LA SEMAFORICA

ThermiCam™

INTEGRATED THERMAL TRAFFIC SENSOR

ThermiCam is an integrated thermal camera and detector for vehicle and bike presence detection and counting at signalized intersections. ThermiCam detects vehicles and bicycles at and nearby the stop bar. The intelligent ThermiCam sensor will transmit its detection information over contact closures or over IP to the traffic light controller and will thus allow a more dynamic control of traffic lights. This dynamic control will result in:

- Reduced vehicle idling time
- Improved traffic flow
- Reduced vehicle emissions
- Improved safety and mobility for bicyclists

THERMAL IMAGING FOR INTERSECTION CONTROL

ThermiCam si avvale di immagini termiche per analizzare le dinamiche del traffico. Nel controllo degli incroci, la termografia offre alcuni vantaggi innegabili:

- **Distinguish between vehicles and bikes**

ThermiCam uses the thermal energy emitted from vehicles and bicyclists to make a distinction between both.

The intelligent sensor can provide the traffic light controller with specific information on vehicle and bike presence, which allows traffic managers to make more intelligent decisions and adapt green times according to the specific road user type (bike or other vehicle).

- **Guaranteed detection, day and night**

ThermiCam is able to detect vehicles and bikes in the darkest of nights over a long range and across different lanes (typically up to 4). As a result, it gives traffic managers uninterrupted, 24-hour detection of motorized vehicles and cyclists regardless of the amount of light available.

- **Detection in difficult weather conditions**

ThermiCam offers reliable vehicle and bike presence detection in various conditions that are tough for traditional, visual

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cameras, such as sun glare, wet road surfaces, car headlights, shadows, snow or fog..

KEY FUNCTIONS

- Detection of vehicles and bikes on traffic intersections
- Counting and Data collection

KEY BENEFITS

- Reduced vehicle idling time
- Improved traffic flow
- Reduced vehicle emissions
- Improved safety and mobility for bicyclists

INTERSECTION APPLICATIONS

• Green on demand

As a direct replacement of electro-magnetic loops, ThermiCam offers vehicle and bike detection at the stop bar. A very common application is green on demand.

This means that the green light is activated only when a bike or vehicle is present in the dedicated detection zone. Both moving and stationary bikes and other vehicles can be detected. ThermiCam is able to handle up to 16 virtual vehicle detection zones and up to 4 virtual bike detection regions (larger surface compared to a zone, which is more efficient for bike detection)

• Lengthening green times

ThermiCam can also be used for advance detection of bikes and other vehicles.

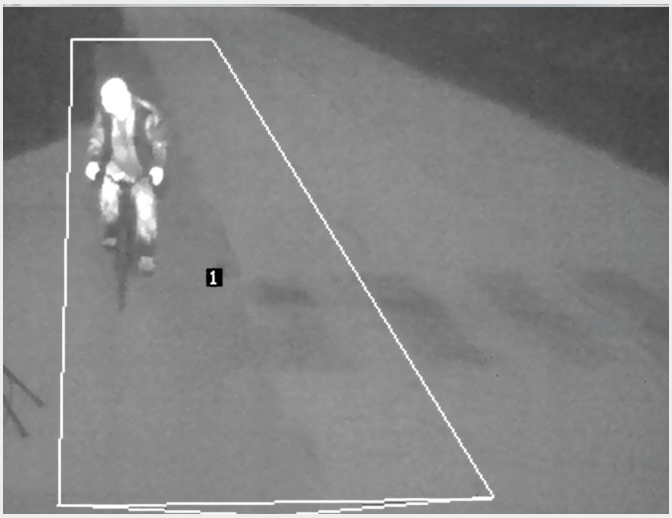
A common application is lengthening the green time.

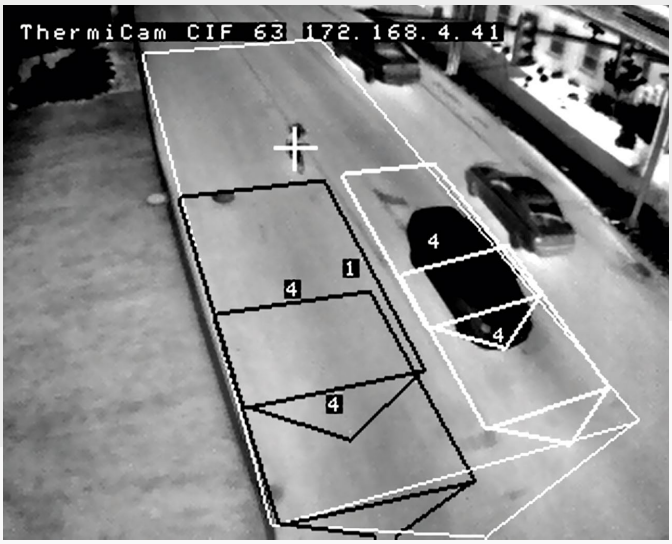
For bikes: If there is a bicycle at a certain distance from the stop bar, the green time can be extended until the bicycle has left the area.

For other vehicles: Here, ThermiCam can effectively replace inductive loops as well as radar. If there is a vehicle in the dilemma zone - the zone where the driver can hesitate between stopping or driving in case the traffic light turns to amber - the green time can be extended until the vehicle has left the area.

• Counting

ThermiCam also offers vehicle and bicycle counting. This functionality can work simultaneously with the presence detection functionality and uses the same detection zones and regions..





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