DayCor®
MiCROM HD

Ultralight corona camera for UAV | HD High Definition

DayCor® micROM[HD] is an innovative corona camera designed for use on UAV or inside minute gimbals. It is light in weight, has low power consumption, supports most commonly used communication protocols and has electromagnetic shielding. micROM[HD] is the first micro HD camera with dual sensors: Solar Blind UV and visible light and is, therefore, capable of detecting and imaging corona in daylight. The camera offers on-board recording in real time of both UVc radiation and the radiating sources, providing a means to pinpoint faults and investigate corona partial discharge. With its DayCor® camera core and special filters, micROM[HD] enables focusing on corona while reducing distracting noise. Interfaces to GPS, temperature and humidity sensors enable adding specific data embedded in the recordings. micROM[HD] is easy to integrate using a supplied set of commands that control all camera functions. The HD imaging serves well the need for detailed clear views of remote/high specific elements and of installations. micROM[HD] is offered both as a camera core that fits well into a wide range of gimbals and as a block camera for most small UAVs with optional customizing.

» HD video & stills camera

» Micro weight, micro size

» Wide FOV

» Low power consumption

» Communication protocols

» UV noise reduction

» Optical & digital zoom

» TRH & GPS embedding

» Easy integration on UAS

» Electromagnetic shielding

MAXIMISE 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 gimbal design requirements.

SEE MORE GET MORE

micROM[HD] 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 INTEGRATE 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.

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

micROM[HD] 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	7.8×10^{-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	-20ºC up to +50ºC	-4°F up to +°F
Weight	Camera core: 700 gr [1.54lb]	Block Camera: 900gr [1.98lb]
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

GTRH a combined GPS & TRH sensor

CoronaWise - Corona Management Software

SD card memory

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