



INTEGRATED THERMAL TRAFFIC SENSOR

TrafiSense

TrafiSense is an integrated thermal sensor for vehicle and bike detection. TrafiSense does not need light to operate, instead relying on the thermal energy emitted from all objects. This allows the sensor to detect vehicles and bikes in complete darkness, over a long range, and in difficult weather conditions, resulting in reliable, 24/7 traffic detection for a wide range of applications.

www.flir.com/its



INTERSECTION CONTROL

TrafiSense controls traffic signals by detecting approaching vehicles, bicycles, and pedestrians.

- Detect vehicles and bicycles at or near the stop bar
- Transmit detection data over contact closures or TCP/IP
- Dynamic traffic signal control
- Adapt green times to road user type
- Reduced idling time and improved traffic flow



WRONG-WAY DRIVER DETECTION

TrafiSense detects wrong-way drivers in a matter of seconds.

- Ideal for installation on urban roads, highways, and highway entries or exits
- Detects across multiple lanes
- Improves traffic safety
- Records thermal video sequence of wrong-way driver



BICYCLE AND PEDESTRIAN DETECTION

Enhanced vulnerable road user awareness and safety.

- Detects bicycles and pedestrians at the crossing and the curb
- Triggers warning signals to alert oncoming drivers

SPECIFICATIONS

System Overview

Detection Functionalities	Vehicle and bicycle presence detection Vehicle and bicycle counting Pedestrian presence detection Traffic data collection Traffic flow monitoring Inverse direction detection Queue detection
Number of Detection Zones	24 vehicle presence zones 8 bicycle presence regions 8 pedestrian zones 8 traffic data zones 8 inverse direction zones 6 queue zones

Thermal Sensor

Resolution	QVGA (336 × 256)
Frame Rate	30 FPS
Type	Longwave infrared (7–14 μm)
Compression	H.264, MPEG-4, MJPEG

Housing

Material	Aluminum
Dimensions	Vertically mounted: 17.7 x 6.3 x 4.7 in Horizontally mounted: 16.1 x 7.1 x 4.7 in
Sunshield	Optional

Power, Outputs, and Communications

Contact Closures	3 for ETH versions, direct or via optional ETH interface (PN 10-6075) 24 for BPL versions, 4 outputs via TI x-stream EDGE interface (PN 10-6055), up to 20 extra outputs via up to 5 4/Os xp expansion boards Note: in TS2 mode, SDLC via TI x-stream EDGE and PIM module
Ethernet	For communication of output state events, configuration & monitoring (streaming video)
Input Power	12-42 VDC, 12-30 VAC
Current Consumption	BPL: < 230 mA @ 24VDC (< 320 mA @ 24 VDC peak at startup) ETH: < 130 mA @ 24VDC (< 250 mA @ 24 VDC peak at startup)
Power Consumption	BPL: < 5.5 W (< 7.5 W peak at startup) ETH: < 3.1 W (< 6 W peak at startup)
PC Tool for Setup	Traficon Configuration Tool (TCT)
PC Tool for Data Retrieval	Traficon Data Tool (TDT)
PC Tool for Traffic Monitoring & Event Data Reporting	FLUX

Regulatory

EU Directives	EMC 2014/30/EU, RoHS 2011/65/EU
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Environmental

Shock & Vibration	NEMA TS2 specs
Materials	Weatherproof, UV-resistant
Protection Grades	Housing = IP68 / Connectors = IP67
Temperature Range	-29°F to 165°F (-34°C to 80°C)
FCC	FCC part 15 Class A

	Part number	Field of view	Functionality	Detection distance for vehicle presence
TrafiSense ETH/BPL 390	ETH: 10-7045 BPL: 10-7035	Horizontal: 90° Vertical: 69°	Vehicle presence, Bicycle presence, Inverse direction, Vehicle and bicycle counting, Traffic data collection and flow monitoring, Pedestrian presence, Queue detection	0 - 80 ft
TrafiSense ETH/BPL 345	ETH: 10-7044 BPL: 10-7034	Horizontal: 45° Vertical: 35°	Vehicle presence, Bicycle presence, Inverse direction, Vehicle and bicycle counting, Traffic data collection and flow monitoring, Pedestrian presence, Queue detection	16 - 160ft
TrafiSense ETH/BPL 335	ETH: 10-7046 BPL: 10-7036	Horizontal: 35° Vertical: 27°	Vehicle presence, Bicycle presence, Inverse direction, Vehicle and bicycle counting, Pedestrian presence, Queue detection	35 - 245 ft
TrafiSense ETH/BPL 325	ETH: 10-7047 BPL: 10-7037	Horizontal: 25° Vertical: 19°	Vehicle presence, Bicycle presence, Inverse direction	100 - 300 ft
TrafiSense ETH/BPL 317	ETH: 10-7048 BPL: 10-7038	Horizontal 17° Vertical 13°	Vehicle presence, bicycle presence	145 - 400 ft

Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com

CORPORATE HEADQUARTERS
FLIR Systems, Inc.
27700 SW Parkway Ave.
Wilsonville, OR 97070
USA
PH: +1 866.477.3687

FLIR ITS
Hospitaalweg 1B
B-8510 Marke
Belgium
PH: +32.0.56.37.22.00

www.flir.com
NASDAQ: FLIR

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