



SentinelleIA—Autonomous Real-Time Urban Traffic Optimization

Edge-AI Smart Traffic Management Solution

SentinelleIA transforms urban intersections into intelligent, self-adapting traffic networks. Powered by local computer vision and edge AI, SentinelleIA dynamically adjusts traffic signal timing in real time to eliminate unnecessary red-light delays, cut greenhouse gas emissions, and improve urban mobility without heavy infrastructure overhauls.

15–25%

Red-Light Delay Reduction

Up to 20%

CO2 Emissions Cut

100% Edge AI

Real-Time Autonomous
Control

~15K\$

Per Camera Entry Cost

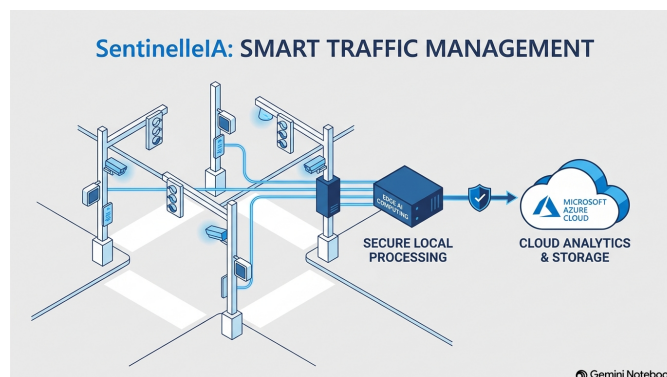
Key Business Benefits

- Immediate Traffic Relief: Cuts travel delays and congestion by dynamically adjusting signal timing based on live vehicular flow.
- Affordable & Scalable: Base configuration starts at ~15,000\$ CAD per camera — a fraction of traditional adaptive system costs.
- Plug-and-Play Integration: Direct compatibility with standard traffic controllers (ATC-1000/2000, NEMA) without heavy civil works.
- Compatible with Existing Cameras: Seamlessly integrates with most currently installed municipal traffic cameras.
- Privacy by Design: Video streams are processed locally on the edge with optional automated blurring, ensuring strict data privacy compliance.

Proven Traction & Validation

- Active Commercial Deployment: Successfully deployed and operational in the City of Drummondville, QC.
- Strong Municipal Demand: High interest and ongoing discussions with multiple municipalities across Québec.
- Protected Innovation: Secured US/Canadian & International Temporary Patent for autonomous traffic optimization logic.

Autonomous System Architecture



SentinelleIA pairs local high-performance Edge AI processors directly with intersection cameras to analyze traffic and control signal controllers with zero latency, while securely syncing telemetry to Microsoft Azure Cloud.

Partnerships & Ecosystem

- Microsoft Azure: Backed by Microsoft for Startups with dedicated Azure cloud credits and enterprise infrastructure.
- Industrial Hardware: Powered by high-performance NVIDIA Jetson edge AI computing platforms.
- Advanced Vision Modules: Cutting-edge analytics and detection modules for accurate multi-modal traffic counting.

Get in Touch with Our Team
Discover how SentinelleIA can optimize your city's traffic flow.
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