

intellisection® Flow





Traffic Data
Analytics and
Optimization
Module.



Technology Overview

Intellisection® Flow helps highway authorities and traffic planners monitor, analyze, and optimize roadway performance through AI and automation. By combining continuous video analytics, vehicle classification, and behavioral data, the module transforms raw traffic footage into actionable intelligence. The result: more efficient mobility, lower congestion, and infrastructure investments based on measurable, real-world data.

Core Capabilities

-  Real-time measurement of vehicle speed, flow intensity (volume), and density.
-  Tracking of occupancy, average time gap, and distance spacing between vehicles.
-  Automated classification of road users: motorcycle, car, van, bus, light truck, semi-truck.
-  Continuous 24/7 monitoring with configurable storage and data export options.

Key Features

DATA-DRIVEN TRAFFIC OPTIMIZATION

Helps improve traffic flow and reduces gridlock using real-time data.

PROACTIVE INFRASTRUCTURE PLANNING

Improves infrastructure planning, signal timing, and maintenance scheduling.

STREAMLINED SYSTEM INTEGRATION

Easily interoperable with third-party systems.

VERIFIED DATA

Delivers reliable data for Smart City and ITS performance reports.

STANDARDIZED GRANT APPLICATION METRICS

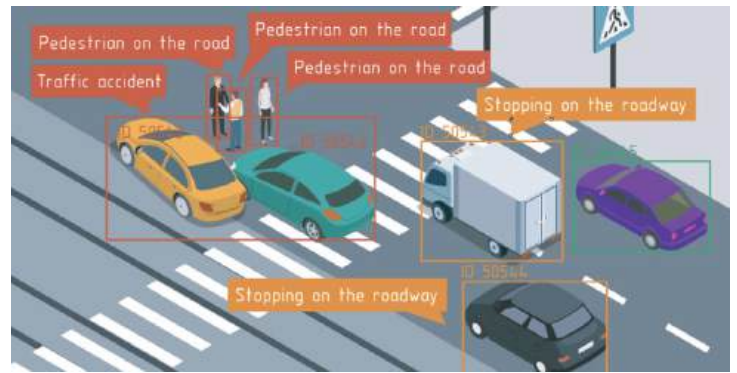
Supplies consistent KPIs for grant applications under programs like HSIP (Highway Safety Improvement Program) and SS4A (Safe Streets for All).

SCALABLE ARCHITECTURE

Designed to expand alongside city-wide expansion projects.

Traffic Flow Analytics

Intellisession® Flow provides high-accuracy, continuous measurement of key mobility parameters to help agencies understand, predict, and improve roadway performance. Built on AI-based tracking and classification algorithms, it delivers detailed traffic metrics essential for congestion management, transportation modeling, and long-term urban planning.



Solution Specifications

Software

Operating System Windows 11 Pro; Windows Server 2019 / 2022.

Camera Technical Data

Supported Camera Types Fixed (box, dome) and PTZ cameras.

Supported Camera Views Overview / angled.

Minimum Required Resolution 640×480 (maximum resolution not limited). Cameras supporting two video streams recommended: one low-resolution stream.

Minimum Required FPS 15 frames per second.

Additional Technical Data

Minimum Linear Size of Detected / Tracked Object
Cars: side of bounding box \geq 5% of image width.
Motorcycles: side of bounding box \geq 8% of image width.
Pedestrians: object height \geq 8% of image height.
Animals: object height \geq 8% of image height.

Object Classifiers Person, Vehicle, Animal.

System Output Data Camera Name, Camera ID, Detector Name, Event Name, Event Description, Timestamp of Event, Snapshot of Entire Frame (with coordinates of object that caused the event).

Traffic Data Provided Average speed, traffic volume or intensity (vehicle count), flow density (vehicles over time in zone), traffic composition, occupancy, average gap between vehicles, average spacing between vehicles.

Supported Video Formats

Video Codec Support H.264, H.265, MxPEG, MJPEG, MPEG-4.

Ordering Information

IF-INT-AIDE Intellisession® Flow (per camera).

IF-INT-AIDE-FLOW Intellisession® AIDE (IF-INT-AIDE-4) + Flow BUNDLE (per camera).