



CoroCAM[®] UVS1

Professional UAV Corona Camera



UAV based inspections require sensor packages which are small, lightweight and yet sensitive enough to detect discharges from safety stand-off distances.

The CoroCAM UVS1 achieves this by making use of the successful CoroCAM solar blind filter & detector array and a lighter wider Field Of View (FOV) lens paired with an HD visible camera.

Both cameras are optically and electronically aligned allowing for exact overlay of the detected discharges at all optical zoom levels.

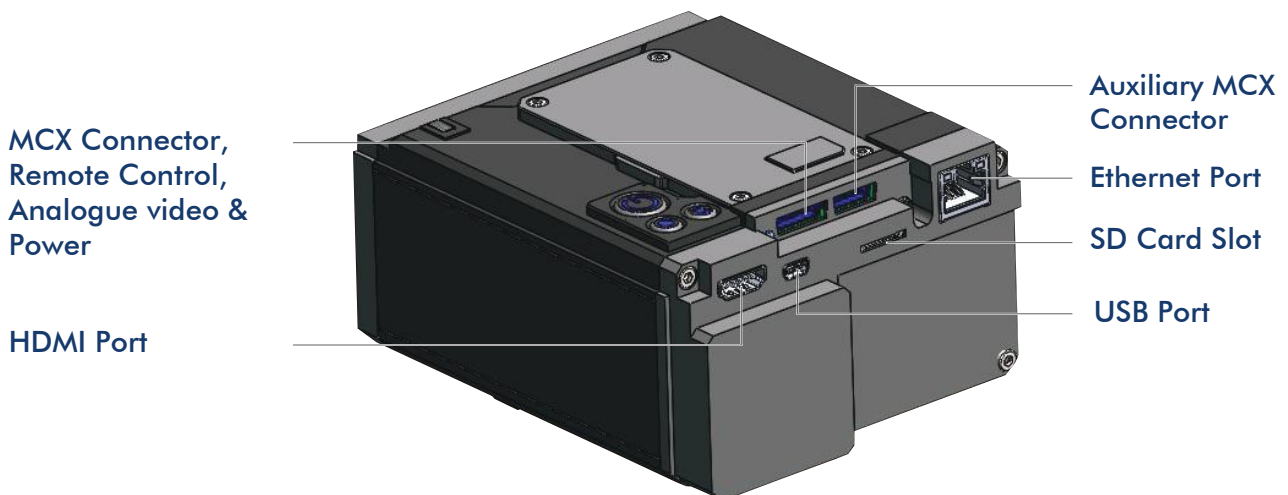
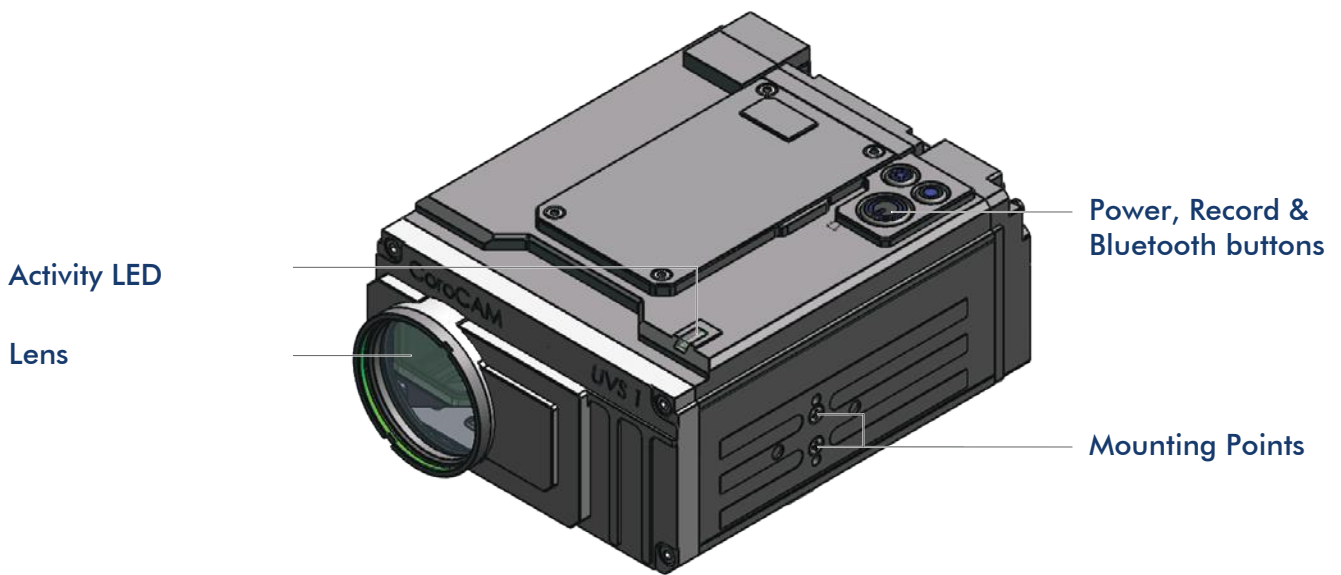
The HD visible camera FOV and resolution provides the detail required to effectively assess the corona discharge location thereby facilitating determination of the maintenance priority rating.

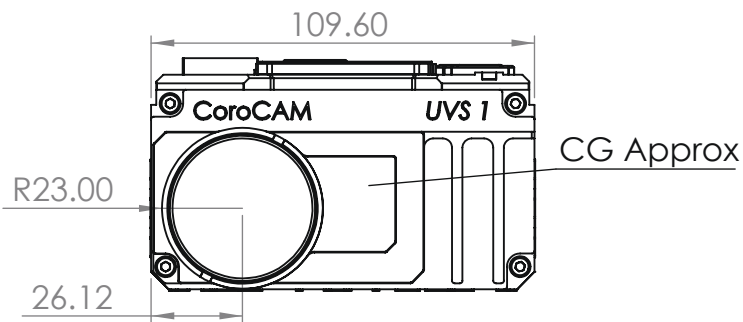
The CoroCAM UVS1 (installed in a suitable gimbal) can be lofted by a number of enterprize grade UAV's. The HDMI or composite video output can be down-linked to a base station display, while the RS232/CAN port can accept remote control signals from a base station via a wireless transmitter.

Video and still recordings can be made on the camera while being remote controlled. An integrated GPS provides data recorder in meta files.

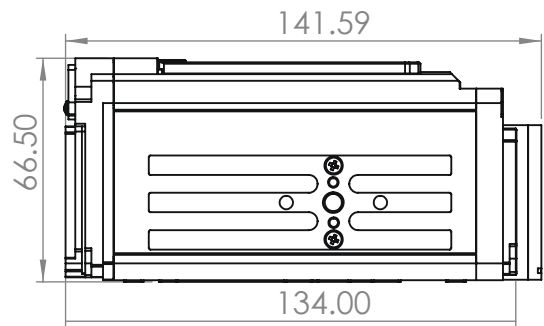
The above makes the CoroCAM UVS1 ideal for inspectors who want a professional UAV corona camera.







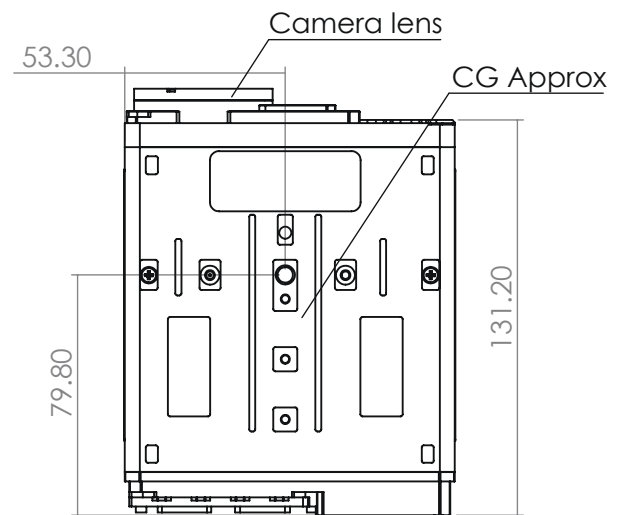
Front view



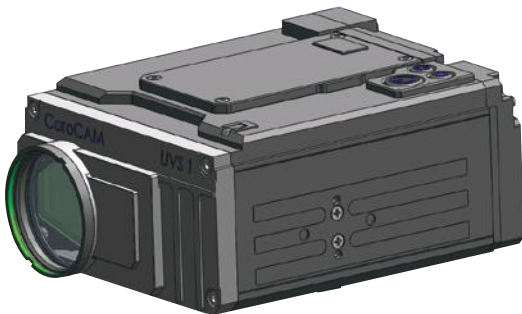
Side view



Back view

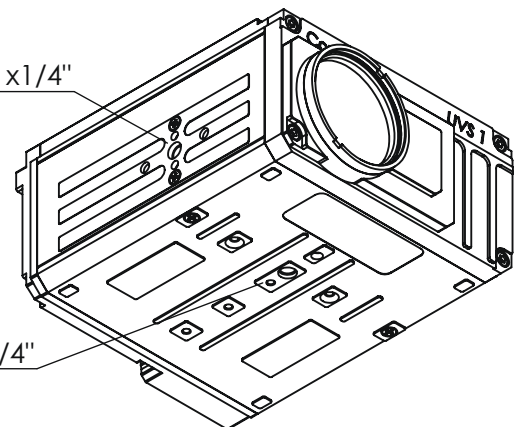


Bottom view



Mounting
Points 2 x M3 1x1/4"

Mounting
Points 1 x M3, 1 x 1/4"



ALL DIMENSIONS IN mm Tol +0.1 -0.1mm

ULTRAVIOLET CHANNEL	
Typical Sensitivity:	SB (240 - 280 nm) 5×10^{-18} Watt/cm ² , Approx. 3,6pC @ 20m
Field of view:	19° Horizontal x 14° Vertical ~ 24° Diagonal Zoom Range (optical): 1x Zoom Range (digital): 19° to 3.3°
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 @ 50 fps
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):	24° (Max. out) to 3.3° (Max. in)
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 Micro SD card

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

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

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 adaptor 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:	750 grams
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:	Nanuk style plastic hard case
Environmental Protection:	IP44 (Optional IP 65)
Safety Standard:	CE, IEC1010-1
Warranty:	18 months



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