

SPECIFICATION SHEET

AXION

Model AX1

Octo Turbine Heavy-Lift VTOL

September, 2026



FEATURES

Application:	Heavy Cargo Delivery & Time-Critical Missions
Engine Failure Mitigation:	Paired Engine Spools-Up for Smooth Emergency Landing
Throttle Management:	Real-Time Thrust Compensation for Fuel Burn-Off
Fuel Flexibility:	Kerosene, Diesel, Jet-A, or Biodiesel
Fuel Tank Configuration:	Dual Cross-Linked 15-Gal Fuel Tanks with Baffles
Turnaround Time:	Refuels in Under 4 Minutes
Flight Mode:	Guided Waypoint Navigation with Full Engine Auto-Start
VTOL Transition:	Zero-Pitch Hover-to-Forward-Flight Conversion
Navigation:	Dual GPS (non-RTK) Satellite Positioning
Delivery:	Ready-to-Fly Out of the Box

PERFORMANCE

Total Thrust Output (Max):	809 lb (3600 N)
Cruise Speed (Sea-Level):	155 mph (69 m/s)
Climb Rate (Sea-Level):	79 mph (35 m/s)
Operational Radius (Max):	25 mi (40 km, Datalink Limited)
Endurance:	21 - 35 min (Payload Weight Dependent)
Engine-Start Altitude (Max):	6,500 ft (2 km)
Service Ceiling:	33,000 ft (10 km, ISA Standard Day)
Operating Wind Speed (Max):	42 mph (19 m/s)
Operating Temperature Range:	14 °F to 120 °F (-10 °C to 50 °C)
Noise Level (Max):	105 dBA @ 1 m

PHYSICAL PROPERTIES

(Fuel and Payload values are adjusted to fit mission profile)

MTOW (Max Take-Off Weight):	506 lb (230 kg)
Empty Weight:	154 lb (70 kg)
Payload Weight (Nominal):	152 lb (69 kg)
Fuel Weight (Max):	200 lb (91 kg)
Fuel Tank Capacity:	30 gal (114 L)
Dimensions (L x W x H):	87" × 63" × 30" (2.2 m × 1.6 m × 0.8 m)



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PROPULSION

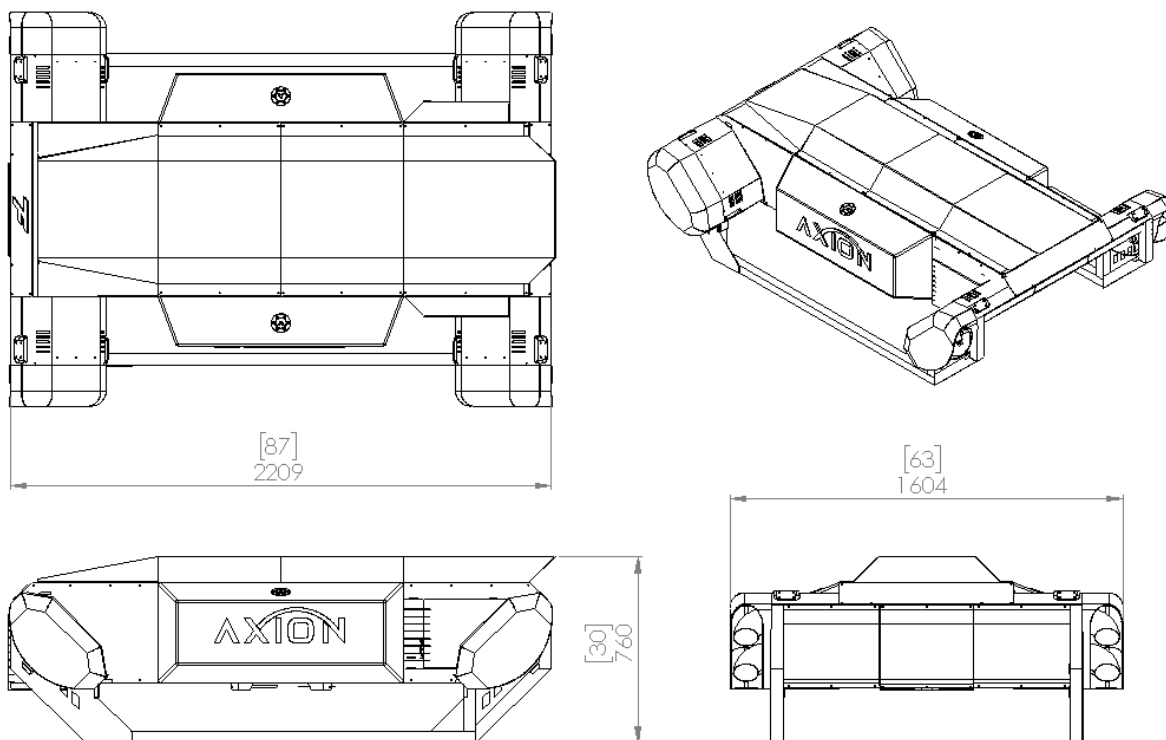
Powerplant:	8 × Microturbine Jet-Engines
Vehicle Dynamic Control:	8 × Electric Thrust Vectoring Systems (TVS)
Start-Up Time:	10 seconds
Easy-Swap Battery:	8 × 5,000 mAh LiPo
Turbine Rotational Rate (Max):	90,000 RPM
Fuel Flowrate (Max, 8 engines):	2.9 gal/min (11 L/min)
Air Flowrate (Max, 8 engines):	12,750 CFM (361,000 L/min)
TVS Exit Temperature (Max):	1,166 °F (630 °C)
Service Interval:	50 hours (Includes Turbine Cleaning & Rebalancing)
Time Between Overhaul (TBO):	1,000 hours

REMOTE CONTROLLER

Control Uplink (900 MHz):	Long Range Digital Uplink
Propulsion Telemetry (433 MHz):	Engine & Fuel Status — 2.5" OLED
Vehicle Telemetry (915 MHz):	Vehicle & Mission Status — 9" Touchscreen

ENGINEERING DRAWING – UNMANNED BASE CONFIGURATION (AX1-U)

(Dimensions Format: [in] mm)



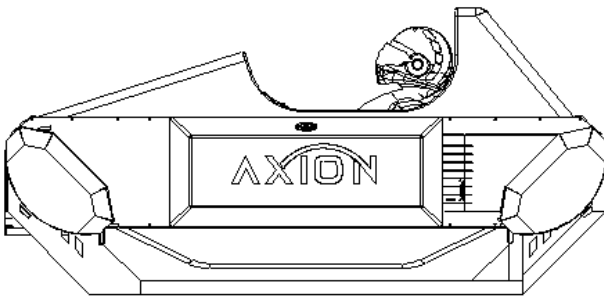
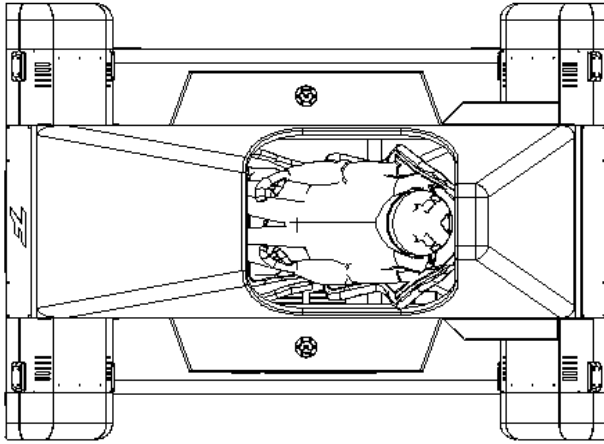
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AXION MANNED CONFIGURATIONS

(Contact us for pricing and availability)

RECREATIONAL (AX1-R)



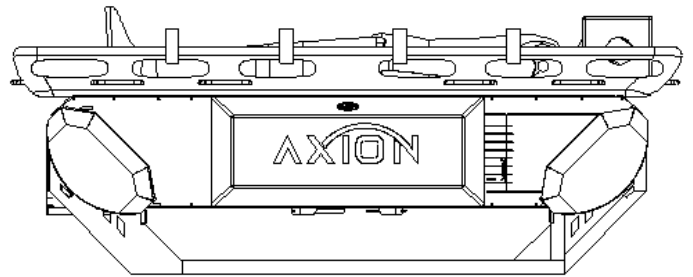
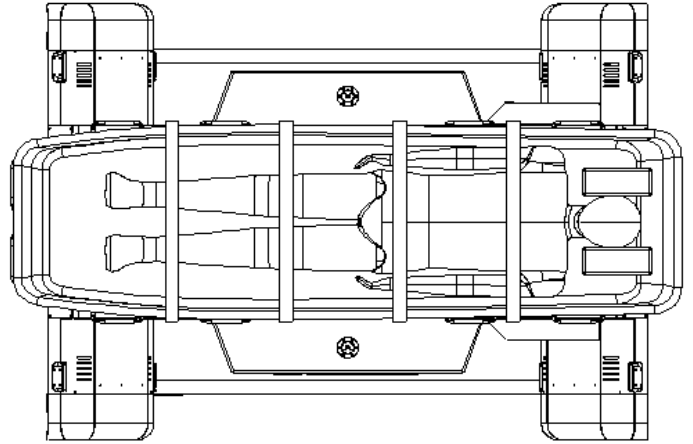
FEATURES

Control Mode:	Fly-by-Wire
Pilot Controls:	Touch Panel & Joysticks
Pilot Seating:	Racing Bucket Seat
Safety:	5-Point Harness
Protection:	Roll-Over Bar
Flight Control:	Triplex Redundant

PERFORMANCE

Occupant Weight (Standard):	190 lb (86 kg)
Seating & Cockpit Weight:	31 lb (14 kg)
Fuel Load (66% Fill):	132 lb (60 kg)
Flight Time:	13 min
Operational Radius:	17 mi (27 km)

MEDEVAC (AX1-M)



FEATURES

Control Mode:	Fully Autonomous
Patient Monitoring:	Vital Signs Telemetry
Patient Litter:	Stokes-Type Basket Litter
Patient Restraint:	Litter Tie-Down Straps
Protection:	Debris Shield
Flight Control:	Triplex Redundant

PERFORMANCE

Patient Weight (Standard):	190 lb (86 kg)
Litter Hardware Weight:	31 lb (14 kg)
Fuel Load (66% Fill):	132 lb (60 kg)
Flight Time:	13 min
Operational Radius:	17 mi (27 km)



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