



## CoroCAM<sup>®</sup> 8HD UAV

Combined LWIR, Solar Blind UV Corona and HD Visible Camera for UV Applications

The CoroCAM 8HD UAV combines a FLIR LWIR, Solar Blind corona and HD video camera into one system, sized and balanced to fit into a standard commercial UAV gimbal for mounting onto UAV's. The false coloured UV blobs fused onto the HD visible or radiometric LWIR image indicate the presence of corona discharges. The HD visible cameras high optical zoom and the safe close approach of the UAV to the hardware under inspection, allows the system to capture more detailed images of the physical condition of the hardware from all angles, allowing inspectors to better assign a maintenance priority. The camera can also be dismantled for man-portable inspections.

# FEATURES & PERFORMANCE:

LED Flashlight & Laser pointer

Remote Control receiver port

Tripod mount

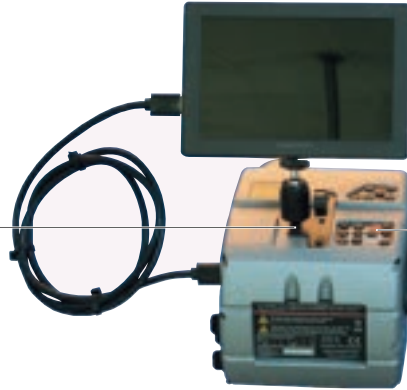


HDMI, USB, Composite Video Output

RS232 & SD Card Slot

Ethernet port & Power Input

Mounting bracket for external screen

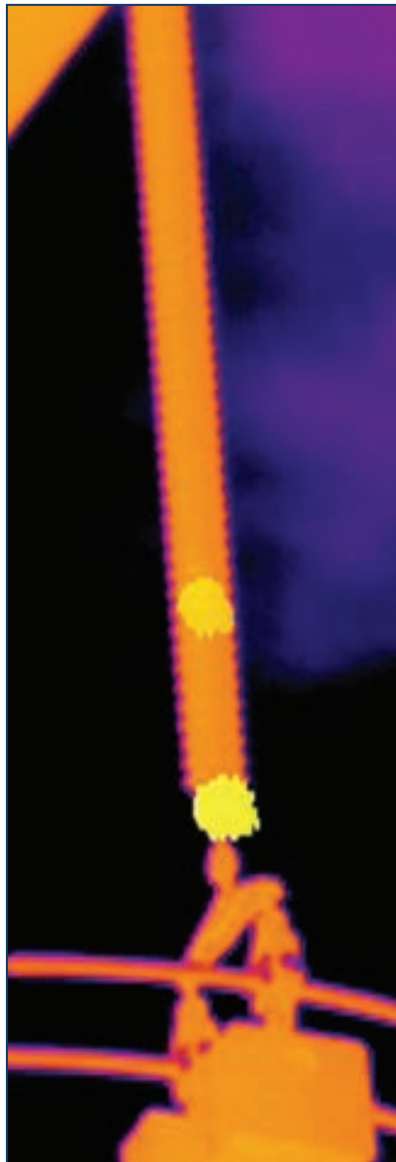
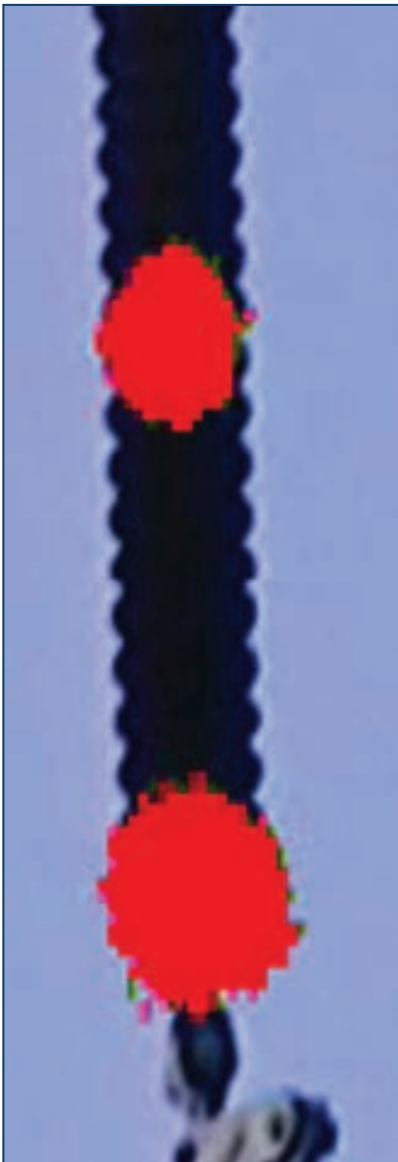


Easy operation via a multi-function keypad when used from tripod or hand carried



## FEATURES & PERFORMANCE:

- High sensitivity UV detector, which can detect UVC light at  $2.05 \times 10^{-18}$  Watt/cm<sup>2</sup>, this allows for the detection of the smallest corona discharges.
- 9Hz (or optional 25Hz) Radiometric IR camera module.
- Synchronized Smooth or Stepped Zoom of all 3 camera channels.
- IR & UV channels are zoomed digitally, visible is zoomed optically to minimum FOV, then digitally enlarged.
- Manual or Autofocus for the Visible channel, UV and IR channels has manual focus or can be synchronized with the Visible channel.
- Onboard still images, video and radiometric data recording in high-quality formats.
- Metadata recording of camera settings and measurements plus environmental variables manually entered - distance, air, temperature, air pressure, ambient humidity, and wind speed.
- The On Screen Display (OSD) shows all the relevant information.
- Manual or Auto Exposure of Visible and IR (Level) cameras, UV (Gain) is manually set.
- Integrated GPS with internal and complementary external booster antenna.
- UV overlay colors have 6 pre-sets or 255 selectable hue levels.
- UV overlay translucency control.
- UV threshold, Integration & Noise Reduction control.
- 14 IR color palettes with contrasting Isotherms.
- Auto or Manual IR Span.
- Camera software update via download to SD card.
- Internal or External power supply.
- 12 Month warranty.



# SYSTEM SPECIFICATIONS:

CoroCAM 8HD UAV Brochure Version: 2024/1  
Specifications subject to change without notice

## ULTRAVIOLET CHANNEL

Typical Sensitivity:	SB (240 - 280 nm) $2.05 \times 10^{-18}$ Watt/cm <sup>2</sup> ; IEC 60270:2000: 3pC @ 20m (Korea Electrotechnology Research Institute) & 1.8pC @ 10m (Innogy)   NEMA107-1987: 13.16dB $\mu$ V(RIV) @ 1MHZ @ 10m (Korea Electrotechnology Research Institute)
	NSB (240-300 nm) $\sim 1 \times 10^{-18}$ Watt/cm <sup>2</sup> , 0.8pC @ 15 m Tested & certified by Innogy SE-Eurotest Germany: IEC 60270:2000
Field of view:	8° Horizontal x 6° Vertical $\sim 10^\circ$ Diagonal   Zoom Range (optical): 1x   Zoom Range (digital): 8° to 2°, in 3 steps
Focus type:	Linked to Visible with manual override
Focus Range:	<0.7m to Infinity
Detector Life Span:	No degradation
Corona Measure Method:	Intensity based count, Calibrated for irradiance value of selected area
Threshold Mask:	Useful range 20-100%
UV Transparency:	0-100%
UV False Color Selection:	6 pre-set colors, 100 user selectable hues
UV Integration:	Adjustable period, Summation or Noise Reduction

## THERMAL

Detector Type:	VOx Microbolometer
Spectral Band:	7.5 - 13.5 $\mu$ m
Temperature Range:	-40°C to 160°C
Sensitivity:	Infrared (NE $\Delta$ T): <62.5mK @ f1.25
Focus Range:	2.3m to Infinity
Resolution:	640 x 512
Field of View:	10.4° x 8.3°
Zoom:	8x digital
IFOV:	0.283 mRAD
Readout:	<9 0r 25Hz
IR Palettes	15x palettes / Isotherms
Level & Span	Auto or Manual

## VISIBLE CHANNEL

Resolution:	1920 x 1080 pixels
Sensitivity Day Mode:	0.1 lx (F1.6, 50 % IRE, ICR off)
Sensitivity Night Mode:	0.05 lx (F1.6, 50 % IRE, ICR on)
Exposure / Image Enhancements:	Auto or Manual
Focus Type:	Automatic with manual override
Focus Range:	<1.5m to Infinity
Useful Zoom Range (optical):	16° (0.5x) to 2° (2x)
Camera Module Zoom Range:	30x Optical zoom, 58.9° to 2,11°
Zoom type:	Stepped and Smooth
Zoom Range (digital):	4x, 6x, 8x, 12x
Maximum IFOV:	0.01917 mRAD / 52.1629

## DISPLAY

Display Modes:	UV+Vis, UV+LWIR, VIS only, LIR only, UV only, UV Priority
UV Overlay Accuracy:	<1 millirad deviation
On Screen Display:	Gain, zoom, count, active functions

## ACCESSORIES

Gimbal Compatibility	Includes: Gremsy T3, DJI Ronin, and more
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IO & OS	
OS Features:	Icon based menu system
	10x User Profiles
	Boot to inspection capable in 6s, to record capable in 60s.
	Image Sort Numbering
	Video list and playback
Input:	Keypad, RS232, Ethernet, SBUS, CAN, PPM
Output:	HDMI, Composite Video
	Onboard speaker
Bi-Directional:	Micro USB, RS-232
Firmware:	Internal GPS, with external hotplug booster antenna
Light source:	LED Flashlight (Adjustable brightness , 10-100% usable range)
Software Update:	Via files downloaded from website to Mirco SD card
OS Features:	Icon based menu system

MEDIA & DATA STORAGE	
Storage Medium:	Micro SD card (32 GB supplied with camera)
Storage Capacity:	1000+ images or >1 hr video/GB
Storage Format Video:	AVI, (H.264 compression)
Storage Format Still:	JPG
Storage Format Radiometric Still:	UCF
Media Download:	Via Card Reader or USB

PROTECTION	
Storage / Transport Case:	Pelican style plastic hard case
Environmental Protection:	IP43
Safety Standard:	CE, IEC61010-1
Warranty:	12 months

PHYSICAL SPECIFICATION	
Useage:	Mounted
Weight:	1.6 Kg including battery
Dimensions:	188 mm L x 156 mm W x 129 mm H
Window aperture:	Ø = 62 mm
Operating Temp:	-15 °C to 55 °C
Storage Temp:	-20 °C to 60 °C
Humidity:	Up to 90 %, non condensating
Mounting Point	Standard 1/4" X20 thread tripod mount

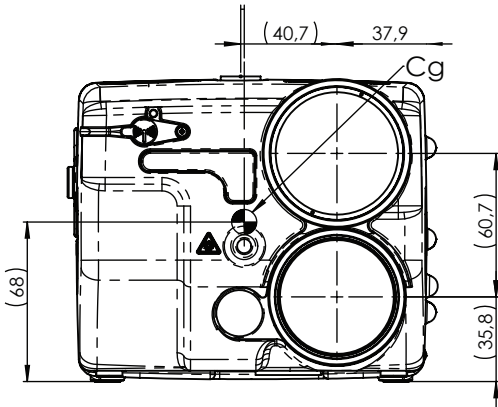
POWER	
Battery:	Sony Li-ion, Type L compatible
Battery Location:	Internal, quickly replaceable
Operating Time:	4hrs maximum
Continuous Operation:	No overheating
Charging:	In camera or in external charger
External Power Supply:	9-16V 12VA - Car or mains adaptor   Mains Adaptor: 110-240 V ac 50 - 60 Hz / 12 V dc 3A   Protection: Reverse polarity, over current, under voltage



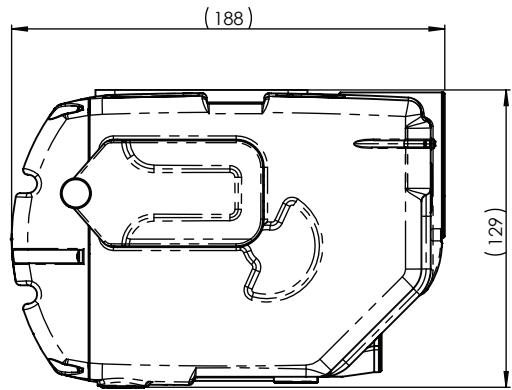
Website: [www.uvirco.com](http://www.uvirco.com)  
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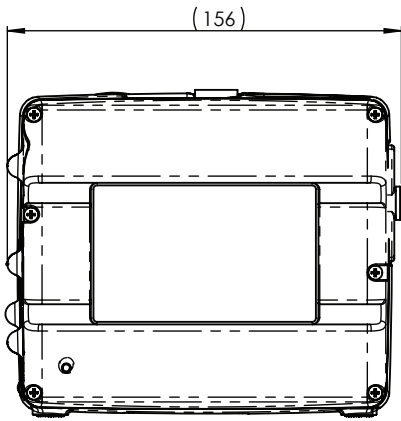
# DIMENSIONS:



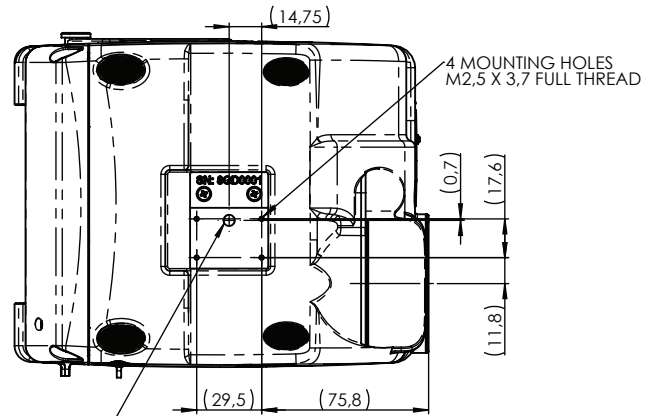
Front view



Side view



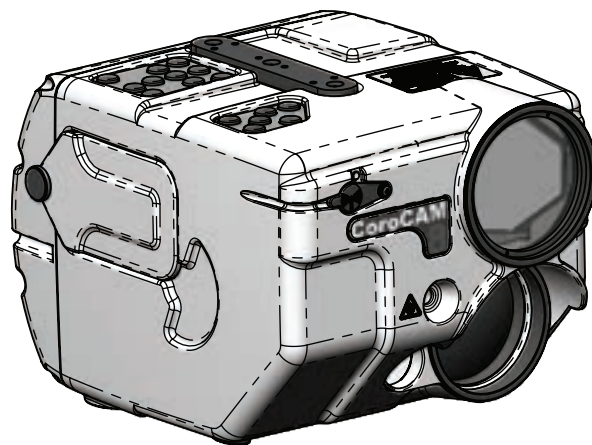
Back view



Bottom view

MOUNTING HOLE  
1/4"-20 UNC X 3,7 FULL THREAD

4 MOUNTING HOLES  
M2,5 X 3,7 FULL THREAD



ALL DIMENSIONS IN mm Tol +0.1 -0.1mm



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