

weathercam

**Visual AI for camera based
present weather monitoring**





Innovative technology

weatherCAM blends proprietary computer vision technologies and cutting edge visual AI to use cameras as the present weather sensors of the IoT era. By leveraging on cameras ubiquity, both companies and public authorities operating surveillance networks can rely on a new, granular and real time source of weather data, to promptly confront with the challenges of climate change.

Digital outputs

weatherCAM works with outdoor IP cameras and returns minute by minute updates on the current weather conditions, by detecting the presence of ongoing precipitations, distinguishing their type and classifying their severity.

weatherCAM data are digital by nature and can be exchanged both as telemetry and custom alerts via MQTT or https protocols, making communications with control rooms and third party decision support systems easy and straightforward.

Your measurements, your privacy

weatherCAM is an edge native application, meaning that it runs directly onboard smart cameras by supported manufacturers, or local processing units installed within the camera network, like the Climate Camera Kit that we developed in collaboration with Eurotech. This keeps your images and privacy safe (weatherCAM is GDPR compliant) with no need to open your network towards remote cloud servers.

TECHNICAL DATA

Weather measurement performance

Operating principle	Software video analysis
Present weather identification	Rain, snow
Present weather reporting	Light, moderate, and heavy intensities
Weather reporting accuracy	± 25%
Sampling frequency	12 Hz (images per minute)
Measurement cycle	1 min

Camera requirements

Camera type	Visible IP camera
Camera format	Box, bullet or PTZ
Sensor dimension	1/2.8" or greater
Image resolution	fullHD 1080p (1920 x 1080 px)
Max operational focal length	10 mm with 1/2.8"
Camera position and angle	Horizontal ±10°
Light conditions	Use of embedded IR illumination is required during nighttime

Output

Data communication	10/100 Mbps Ethernet 4G LTE (external router and SIM required)
Data output protocols	MQTT, https
Data format	JSON formatted text
Data channels	Telemetry and alerts (based on custom thresholds)