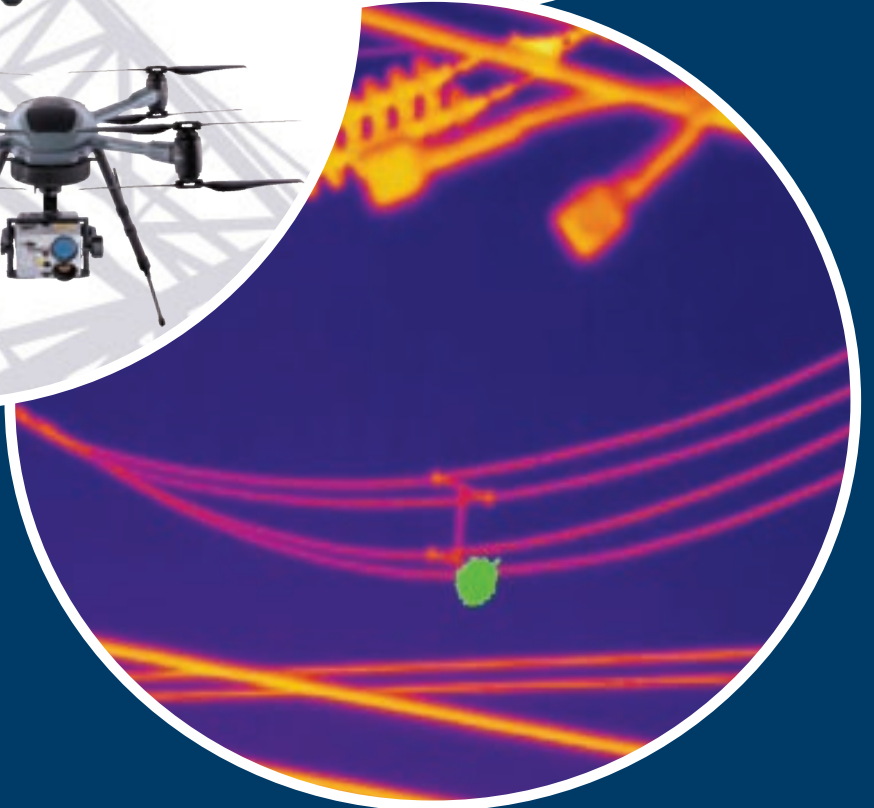


CoroCAM® UAV Product Catalog

We manufacture and supply UV emission visualization cameras that offers a full range of combined Ultra Violet, Infrared and Visible inspection systems in handheld and aerial applications to the world's Power Industry. The CoroCAM® cameras gives power utilities the ability to determine where preventative maintenance should be performed to avoid outages and equipment failure.





With Optional Thermal
Module

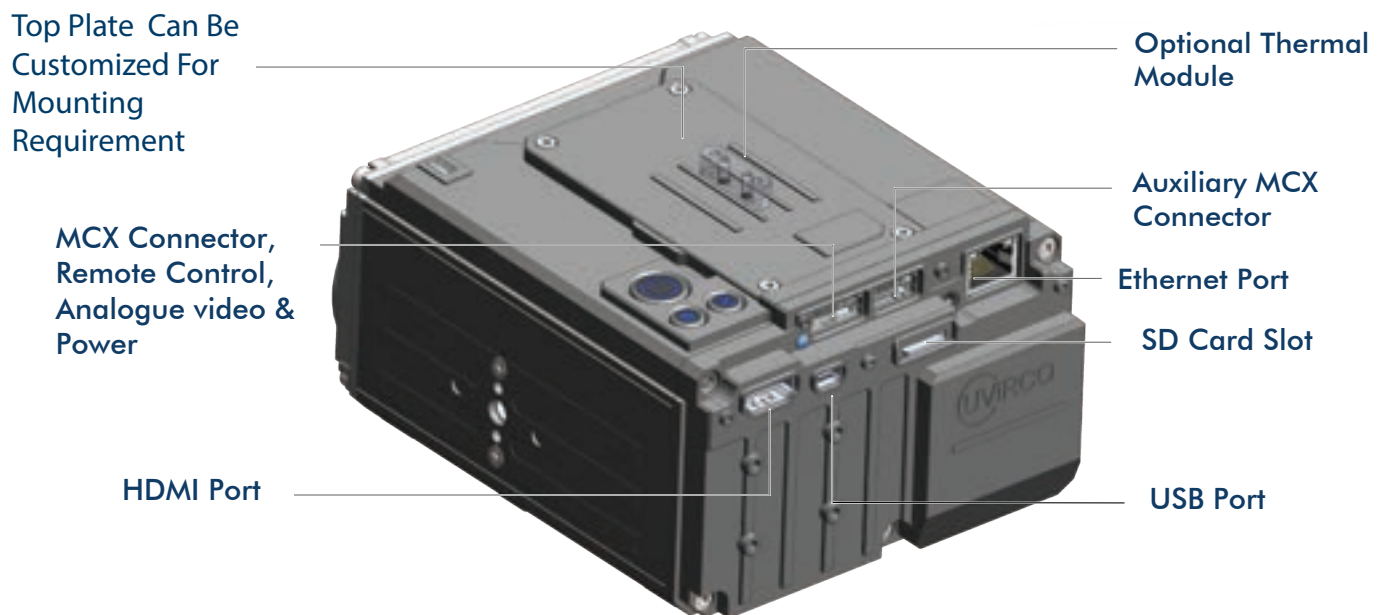
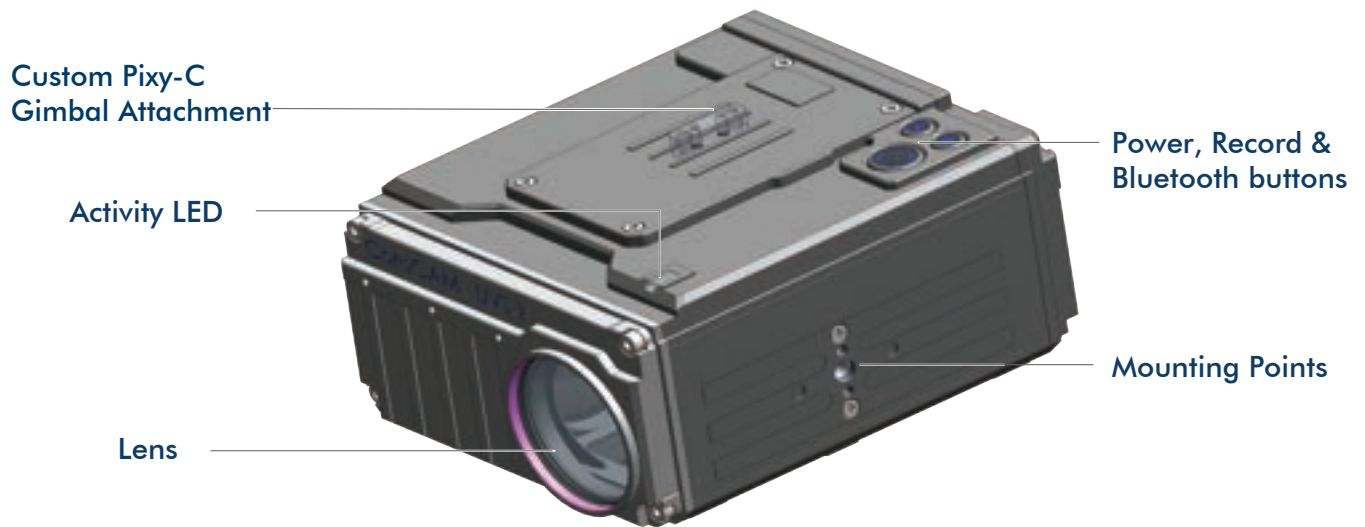
CoroCAM[®] UVS1

Specialist UAV Corona Camera

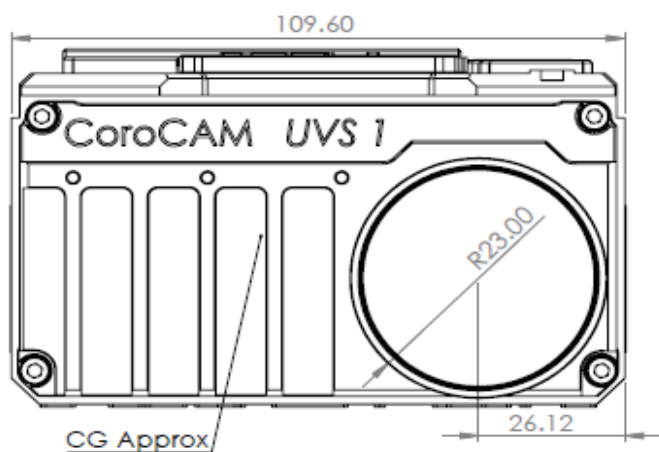
The CoroCAM UVS1 is designed for UAV combination of the successful CoroCAM Solar Blind corona sensor and a HD visible camera in a lightweight package able to fit into smaller gimbals. The resulting system gives excellent UV sensitivity, a wide FOV for close up inspection and good resolving power.

Setup via bluetooth, with video and still recordings onto an onboard μ SD card, downlink the HDMI or composite output and input remote control commands via CANBUS / PWM / RS232 / Ethernet.

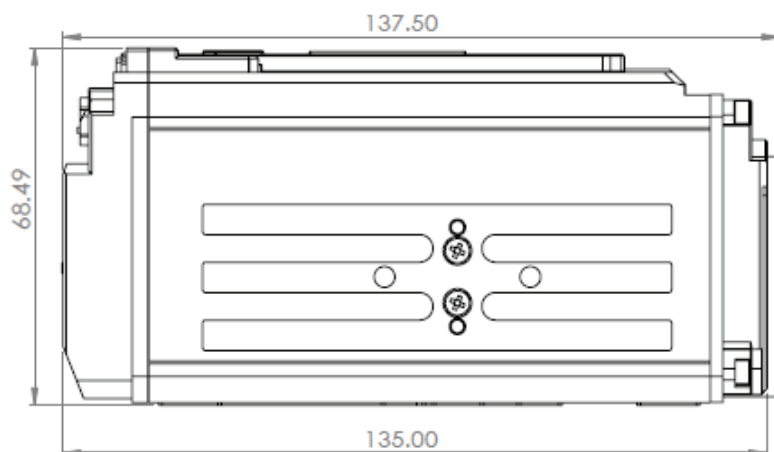
FEATURES:



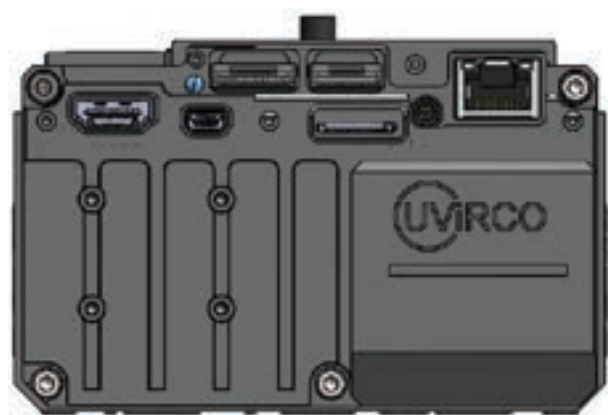
DIMENSIONS:



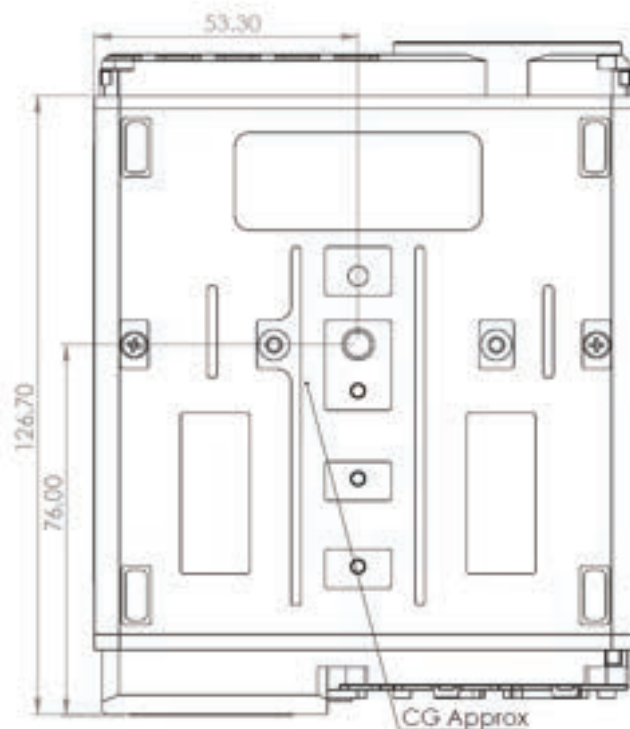
Front view



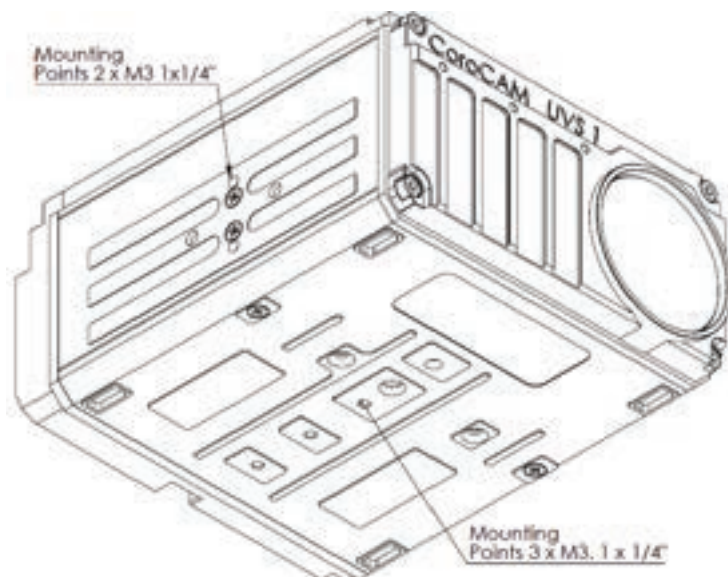
Side view



Back view



Bottom view



ALL DIMENSIONS IN mm Tol +0.1 -0.1mm

SYSTEM SPECIFICATIONS:

CoroCAM UVS1 Brochure Version: 2023/1
Specifications subject to change without notice

ULTRAVIOLET CHANNEL	
Typical Sensitivity:	SB (240 - 280 nm) 5×10^{-18} Watt/cm ² , 3.6pC @ 20m
Field of view:	19° Horizontal x 14° Vertical ~ 24° Diagonal Zoom Range (optical): 1x Zoom Range (digital): 16° to 6°
Focus type:	Linked to Visible with manual override
Focus Range:	3m 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:	4 presets with 100 user selectable hues
UV Integration:	Adjustable period, Summation or Noise Reduction

VISIBLE CHANNEL	
Resolution:	1920 x 1080 pixels
Sensitivity Day Mode:	0.05 Lux F 1.6
Sensitivity Night Mode:	0.03 Lux F 1.6
Exposure / Image Enhancements:	Auto or Manual / Wide Dynamic Range
Focus Type:	Automatic with manual override
Focus Range:	3m to Infinity
Useful Zoom Range (optical):	16° (0.5x) to 4° (3x)
Camera Module Zoom Range:	10x, 53° to 4.9°
Zoom type:	Stepped
Zoom Range (digital):	4x, 6x, 8x, 12x
Maximum IFOV:	0.0445 mRAD

IO & OS	
OS Features:	Icon based menu system, 10x User Profile, Boot to inspection capable in 6s, to record capable in 60s, Image Sort Numbering, Video list and playback
Input:	SBUS, (CAN or RS232 option), Ethernet; ON/OFF Switch (Always ON Selection via Jumper), Bluetooth Pairing, Record Start/Stop
Output:	HDMI via port or Ethernet / Wi-Fi (optional) & Composite Video (10 pin accessory port) Optional Wi-Fi - deactivates ethernet & adds 100g
Firmware:	Internal GPS, with external antenna via MCX connector
Software Update:	Via files downloaded from website to Mirco SD card

MEDIA & DATA STORAGE	
Storage Medium:	Micro SD card (64 GB supplied with camera)
Storage Capacity:	1000+ images or >1 hr video/GB
Storage Format Video:	AVI, 720p (H.264 compression)
Storage Format Still:	JPG
Media Download:	Via Card Reader or USB

SYSTEM SPECIFICATIONS:

CoroCAM UVS1 Brochure Version: 2023/1
Specifications subject to change without notice

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

POWER	
Battery:	N/A
Power Consumption:	12 Watt
Operating Time:	Depending on Power supply (External or UAV battery) Typical 3hrs on 40W battery
Continuous Operation:	No overheating
Charging:	N/A
External Power Supply:	9-60 V 12VA - Car or mains adapter Mains Adaptor: 110-240 V ac 50 - 60 Hz / 12 V dc 3A Protection: Reverse polarity, over current, under voltage

PHYSICAL SPECIFICATION	
Useage:	Mounted horizontal (standard) or mounted vertical (optional)
Weight:	740 g without the brackets 800 g with Boson Module 1.25 Kg with the Pixy - C gimbal, brackets and thermal
Dimensions:	110 mm L x 143 mm W x 67 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 at bottom, M3 mounts bottom and right side
Center of Gravity	70 - 64 mm from rear (Depending on Options)

PROTECTION	
Storage / Transport Case:	Pelican style plastic hard case
Environmental Protection:	IP44 (Optional IP 65)
Safety Standard:	CE, IEC1010-1
Warranty:	12 months

WITH OPTIONAL THERMAL MODULES

THERMAL	FLIR TAU 2	FLIR BOSON
Spectral Band:	7.5 - 13.5 µm	8µm - 14µm
Sensitivity:	<50 mK	<50 mK
Resolution:	640 × 512	640 × 512
Field of View:	32° x 26°	24° x 19.2°
Level & Span:	Auto or Manual	Auto or Manual



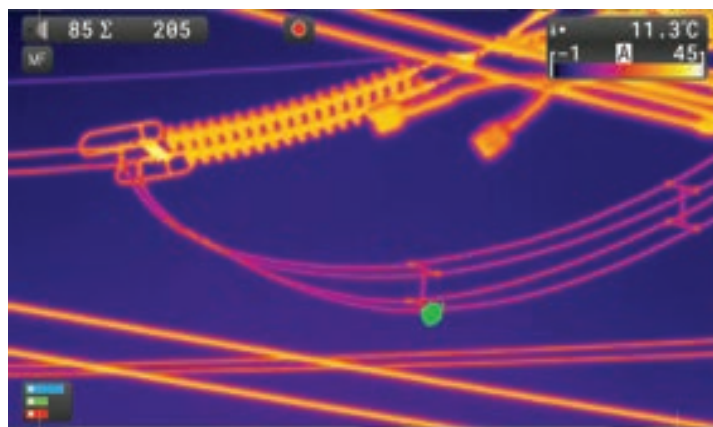
Website: www.uvirco.com

Address: UVIRCO Technologies (Pty) Ltd,

33 De Havilland Crescent, Perseus Technopark, Pretoria 0020, South Africa

Tel: +27 (0)12 349 3760 | Fax: +27 (0)86 435 5204 | Email: info@uvirco.com



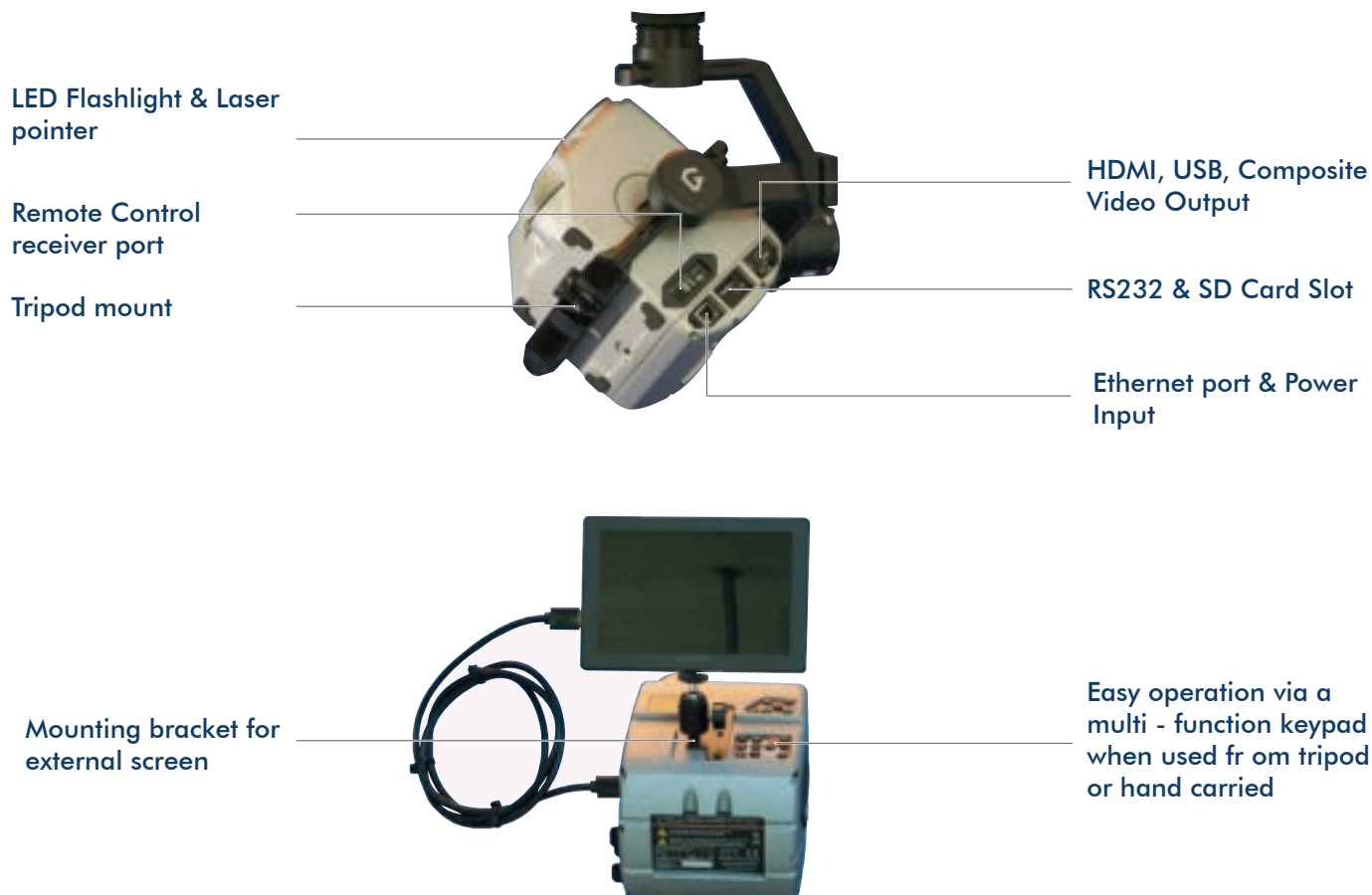


CoroCAM® 8HD UAV

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 dismounted for man-portable inspections.

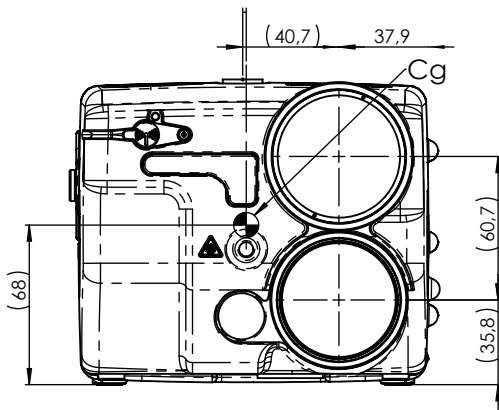
FEATURES & PERFORMANCE:



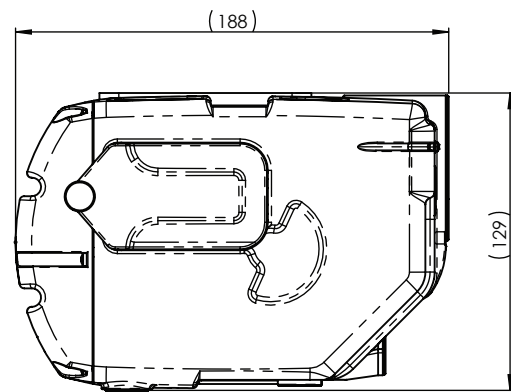
FEATURES & PERFORMANCE:

- High sensitivity UV detector, which can detect UVc light at $2.05 \times 10^{-18} \text{ Watt/cm}^2$, 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.

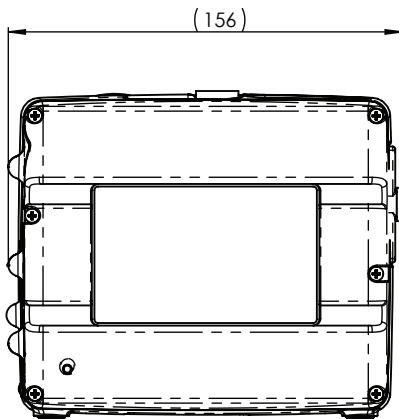
DIMENSIONS:



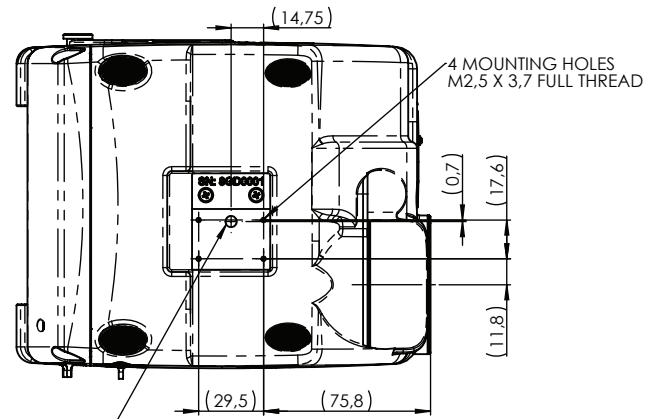
Front view



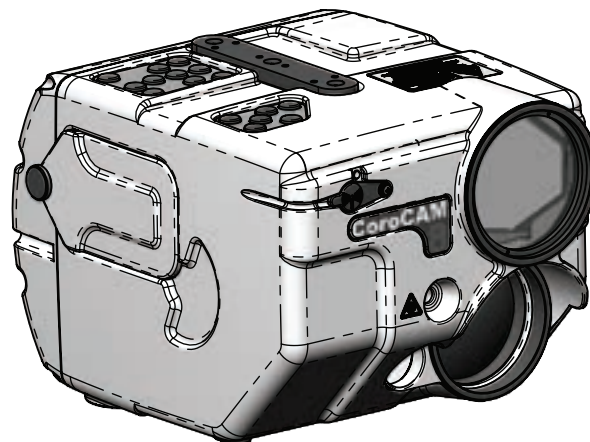
Side view



Back view



Bottom view



ALL DIMENSIONS IN mm Tol +0.1 -0.1mm

SYSTEM SPECIFICATIONS:

CoroCAM 8HD UAV Brochure Version: 2023/1
Specifications subject to change without notice

ULTRAVIOLET CHANNEL

Typical Sensitivity:	SB (240 - 280 nm) 2.05×10^{-18} Watt/cm ² ; IEC 60270:2000: 3pC @ 20m (Korea Electrotechnology Research Institute) & 1.8pC @ 10m (Innogy) NEMA107-1987: 13.16dB μ V(RIV) @ 1MHZ @ 10m (Korea Electrotechnology Research Institute)
	NSB (240-300 nm) $\sim 1 \times 10^{-18}$ Watt/cm ² , 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 μ m
Temperature Range:	-40°C to 160°C
Sensitivity:	Infrared (NE Δ 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, LWIR only, UV only, UV Priority
UV Overlay Accuracy:	<1 milirad deviation
On Screen Display:	Gain, zoom, count, active functions

ACCESSORIES

Gimbal Compatibility	Includes: Gremsy T3 and more
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SYSTEM SPECIFICATIONS:

CoroCAM 8HD UAV Brochure Version: 2023/1
Specifications subject to change without notice

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



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