



A high-performance aerial lighting solution purpose-built for night-time search and rescue, security, and industrial inspection operations.

At its core, VL1 is an industry-leading Matrix Light, delivering a massive 120,000 lumens of illumination across a 120° field of view. From its vantage point in the sky, it casts a wide, even floodlight over a vast operational area, effectively turning night into day. Designed for rapid deployment, the VL1 offers one-touch operation to get airborne in seconds, while an integrated parachute safety system provides an extra layer of protection during critical missions.

A gimbal-stabilized camera delivers real-time situational awareness, with live video feed that can be output via HDMI to support onsite command and coordination. Housed in a portable and durable airframe with a foldable design, the complete system is built to operate reliably in extreme temperatures from -20°C to 50°C, providing professional teams with a trusted, all-in-one solution for critical missions that demand both brilliant light and absolute operational certainty.

Product Features



Massive Illumination Area

From its optimal operating altitude, the VL1's 800W Matrix Light can effectively illuminate an area of over 10,000 to 13,000 square meters—more than enough to cover a large emergency scene or work site.



Rugged & Portable Design

The complete system, including the ground station and a custom-fitted backpack, is designed for easy transport to even the most challenging environments, ensuring professional teams can bring light wherever it's needed.



Integrated Safety Systems

The VL1 is equipped with a built-in parachute that can be deployed in emergency situations, providing an extra layer of protection for personnel and equipment on the ground.



Tethered Power for Unlimited Endurance

The VL1 utilizes a ground-based tethered power supply, allowing for continuous, long-duration flight without the need to land and change batteries. This makes it ideal for extended search and rescue or disaster relief operations.



Interference-Resistant Operation

To ensure reliability in complex electromagnetic environments, the VL1 uses powerline carrier technology over its tether cable to transmit video and control data. This makes it immune to radio frequency interference and drone jamming devices, ensuring a stable connection when it matters most.



Effortless One-Touch Operation

The VL1 is designed for rapid deployment. With automated one-touch takeoff and landing and an automatic cable retractor, a single operator can have the system airborne and providing light in seconds.



Real-Time Situational Awareness

A gimbal-stabilized camera provides live 1080p HD video feed from the airborne unit. This feed can be viewed on the built-in 1000-nit high-brightness screen or output via HDMI to support on-site command and coordination.



Dual-Mode Power Supply with Instant Failover

The system features a dual-mode power supply. If the main external power source fails, it instantly and seamlessly switches to an internal backup battery, ensuring the aircraft can land safely.



Integrated App Control

The system can be operated via the dedicated mobile app, offering an intuitive and user-friendly interface that simplifies flight control and system management, reducing operator training time.



Model VL1

Airborne Unit	Weight (kg)	≤ 2.6 kg
	Size Deployed (mm)	384×381×169 mm
	Size Folded (mm)	381×237×200 mm
	Maximum Flight Altitude	4000 m
	Wind Resistance Level	Level 7
	Hovering Accuracy (calm or light wind)	Horizontal: ±1.5 m, Vertical: 0.5 m (in GNSS mode)
	Maximum Ascent Speed	1.5 m/s
	Maximum Descent Speed	1 m/s
	Propeller Size	12 inches
	GNSS	RTK, GPS + BDS + Galileo
	GNSS Frequency Band	B1C, B2a, E1B/C, E5a, L1C/A, L5
	Matrix Light Power	800 W
	Total Luminous Flux	120,000 lm
	Lighting FOV	120°
	CMOS Size	1/2.8"
Video Resolution	1920×1080	
Ground Station	Weight (kg)	≤ 12.4 kg
	Size (mm)	385×337×224 mm
	Input Voltage	176–264 VAC
	Battery Capacity	2300 mAh
	Screen Size	5.5 inches
	Screen Resolution	1920×1080
	Screen Brightness	1000 nits
	Ground Station Output Interface	HDMI, Network ports
	IP Rating	IP44
	Operating Temperature	-20°C to 50°C
	Storage Temperature	-40°C to 70°C