**FLIR Introduces TrafiBot Dual AI Camera to Enhance Interurban Traffic Flow and Road Safety**

*Multispectral Camera System Automates Incident Detection, Delivers Premium Early Fire Detection, While Reducing False Alarms Via FLIR’s Propriety On-Camera AI and its Patented 3D World Tracker*

**Sept. 16, 2024** – [FLIR](https://www.flir.com/), a Teledyne Technologies company, today introduced the TrafiBot Dual AI multispectral camera system for interurban traffic intelligence. This closed-circuit traffic camera is designed to improve safety in tunnels and on bridges where drivers are most at risk for hitting unseen objects or being trapped by fast-growing vehicle fires.

The TrafiBot Dual AI offers a fast thermal core, the most reliable 14-bit early fire detection for road tunnels, robust artificial intelligence (AI) for the highest detection performance, and the most dependable traffic data collection along interurban roadways, without sacrificing imaging resolution or data loss due to bandwidth restrictions.

TrafiBot Dual AI utilizes three FLIR proprietary AI models simultaneously, developed and trained from millions of FLIR-captured images collected across the world. One model identifies and classifies fallen objects while the other two classify vehicles on thermal and on the visual stream, including unusual objects such as e-scooters and vulnerable road users like pedestrians and bicyclists.

Combined with the FLIR-patented 3D world tracker, TrafiBot Dual AI features a greater capacity to detect incidents within a scene. As vehicles enter its field of view, the camera anticipates vehicle speed and trajectory, even if tracked objects become occluded or obscured by other vehicles, objects, or road infrastructure. TrafiBot Dual AI can also detect sudden lane changes and wrong-way drivers, providing critical data to traffic managers to better manage safety incidents while reducing false alarms.

TrafiBot Dual AI takes early fire detection to the next level. Analyzing the 14-bit thermal information directly on the camera side gives the camera algorithm 64-times more information, which guarantees unparalleled fire detection, speed, and reliability while dramatically reducing the potential for false alarms—making it the new standard for early fire detection for traffic road tunnels.

“Intelligent traffic management systems have made great strides during the past decade, and today traffic management teams require more immediate, accurate traffic data to alert first responders, save lives, and get vehicles moving again,” said Stefaan Pinck, Vice President, Business Development, FLIR. “TrafiBot Dual AI provides that capability through a combination of proprietary AI models 3D world tracker and its early fire detection capabilities.”

“FLIR has gone in the right direction by integrating its own traffic intelligence experience dating back more than 30 years within its AI algorithm, an experience that is unmatched by anyone else in the industry,” said Gil Marques, President of Tacel Ltd., one of Canada’s leading suppliers of advanced traffic management systems and traffic control devices. “Competitors must rely on off-the-shelf datasets and brand-new datasets to build their respective AI algorithms, which is not as powerful as the approach FLIR is using.”

**All Environments Housing and Flexible Installation**

TrafiBot Dual AI has an innovative three-axis rotational design that provides greater installation flexibility for mounting on unique roadway infrastructure including the sloped walls of tunnels and within tight spaces. The three-axis camera swivel, pans, tilts, and rolls sideways, eliminating the need for custom adapter plates that take a lot of time to install. The tilt sensor inside also calibrates the camera automatically, further reducing installation time and any ensuing traffic disruption.

TrafiBot Dual AI is housed within an IP 66/67-rated non-corrosive, marine grade, stainless-steel casing built to withstand all types of weather, including salt air and humidity, along with high-pressure water blasts from road-and-tunnel cleaning operations. The 4K camera features an optical zoom of 6 to 22 mm with a detection range of up to 300 m (984 ft), providing greater coverage per camera compared to predecessor FLIR intelligent traffic cameras.

**Software Integration**

The camera is designed to integrate with FLIR Cascade, a newly launched software that can collect and organize data from TrafiBot Dual AI. It also provides a state-of-the-art intelligent incident filtering system to ensure only the relevant incidents are shown to the traffic operator. If an incident is detected, a short, 4K-resolution color and/or a thermal video clip of the scene is flagged for the traffic management team for immediate review. TrafiBot Dual AI can also further integrate with video management systems to provide live footage.

To learn more about the TrafiBot Dual AI, please visit: <https://www.flir.com/traffic/flir.com/trafibot-dual-ai>

To view the Trafibot Dual AI camera in person, visit the Teledyne FLIR stand number H7-B14 at the [ITS World Congress](https://itsworldcongress.com/), in Dubai, September 16 – 20, 2024.

**ABOUT FLIR, A TELEDYNE TECHNOLOGIES COMPANY**

FLIR, a Teledyne Technologies company, is a world leader in intelligent sensing solutions for industrial applications with thousands of employees worldwide. Founded in 1978, the company creates advanced technologies to help professionals make better, faster decisions that save lives and livelihoods. For more information, please visit [www.teledyneflir.com](http://www.teledyneflir.com/) or follow @flir.