

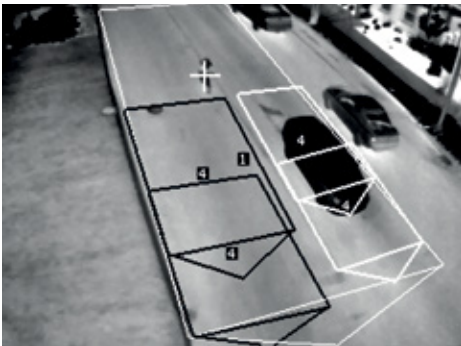


## INTELLIGENT THERMAL TRAFFIC SENSOR WITH V2X

# FLIR TRAFISENSE2 V2X

TrafiSense2 V2X is an intelligent thermal sensor for vehicle, pedestrian, and bike detection. Integrated V2X technology allows simultaneous thermal detection and V2X message processing. Since the Trafisense2 V2X relies on thermal energy rather than light, it offers 24/7 traffic monitoring and can detect road users at night, through glare, and in harsh weather conditions.

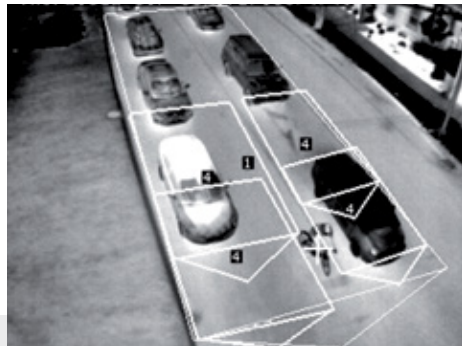
[www.flir.com/Traffic](http://www.flir.com/Traffic)



### V2X Technology

Built-in V2X communication technology works with other fixed and mobile V2X devices to create safer, more efficient traffic.

- Streamlined traffic signal priority for public transportation and emergency vehicles
- Supports US Standard IEEE 802.11p and SAE J2735 Basic Safety Messages (BSM)
- Easy-to-install detector using three-core signal cable for power and communications over powerlines for outputs and TCP/IP



### Vehicle, Bicycle, and Pedestrian Detection

TrafiSense2 V2X can distinguish between vehicles and bicyclists, gathering relevant data and protecting vulnerable road users.

- Adapt green times according to specific road user type
- Collect traffic volume, speed, occupancy, headway, gap time, and vehicle classification data
- Detect waiting and crossing pedestrians



### Reliable Thermal Imaging

Trusted FLIR thermal imaging allows Trafisense2 V2X to detect pedestrians, bicyclists, and vehicles in complete darkness, through glare, and in harsh weather conditions.

- Fast, clear detection without the need for visible light
- Intelligent presence detection, data collection, and wrong-way driver detection
- Field-proven 24/7 monitoring

## TECHNICAL SPECIFICATIONS

### System Overview

Detection functionalities	Vehicle and bicycle presence detection at the stop bar and in advance Pedestrian presence detection Traffic flow monitoring in free flow traffic (counts, occupancy, classification, speeds, headway, gap, level of service) Wrong way driver detection (optional license) Traffic data collection at the stop bar: counts, occupancy, classification (optional license) ITS-IQ Wi-Fi travel time monitoring (optional license) ITS-IQ cloud communication (optional license) V2X traffic signal priority (optional license)
# detection zones	24 vehicle detection zones \ 8 bicycle detection zones \ 8 pedestrian zones \ 6 traffic data zones \ 6 wrong way driver zones
Configuration	Web page setup via secure Wi-Fi, Ethernet or BPL

### Camera

Type	Focal Plane Array (FPA), uncooled VOx microbolometer Long wave Infrared (7 – 14 µm)
Resolution	VGA (640x480)
Frame Rate	30 fps
Compression	H.264, MPEG-4, MJPEG
Streaming Video	RTSP

### Product Types

	Part Number	Resolution	Focal distance	Field of view	Detection distance for vehicle presence
TrafiSense2 V2X 690	10-7450	VGA	7.5mm	Horizontal: 90° Vertical: 69°	2 – 30 m / 6 - 100ft
TrafiSense2 V2X 645	10-7454	VGA	7.5mm	Horizontal: 45° Vertical: 35°	10 – 75 m / 32 - 245ft
TrafiSense2 V2X 632	10-7456	VGA	9mm	Horizontal: 32° Vertical: 26°	15 – 75 m / 100 - 300ft

### Housing

Material	Aluminum housing with integrated polycarbonate sunshield
Dimensions (incl. mounting bracket)	Vertically mounted: 45 cm x 16 cm x 12 cm (9.8 in x 6.3 in x 4.7 in) Horizontally mounted: 41 cm x 18cm x 12cm (16.2 in x 7.1 in x 4.7 in)

### Power, outputs, communication

Input power	24 – 42 V AC/DC
Power consumption	< 11 W
Output contacts	1 N/O and 1 N/C dry contacts direct 16 N/C dry contacts via TI BPL2 EDGE interface 16 output channels via TI BPL2 EDGE and PIM module (SDLC)
Ethernet	10/100 Mbps for configuration, video streaming, monitoring, JSON public API
PoE	PoE mode A
BPL	50 Mbps Broadband over Powerline communication via TI BPL2 EDGE interface
Wi-Fi	IEEE 802.11 for configuration and Wi-Fi travel time monitoring

### V2X

V2X Access Layer	DSRC IEEE 802.11p
Transport & Network layer	WSMP IEEE 1609.3 WAVE
Facilities Layer	SAE J2735 BSM, SPaT, MAP

### Environmental

Schock & Vibration	NEMA TS2 specs
Materials	All weatherproof UV resistant
IP Rating	IP 67
Temperature Range	-34°C to +74°C / -29°F to +165°F

### Regulatory

FCC / EU Directives	FCC part 15 class A, EMC 2014/30/EU, RoHS 2011/65/EU, LVD 2014/35/EU, RED 2014/53/EU
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Specifications are subject to change without notice. For the most up-to-date specs, go to [www.flir.com](http://www.flir.com)

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