kg) with one battery Supports dual payloads (top and bottom)
DRIVE SYSTEM	Direct drive with 2x brushless motors
POWER	12S 44.4 volts Lithium-ion
ENDURANCE	ONE BATTERY: 38 min. w/ no payload 16 min. w/ max payload DUAL BATTERY: 53 min. w/ no payload 32 min. w/ max payload
MAX ALTITUDE	14,600 feet above MSL (5,000 m) (observed)
MAX SPEED	Manual: 60+ mph (100 kph, 27 m/s) Auto (Recommended): 40 mph (65 kph, 18 m/s)
ENVIRONMENTAL	IP56 OPERATING TEMP: -40 to 130F (-40 to 54C) WIND RESISTANCE: CLASS 8 (40+mph)

COMMAND & CONTROL (C2)

AUTO PILOT	Pixhawk Cube. NDAA-compliant, MAVLink compatible. Other autopilot options available.
GPS	GPS, Glonass, Galileo, Beidou and QZSS. Other options available.
AIRBORNE EQUIPMENT & GCS OPTIONS	A wide range of C2 hardware is available to support manual and autonomous operations. Airborne options include Microhard, Silvus, Persistent Systems and DoodleLabs. GCS options include Herelink, UXV Navigator Tab5, Auterion SkyNav, ruggedized Windows PCs and Android/iOS tablets.

Performance details for specific combinations of C2 equipment are available upon request.
New C2 options are added often and custom options are available. Please contact us for details.

