



SKY-WATCH

RQ-35 HEIDRUN

TECHNICAL
SPECIFICATIONS



The **RQ-35 Heidrun** is a battle proven, fixed wing, UAS for low-altitude video surveillance and reconnaissance missions. It is designed for operations in complex environments and with high mobility, rapid and easy launch and recovery in mind. Reaching up to 55 km of live video feed, it is ideal for collecting immediate situational awareness from any mission critical area without exposing the operator to any danger.

DIMENSIONS

L x W x D

WEIGHT

DIMENSIONS	L x W x D	WEIGHT
UAV - ready for take-off	1070 mm x 1650 mm x 170 mm	3.07 kg
UAV battery	140 mm x 70 mm x 40 mm	0.92 kg
Complete UAS in transport case	1121 mm x 409 mm x 355 mm	24.7 kg (excl. batteries)
Complete UAS in backpack (mobile)	1120 mm x 440 mm x 300 mm	15.7 kg (excl. batteries)

PERFORMANCE

Max flight time	180 min - dependent on actual environment	
Max wind tolerance	16 m/s	31 kts
Cruise speed (air speed)	16 m/s	31 kts
Service ceiling	5.000 m ASL	16.400 ft ASL
Maximum landing altitude	3.000 m ASL	9.800 ft ASL
Minimum / Maximum operating temp.	-20° C	45° C
Charger power supply	100-240 V AC	10-50 V DC
RQ-35 smart battery	14.4 V	19.6 Ah
Average landing area needed	12.5 m radius	Weather dependent
Launch/land method	Hand launched	Deep stall landing
GNSS-denied operation	Low audible and visual signature	
Fail safes	Loss of telemetry link Low battery Loss of GNSS data	

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The RQ-35 Heidrun radio link architecture supports both single-band (S-band) and dual-band (S+C band) configurations, enabling users to tailor communication links for specific mission profiles, operational ranges, and spectrum conditions. Combined with configurable Ground Control Station (GCS) antenna options, the system offers exceptional resilience, mobility, and adaptability - covering both the short-range tactical deployments to the long-range operations in RF contested environments.

UAS OPTION	RADIO BANDS	FREQUENCY	BANDWIDTH	USE CASE
Single-band (S)	S-band	2.2 - 2.5 GHz	10 MHz	The preferred option for any LOS operation and ideal for no or low RF contested environments.
Dual-band (S+C)	S- and C-band	2.2 - 2.5 GHz / 4.4 - 4.94 GHz	10 MHz	Enables dual-band operation for enhanced link robustness and frequency diversity. Recommended option for any high RF contested environments.

Transmission power	Automatic adjustment from 0.1 W	Up to 2x5 W (2x37dBm)
Spectrum dominance	Autonomous RF channel selection	Encryption key auto change (multiple keys) Interference Avoidance (MAN-IA) Interference Cancellation (MAN-IC)*
Antenna type	UAV: Dipole antennas GCS: Dipole combined with directional patch antennas	
Encryption	Up to AES-GCM 256 ECDH-KAS (FIPS 140-2) depending on EUS	
Transmission range	Up to 55 km LOS with dual directional antennas	Dependent on option and environment

* ITAR controlled

PAYLOAD	TRIPLE LENS CAMERA		2 + 1 LENS CAMERA	
Payload platform	Extractable gimbal mount		Extractable gimbal mount	
Gimbal	2-axis stabilized gimbal		2-axis stabilized gimbal	
Visible camera (EO)	Resolution: 1280x720 HFOV: 60° WFOV – 1.5° - 0.75° DFOV	Visible 400-700 nm Zoom: x40 + x2 digital (x80)	Resolution: 1280 x 720 HFOV: 60° WFOV – 3° - 1.5° DFOV	Visible 400-700 nm Zoom: x20 + x2 digital (x40)
Thermal camera (IR)			Resolution: 640 x 480 HFOV: 32° W.FOV – 8° DFOV	LWIR uncooled (8-14µm) Zoom: x4 digital
Extracted range of rotation	+/- 155° azimuth -70° to +10° pitch	(0 = UAV body heading) (0 = UAV water line)	+/- 166° azimuth -70° to +10° pitch	(0 = UAV body heading) (0 = UAV water line)
Retracted range of rotation	Fixed 0° azimuth -36° to -90° pitch	(0 = UAV body heading) (0 = UAV water line)	Fixed 0° azimuth -31° to -90° pitch	(0 = UAV body heading) (0 = UAV water line)

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GROUND CONTROL STATION CONFIGURATIONS

The Sky-Watch Ground Control Station (GCS) is designed to adapt to your mission, not the other way around. Its modular antenna system allows you to quickly configure the setup based on your operational needs - whether that's maximum mobility, extended range, or reliable performance in challenging RF environments. By switching between antenna configurations, you can actively adapt the GCS to changing mission conditions. This allows you to maintain link stability and reliable control, even in RF contested environments.

For training, testing, or high-mobility missions, the GCS uses dipole antennas for a lightweight, flexible setup. As range demands increase, it can be switched to a dipole and patch antenna combination for extended coverage. For long-range operations or heavily jammed environments, a dual patch antenna configuration delivers maximum range and resilience.

SINGLE BAND CONFIGURATION

TYPICAL RANGE (LOS)

USE CASE

Dipole antennas only	Up to 10 km (S)	Training, testing, or high-mobility operations
16 x 16 patch antenna + dipole	Up to 25 km (S)	Medium-range missions
16 x 16 + 30 x 30 patch antenna	Up to 50 km (S)	Long-range and high-jamming environments

DUAL BAND CONFIGURATION

TYPICAL RANGE (LOS)

USE CASE

Dipole antennas only	Up to 10 km (S) / 6 km (C)	Training, testing, or high-mobility operations
30 x 30 patch antenna + dipole	Up to 40 km (S) / 30 km (C)	Medium-range missions
Two 30 x 30 patch antenna	Up to 55 km (S) / 40 km (C)	Long-range and high-jamming environments

GROUND SYSTEM OPERATIONS

Rugged tablet (windows based)	Performance depends on chosen model	
User interface based on user-driven development	Sky-Watch Drone Manager (SDM)	Single tablet operation
	Sky-Watch Camera Controller (SCC)	Dual tablet operation

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