TRAFISENSE AI™
AI-Powered Thermal Traffic Sensor

Designed to reliably detect and classify road users, TrafiSense AI is an intelligent thermal imaging sensor for traffic monitoring in complex urban environments. Featuring AI algorithms built on 25+ years of traffic detection and best-in-class thermal imaging, TrafiSense AI delivers continuous vision and data collection for safer, more efficient cities. Capable of tracking multiple objects in any lighting condition, the advanced edge-based AI technology effectively controls intersections, helps protect vulnerable road users, and gathers detailed traffic data for better city planning decisions.

For more information, please visit:
www.flir.com/trafisense-ai
## System Overview

### Functionalities
- Vehicle, Bicycle and Pedestrian Presence Detection
- Traffic Data Collection (Integrated Data)
- Queue Length Monitoring
- Premium Traffic Data Collection (Individual Data) - optional license
- Wrong Way Driver Detection - optional license

### Services
- FLIR VSO data - optional Acyclica license
- Modules (Reporting Module, Planning Module, Signal Timing Tools) - optional Acyclica licenses

### Detection Zones
- 24 virtual loops for presence detection
- 8 traffic data zones for classification and counting
- 8 Bicycle & Pedestrian detection zones
- 4 Queue Length Monitoring zones
- 6 Wrong Way Driver detection zones

### Configuration
- Local/remote web page setup via PoE or BPL

## Imaging & Optical

### Type
- Focal Plane Array (FFA)
- Uncooled VOx microbolometer Long wave Infrared (7 – 14 µm)

### Resolution
- VGA (640 x 480)

### Frame Rate
- 30 fps

### Compression
- H.264, MJPEG

### Streaming Video
- RTSP

## Product Types

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Field of View</th>
<th>Detection Distance for Vehicle Presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>TrafiSense AI - 690</td>
<td>90°H x 69°V</td>
<td>5 - 100 ft</td>
</tr>
<tr>
<td>TrafiSense AI - 644</td>
<td>44°H x 35°V</td>
<td>30 - 245 ft</td>
</tr>
<tr>
<td>TrafiSense AI - 632</td>
<td>32°H x 26°V</td>
<td>100 - 300 ft</td>
</tr>
</tbody>
</table>

### Mechanical
- Aluminum housing with integrated polycarbonate sunshield

### Dimensions (incl. mounting bracket)
- Vertically mounted: 9.8 in x 6.3 in x 4.7 in
- Horizontally mounted: 16.2 in x 7.1 in x 4.7 in

### Electrical
- 24-42 VAC / 24-48 VDC
- Avg 10.5 W / Peak 15 W

### Communication
- 1 N/O and 1 N/C dry contact direct
- 4 N/C dry contacts via TI BPL2 EDGE interface (more with additional 4 I/O USB expansion boards)
- SDLIC to traffic light controller via TI BPL2 EDGE interface and PIM module
- PoE mode A for configuration, video streaming and data communication
- 80 Mbps Broadband over Powerline communication via TI BPL2 Edge interface

### Environmental
- NEMA TS2 specs
- All weatherproof UV resistant
- IP 67
- -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

For the latest specification, please visit [www.teledyneflir.com](http://www.teledyneflir.com)