



Name: ideaForge Q6 UAV

Year of Purchase: 2024

Description:

The ideaForge Q6 UAV is a high-performance, VTOL (Vertical Take-Off and Landing) drone designed for intelligence, surveillance, and reconnaissance (ISR) missions. Known for its robust endurance, advanced autonomy, and exceptional stability in challenging environments, the Q6 stands out with its long flight time, high payload capacity, and superior imaging capabilities. Its rugged and reliable build ensures consistent performance in diverse terrains and weather conditions.

Specifications:

UAV Weight with battery and max. payload	< 6 kg	Area Coverage at 120 m (for mapping applications with 20 MP payload)	Minimum 1.75 sq km at 120 m AGL with 80/60 overlap
UAV Size with Propeller	< 1.5m x 1.5m	Autonomy	Fully autonomous from Take-off to Landing without using any R/C controller
Endurance (upto 1000m AMSL Take-Off)	60 minutes with Day payload (up to 1000m AMSL Take-Off) 50 minutes with Mapping payload (up to 1000m AMSL Take-Off)	Flight Modes	Altitude Hold Hover at a defined waypoint Autonomous Waypoint Navigation (pre-defined as well as dynamically adjustable waypoints during flight) Remotely Piloted mode (RPV Mode) Real-time Target Tracking of designated static and moving targets
Range of live transmission (LOS)	5 km (un-obstructed & interference free)	Operating Crew	Maximum 2
Typical Cruise Speed	10 m/s	Deployment Time	< 10 minutes
Propulsion	Battery Powered Electric Propulsion	Packaging and Storage	Waterproof Backpacks to carry all mission critical components with IP66 or better rating for dust and drizzle protection(OEM certification)
Maximum operating altitude (AGL)	500m AGL (Above Ground Level)	Failsafe features	Auto-Return to Home and Land on Communication Failure Auto-Return to Home and Land on Low Battery Multiple GPS on-board for redundancy Auto-Return to Home and Land on exceeding Wind limit of the system Auto-Return to Home and Land on Battery Imbalance Auto-Return to Home and Land on exceeding the UAV health parameters (Temperature, vibration and throttle limit of the system)
Maximum launch altitude (AMSL)	3000m AMSL (Above Mean Sea Level)	Navigation Lights	Switchable (from GCS)
Functional Temperature Range	0°C to +50°C (Self Certified)		
Dust & Drizzle Resistance	IP53 rating (Self Certified)		
Aural Signature	<40 Db @300 meters AGL (Self Certified)		
Wind Resistance	Upto 10m/s (36kmph or ~20knots)		
Technical Life of UAV (Landings)	Minimum 500 landings (Self Certified)		
Launch & Recovery	Autonomous Vertical Take-Off & Landing (VTOL)		
Maximum space required for recovery	25m x 25m open area		