DayCor®
MICROM HD

Ultra light corona camera for UAV | HD - High Definition

DayCor® micROM is a compact HD corona camera designed for use on UAVs or inside small gimbals. It is light in weight, has low power consumption, supports most commonly used communication protocols, and is electromagnetically shielded. micROM is a dual sensors camera comprising of a highly sensitive Solar Blind UV and a visible light sensor. As a result, micROM is capable of detecting, pinpointing, and imaging corona in daylight. The camera offers on-board recording in real time of corona partial discharge as it is emitted. The camera output is used as a means to investigate electrical and mechanical infrastructure faults that are related to corona partial discharge.

micROM camera for drones incorporates the DayCor® technology. Its patented UV filter ensures encompassing every corona signal in the inspected arena, leaving out sporadic distracting noise. HD footage is transmitted live to a remote monitor leading inspectors to faulty locations that call for closer investigation. Interfaces to GPS links the corona imaging with findings' locations. A full integration Plug-N-Play solution package is ready to be used and offered to DJI m300 drone operators as an accessory. micROM is easy to integrate through a set of commands that are supplied with the camera.

- HD video & stills camera
- Light weight, small size
- Wide FOV
- Low power consumption
- Communication protocols
- UV noise reduction
- Optical & digital zoom
- Electromagnetic shielding
- Easy integration on UAS
- Gimbal options w/integration support

MAXIMIZE FLIGHT DURATION, SPEED & FLEXIBILITY

In order to maximize flexibility, duration and velocity, weight must be kept to a minimum. micROM HD is a lightweight camera with energy-efficient usage, allowing longer, higher and faster flights scanning power lines. micROM HD silhouette simplifies the outline of gimbals design requirements.

SEE MORE GET MORE

micROM outputs & records HD videos providing a clear view of the inspected scenes, allows reading name plates & catalogue numbers of equipment for maintenance referencing. Videos can include corona events count, date & time, GPS, temperature and humidity (optional). Hence, higher resolution ends in more detailed data

MANAGE TIME EFFICIENTLY

micROM HD provides in real time the representation of corona as it is emitted, displaying both the discharge and the faults. Imagery, which is clear and sharp even while on the move, is used to determine fault location and level of severity.

EASILY INTEGRATED WITH YOUR UAV

micROM HD is controlled through a set of communication commands, using interfaces such as RS232, MAVlink, S. BUS, CAN BUS and MFIO-PWM. Gimbals for various UAVs with integration support are available as optional accessories.

INCREASE SAFETY AND PRODUCTIVITY

Unparalleled corona detection precision is attained through the implementation of Ofil proprietary solar blind DayCor® technology [Registered Patent EP1112459B1]. Absolute solar blindness ensures effective operability in daytime and guarantees highest sensitivity to corona UVc radiation. Enhance your productivity by referring to true corona occurrences without missing any.

MATCH YOUR DIMENSIONS

micROMHD is offered either as a camera core to be incorporated in gimbals or any other enclosure, or as an encapsulated micro corona camera. Possible to switch between profiles and select the most appropriate one.

TECHNICAL SPECIFICATIONS

ULTRA VIOLET (UV) - OPTICAL PROPERTIES	
Sunlight Rejection	Absolute – at all sunlight and all weather conditions, target can be inspected with the sun in the field of view
Minimum Discharge Detection	1pC @ 8 m (tested by Innogy SE-Eurotest : NEMA107-1987)
Minimum UV Sensitivity	7.8 x 10^{-18} watt/cm²
Minimum RIV Detection	30dBμV (RIV) @1MHz@10m
Field of View H x V	H: 20° x V:11.25°
Focus	Manual and auto focus, UV &Visible channels synchronized
UV Zoom	3x digital continuous zoom; UV & Visible channels synchronized
UV Frames Integration	On, selectable from a range | Off
UV Display Colors	Selectable from a range of colors
Spectral Range	240-280nm
UV Blobs Count	UV events per minute, 3 FOV sizes
VISIBLE - OPTICAL CONFIGURATION	
UV/Visible Overlay Accuracy	Deviation < 1 miliradian
Minimum Visible Light Sensitivity	0.03Lux
Field of View	H: 20° x V:11.25°, UV & visible channels synchronized
Visible Zoom	3x optical
Noise Reduction	Yes
Focus Range	5m to infinity, automatic & manual
DATA STORAGE	
Video Out Standard	HD 720p 60fps
Video Format	MOV
Image Format	JPG
Storage	FAT-32, exFAT
I/O CONTROLS AND OPERATION	
Video Interface	HDMI, RTSP
Communication Protocol	micROM-Protocol, GPS-NMEA, MAVlink, S. BUS
Interfaces	RS232, CAN BUS, MFIO-PWM, UART
Connectors	microHDMI, RJ45, Power, AUX, MFIO, miniUSB, JST
UV & Visible Output Combination Modes	Combine (UV & Visible), UV only, visible only
PHYSICAL CHARACTERISTICS & POWER SOURCE	
Storage and Operation Temperatures	-20°C up to +55°C | -4°F up to +131°F
Weight	Camera core: 675 gr [1.48lb] | Block Camera: 875gr [1.92lb]
Dimensions	L156 x W112 x H71mm | L6.14" x W4.4"x H2.79"
Power Source & Consumption	7-28V DC, 12 Watts
Sealing, Vibration and Shock	IP 42
Mounting	Precision mounting threads

ACCESSORIES

Installation kits, Adaptors & Gimbals for various UAVs with and integration support

GPS

CoronaWise - Corona Management Software

Li-Po rechargeable batteries: med range for 90 min | long range for 4 hours

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