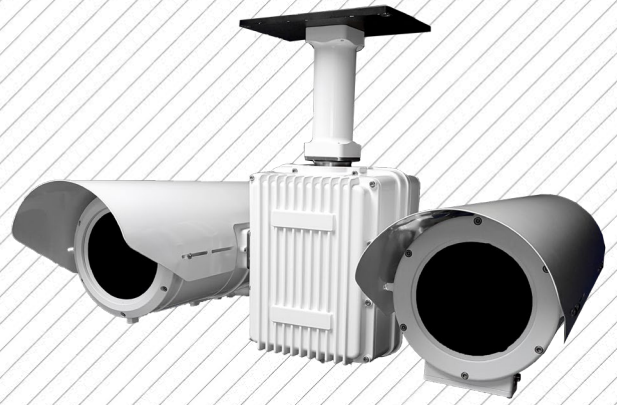


JAEGER COUNTER-UAS



PLATFORM DESCRIPTION

The Jaegar C-UAS platform is a turnkey multi-sensor platform providing advanced counter drone capabilities by combining EO, video tracking, auto-classification and optional effecting technology. The platform is ideally suited for mobile and rapid deployable applications, as well as fixed installations.

CAPABILITIES

EO Positioning: By utilising harmonic drive gears, the Jaegar platform is capable of providing high speed as well as pinpoint accurate EO positioning. As with all of our platforms, the Jaegar can provide absolute positional feedback from both the pan and tilt and EO payloads.

Detection: The Jaegar PT platform has been specifically developed for integration with third party Radar or RF-based detection systems. In addition, the through-shaft allows for the integration of these capabilities to be fully combined onto the EO system. By mounting the detection capability in this way the Jaegar platform is able to provide continuous, uninterrupted, 360° target tracking.

Tracking: The platform offers a fused-tracking capability utilising information from a Radar track which is paired with a hardware-based video tracker to ensure smooth and reliable tracking at all ranges and speeds. Other features include centroid and edge measurement.

Classification: The auto-classification capability adds an additional layer of target intelligence. This allows drone targets to be positively discriminated from other airborne clutter such as aircraft and birds.

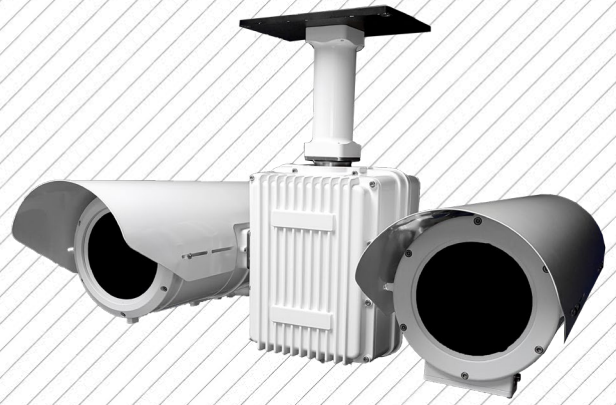
Identification: Due to the highly modular format of the Jaegar platform, a wide range of EO sensors are available for integration. These sensors include, HD lowlight video, MWIR and LWIR thermal detectors, as well as SWIR sensors. These can be configured to match both performance and budget requirements.

Mitigation: The optional effecting/jamming capability allows the user to selectively deny control, video, or GPS (or combination) as well as triggering behaviour such as 'freezing' the drone in place, returning the drone to the controller or forcing the drone to land safely. A range of "soft kill" mitigation add-ons can also provide a useful deterrent when jamming is not able to be used. These options include a long range laser dazzler and white light illumination device that can act as both a deterrent and can also provide useful target designation capabilities.

KEY FEATURES

- Single mast solution
- High speed pan and tilt mechanism up to 80° per second
- Multiple object detection and tracking
- Ease of integration to third party systems
- Highly modular – wide selection of easily configurable EO systems
- Soft kill options
- Auto-classification
- Custom-made, multi-band helix and flat panel antenna array and Tri Band array
- Broad-ranging effecting capabilities with high-powered signal transmission, enabling superior range and target/threat mitigation

JAEGER COUNTER-UAS



POPULAR CONFIGURATIONS (OTHER OPTIONS ARE AVAILABLE)

Part Number	Ranger-LR-CUAS-225	Ranger-LR-CUAS-300	Searcher-CUAS-300	Searcher-CUAS-690	Searcher-CUAS-900	Searcher-CUAS-HD-960
Thermal Type	Uncooled VOx Microbolometer			Cooled InSb FPA		CMT (HgCdTe – Cadmium Mercury Telluride)
Thermal Field of View	17.5° (W) to 2.0° (T) 25mm to 225mm (9x zoom)	11.0° (W) to 1.5° (T) 40mm to 300mm (7.5x zoom)	35.5° (W) to 1.83° (T) 15mm to 300mm (20x zoom)	15.6° (W) to 0.8° (T) 35mm to 690mm (19.7x zoom)	12.2° (W) to 0.61° (T) 45mm to 900mm (20x zoom)	11.0° (W) to 0.9° (T) 80mm to 960mm (12x zoom)
Daylight FOV	23.42° (W) to 0.78° (T) 15.2mm to 500mm (33x zoom)			21.2° (W) to 0.45° (T) 10.1° (W) to 0.23° (T) (x2) Extender 16.7mm to 1000mm (60x zoom) 33.4mm to 2000mm with (x2) extender (120x zoom)		

JAEGER PAN AND TILT UNIT

Part Number	JPT
Pan Range; Pan Velocity	360° continuous; 0.0002° - 80.0° per second
Tilt Range; Tilt Velocity	-90° -to +90°; 0.0002° - 80.0° per second
Accuracy	0.0002° / 0.0035 mRad
Repeatability	0.0002° / 0.0035 mRad
Actuation	Custom Stepper Motors

IMAGE PRESENTATION

Video Output	NTSC or PAL Composite Video
Connector Types	BNC (2) provides thermal and daylight videos simultaneously
Video over IP	Integrated IP encoders provide simultaneous h.264 RSTP and ONVIF Profile-S

TELEMETRY

Presets	127x Preset positions, 16x preset tours
Protocols	Pelco D, Pelco D Extended, ONVIF Profile-S
Interface	RS485, ONVIF Profile-S, Serial <-> IP
Positioning	Absolute positioning feedback

PHYSICAL CHARACTERISTICS

Input Voltage	Nominal 48VDC (36-72VDC)
Power Consumption	Typical: 120W, Peak: 250W
Housing Material	Iridized aluminium, White powder marine grade paint finish (other colours are available upon request)
Camera Weight	22kg / 48.5lb (Excluding Payloads)
Camera Size (mm)	H434 x W343 x H343 (Excluding Payloads and Through Shaft)
Aux Payload Connectors (Optional)	QTY4x External Connectors Allowing for a selection of the following: Power Outputs - 12vDC, 6A / 24vDC, 15A / 48vDC, 10A Network Output - Cat5e, 10/100 Base T Antenna Connections - Cellular, GPS, WiFi, IP Radio, GPS Compass

INTERFACES

Ethernet	Command and Control of all functions including streaming of H.264 Video
RS485	Command and control of all functions and Firmware Upgrade

ENVIRONMENTAL

IP Rating	IP67
Temperature Range	-30°C (-22°F) up to 65°C (149°F) [-40°C with optional heater]

HARD KILL - RF EFFECTOR SYSTEM

Jammer Frequency Bands (Configurable)	VHF: 20-100 MHz 30 W ± 1.5 dB VHF: 10-100 MHz 30 W ± 1.5 dB VHF: 100-300 MHz 30 W ± 1.5 dB UHF: 300-520 MHz 30 W ± 1.5 dB UHF: 520-960 MHz 30 W ± 1.5 dB UHF: 960-1805 MHz 30 W ± 1.5 dB UHF: 1805-2400 MHz 30 W ± 1.5 dB UHF: 1805-2400 MHz 30 W ± 1.5 dB UHF: 2400-3800 MHz 30 W ± 1.5 dB UHF: 2400-3800 MHz 30 W ± 1.5 dB SHF: 3800-5000 MHz 30 W ± 1.5 dB SHF: 5000-6000 MHz 15 W ± 1.5 dB
	RF Power output: 30-15W per Band x 12 Bands + Antenna Gain
Jamming Mode	Full Band Digital Sweep + PN Noise for 3G/4G cellular bands
Jamming Technology	Direct Modulation Over Synthesized Signal
Antennas	Internal Directive High Gain Antennas and External Omnidirectional

SOFT KILL - STROBE LIGHT / TARGET ILLUMINATION

Beam Width	1 to 40 degree (zoomable)
Output	12,000,000 Peak Beam Candle-Power (no maximum threshold; -10% minimum threshold)
Range	0.25 lux @ 6,925meters 1 lux @ 3,500 meters 12 lux @ 1,000 meters Visible ranges per ANSI/NEMA FL1: Flashlight Basic Performance Standard
Lamp	85 Watt Xenon Short Arc, Instant cold start and hot restrike
Strobe Mode	Default Frequency of 10Hz and Duty Cycle of 38%. User-Adjustable Frequency from 1-31Hz User Adjustable Duty cycle from 3-63%
Controllable Functions	On/Off, Beam Intensity, Beam Width, Strobe
GPS	Optionally Available

SOFT KILL - LASER DAZZLER

Laser Power	5000mW
Wavelength	520 nanometers
Beam Divergence	6 mrad