



*Paving Intelligence into  
Safety, Security & Mobility*



# XCam-ng™

## Advanced Intersection Control Video Sensor

Citilog's XCam-ng is a real-time video-sensor enclosed in a rugged elegant housing for advanced detection functions at intersections and on ramps.

The XCam-ng video-sensor offers an alternative to embedded magnetic loop detectors. It provides data such as queue length and static occupancy enabling better evaluation of traffic demand (queue)

and infrastructure availability (spatial occupancy) at intersections. This advanced data, when associated with an adaptive real-time strategy, enables incremental adjustments to traffic signal timings based on real time traffic changes at each intersection.

The XCam-ng video sensor allows a more cost effective approach to replace loop-based detection. It also allows more efficient traffic control at intersections, thus reducing congestion and minimizing delays for road users.

The XCam-ng is a low cost sensor that makes the most of existing infrastructure and its components resulting in a quick return on investment and an excellent cost/benefit ratio.

Ideal at intersections and on-ramps, XCam-ng provides built-in low power consumption and wireless communications.

XCam-ng components (particularly the CMOS sensor) have been specifically designed to ensure durability of the sensor while optimizing performance of the video-detection algorithm. The XCam-ng's detection algorithm is flexible and adaptable to changing environmental conditions (night or day, sun or rain) to maximize traffic monitoring capabilities.

System setup and modification of detection zones are performed within a few minutes, with a friendly graphical user interface (GUI) via a laptop computer.

Queue, static occupancy, gridlock detection and other advanced functions can be easily associated with loop detector outputs for straight forward communications with a traffic controller.

Fail-safe functionality allows for true 24/7 operation.

The XCam-ng communicates with any traffic controller through a communications board (XCom) or directly to any field equipment or central system through serial or Ethernet-based communications protocols. A wireless module enables the wireless connection of several XCam-ng video sensors for an easy and flexible deployment.



### KEY CAPABILITIES

- Real time queue length data and management for accurate demand measurement.
- Anti-Gridlock functions for intersection centers.
- Video streaming for intersection monitoring.
- Seamless communication with traffic Controllers and integration into existing urban traffic management systems.
- Can be associated with adaptive real-time strategy for maximum intersection efficiency.
- Improves road safety and mobility thus reducing environmental impacts from traffic congestion and delays.

### KEY BENEFITS

- Low cost and seamless deployment.
- Fast ROI (Return on Investment) of above-ground detection compared to traditional road-embedded sensors.
- Reduce the negative economic, social and environmental impact from traffic congestion.
- Waiting time reduction up to 30%, using queue length in conjunction with adaptive signal control. A reduction of 4-12% in greenhouse gas effect emission.



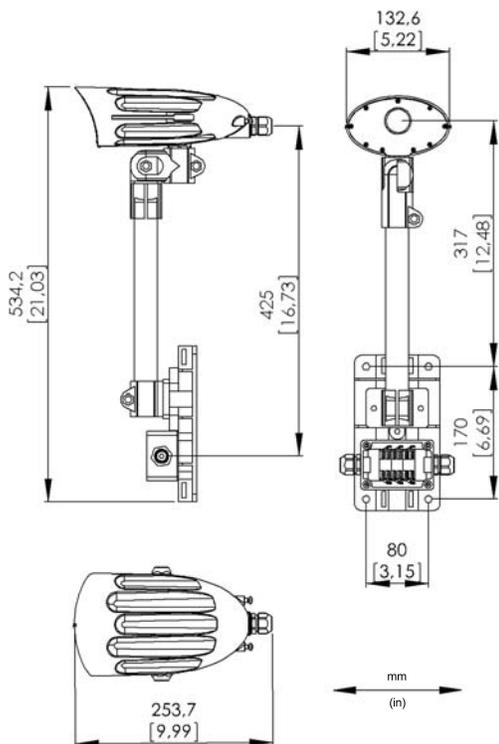
The XCam-ng can provide video streaming permitting remote monitoring of intersections and monitoring via the Traffic Management Center. Configuration or maintenance operations can also be performed remotely for greater efficiency and a lower cost of operation and maintenance.

The XCam-ng is delivered with a mounting bracket, extension pole and connection block. This allows the XCam-ng to be installed in the field without opening the video sensor housing, thus extending its life and avoiding troubleshooting in the field. Its capabilities go beyond typical requirements of video-based presence sensors to ensure durability.

The extension pole can be adjusted in length and mounted either horizontally or vertically to fit the physical requirements of any site.

*The XCam-ng provides a cost-effective, easy-to-install and field-proven solution as well as an innovative approach to advanced adaptive control.*

## Technical Specifications



### Sensor

- 1/4" VGA CMOS sensor.
- Minimum illumination 0.04 lux. @ f/1.2.
- Anti-blooming, zero smearing.
- Signal to Noise ratio: >50dB.

### Housing

- IP67 Injection molded polycarbonate housing.
- Sun shield for hot climate and direct sun exposure.
- Size: 132 x 254 x 124 mm.

### Hardware

- Power Supply: +12/24V AC/DC.
- Power consumption: < 3W.
- -34°C / +74°C.
- Humidity: 0 to 95% RH, non condensing.
- Weight: 600 g.

### Communications

- Wireless module (GPRS, ISM).
- Output to XCom: Ethernet or RS485.

### XCom communications board

- Communications to a traffic controller.
  - 24 open collectors.
  - Ethernet.
  - Serial.
- DIN-rail mountable.
- Size: 175 x 107 x 26 mm.
- Connection to PC: USB, Ethernet.



## DETECTION HIGHLIGHTS

- High performance trajectory and tracking-based vehicle detection.
- Real time queue length.
- Anti-gridlock function.
- Video streaming capability.

## APPLICATIONS

- Presence detection at stop bar.
- Advance/Mid-block detection.
- Ramp metering.
- Intersection center monitoring.
- Transit Priority management.
- Micro & Macro control.
- Saturation detection.
- Intersection Performance Index.



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Latest Hardware specifications available upon request