

MULTI-PURPOSE LARGE SCALE STABILISED CAMERA GIMBAL

The CM380 is a large 3 axis stabilised camera gimbal that is designed for use on platforms that require the ability to carry a large specialised payload.

The large internal space within the ball, provides the greatest amount of flexibility for the customer to install whichever sensor they require. High quality slip-rings route independent payload power supply, with spare signal cables (Up to 18 ways) for payload specific requirements. e.g. Daycor II Remote control

WHY CHOOSE THE CM380/CC ?

-  NO ITAR / EXPORT RESTRICTIONS
-  FLEXIBLE - LARGE GIMBAL TO FIT A RANGE OF DIFFERENT CAMERAS/SENSORS
-  WEATHERPROOF
-  3-AXIS STABILISATION

APPLICATIONS:

- POWERLINES
- BRIDGES
- BUILDINGS
- SURVEILLANCE
- COOLING TOWERS
- DAMAGE ASSESSMENT
- INFRASTRUCTURE INSPECTIONS



LARGE-SCALE STABILISED GIMBAL

APPLICATION FOCUS

CM380CC POWER-LINE INSPECTIONS

Corona is a phenomenon that results from the ionising of air due to high electric or electrostatic field. These fields often form as a result of poor electric field distribution and/or choosing incorrect parameters during design and/or environmental pollution deposits during operation.

In the CM380CC system, a sophisticated lens and filter system projects the UV light onto an electro-optical device (cone image converter and monochrome camera). The monochrome camera, with the help of a spectrum converter (converting radiation from one particular wavelength to another), is used for the detection of corona in the solar blind spectrum. The normal image is projected through an optical device onto a colour camera. The two resultant images are combined and presented as one colour image to the user.

The CM380CC System provides a video image of the corona spot. This information is sufficient to determine the exact position of the corona and its possible cause. Since the video provides a moving image, it is also possible to determine the characteristics of the corona and identify the type in question.

PAYLOAD SPECIFICATIONS

Sensors Technical Specifications:

Choice Of Sensor for Powerline Inspection:

Sensor #1a - CSIR® Daylight UV/IR MultiCAM UV/IR

Detector Sensitivity:

Infrared:	LWIR: 8 to 12 µm, NETD 250mK, 35 µm pitch
UVc:	240 to 280 nm, solar blind
Visibility:	3 Lux

Video Camera Output:

Camera resolution:	460 (H) TV lines (NTSC/PAL)
Scanning resolution:	525 lines EIA (NTSC)/ 625 lines CCIR (PAL)
Zoom factor:	25 x optical, 12 x digital

Optics:

Field of View(°):	8° Horizontal x 6° Vertical
Focus Range:	3m to infinity

Sensor #1b - DayCor® Daylight/UV Camera

UV Sensor

Sensitivity :	3x10 ⁻¹⁸ watt/cm ²
Min. RIV Detection:	10.7 dBµV @ 10 m
Field of View(°):	5° Horizontal x 3.75° Vertical
Focus:	Full Auto Focus for UV & Visible
Focus Distance:	0.5 to infinity
UV/Combined Zoom:	X2 and X4

Visible Sensor

UV/Visible Overlay:	Better than 1 milliradian accuracy
Min. Visible Sensitivity:	0.1 Lux
Zoom Factor:	25x Optical, 12x Digital

NOTE: Customer may retrofit any other camera/sensor which falls within the weight and space criteria

SYSTEM SPECIFICATIONS

Gimbal Capabilities:

Position Resolution:	0.02°
Stabilisation Accuracy:	+/- 0.25°
Elevation:	+/- 125°
Azimuth:	360° Continuous
Roll:	180°
Slew Rate:	155° / sec (2.7 rad/s)
Slew Acceleration:	100° / sec ²

Power Rating

Input Voltage:	9-36V
Power Consumption:	300mA @ Rest inc downlink, 2.5A @ Full Operation

Electronics

High Speed 16bit DSP

Combined Output:

Video Output:	PAL 50Hz / NTSC 60Hz
Optical Channels:	Visible, Infrared & Ultra Violet channels, IR separate and UV overlaid
Horizontal Resolution:	576 TV Lines

Physical Dimensions:

Weight:	4.5 KG 12 KG (CM380CC)
Dimensions:	W430 x H463 x D380
Temperature (C):	-20° to +55° (storage) 0° to +40° (operation)
Relative Humidity:	0-95%

