Mobile Unit for Sensing Traffic
MUST
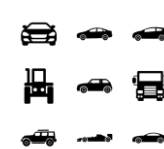
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AIWaysion's *MUST* is a roadside AI Edge device that integrates comprehensive sensing, data fusion, in-device edge analysis, and communications functions all in one unit. Multiple sensors, including PTZ camera, Bluetooth and Wi-Fi antennae, and temperature and humidity sensors, are integrated to address the diverse needs of applications in smart transportation. MUST can detect, analyze, and produce data about vehicle, pedestrian, and cyclist volume, speed and classification; road surface conditions (e.g., dry, wet, ice, snow); visibility; dangerous events including stopped vehicles, collision/near miss, , and travel time estimates. MUST can be configured as a communication node on the infrastructure side for connected vehicle and similar smart transportation applications. MUST's robust engineering design enable it to work under very challenging weather and environmental conditions.

KEY FUNCTIONS

Road-side Device for Connected Vehicle Apps

Travel Time Data Collection

Vehicle Counting & Classification

Roadway Monitoring & Control

Pedestrian Detection & Trajectory

Parking Detection and Security Monitoring

APPLICATION SCENARIOS

Smart Transportation Management

Infrastructure Monitoring System

V2X Communication System

Roadside Device for Connected Vehicles

SPECIFICATIONS

- **Operation Temperature**   -40 ℃ ~ 70 ℃
- **Operation Relative Humidity**   10% ~ 90%
- **Ingress Protection**   IP 65
- **Power Supply**   12V(DC)
- **Energy Consumption**   < 35Watts
- **CPU**   ARM1176JZF-S 700 MHz
- **GPU**   128-Core Maxwell 1600MHz
- **Communication**   3G/4G/5G, Ethernet
- **Operation System**   Linux
- **Local Data Storage**   Micro Secure Digital (SD) Card
- **Weight**   10 pounds
- **Dimensions**   170 mm (length), 170 mm (width), 300 mm (height)