

INCREMENT[®] **Advanced Vehicle Counting and Classification System (AVCCS)**

Transit studies are important for planning a road network and implementing proper traffic control measures. Effective traffic analysis can also help in analyzing the utilization of the road and will be helpful in planning expansion. A vehicular count and vehicle classification is very essential in such an analysis. Unfortunately automated counting solutions are not widely available and often transport authorities have to adopt manual counting methods which are very cumbersome and time consuming.

Increment is an innovative video based AVCCS solution which can analyze a traffic video stream to provide advanced video analytics information. Combining advanced video analytics with state of the art image processing algorithms, the solution can count the vehicles passing through a predefined point from the traffic video. The system is also capable of classifying the vehicles based on their dimensions. Major functions of the system are:

- Vehicle counting – Total number of vehicles passing through a defined point
- Vehicle classification – System can classify the vehicles based on the size
- Vehicle density – Information about vehicle density distribution over a period of time

The system uses a video camera placed above the street to capture the traffic in real-time. The video camera must be placed above the street level to achieve proper acquisition quality. Fast image processing algorithms and advanced techniques allow identifying and counting all vehicles in the image sequences.

The information obtained can be utilized to study the traffic patterns and density in various roads and junctions and can help transport authorities in planning and implementing effective traffic control measures.

Sample video clips



(a) Daylight Scenario



(b) Night Scene

Product Description

Increment is designed as a PC based software package and can run in any standard PC configuration with sufficient processing power. The PC should have connectivity options through which video stream can be captured either through IP based communications or analog video interfaces. The system supports both offline and real-time mode.

In real-time operation mode, the software can analyze the traffic video feed directly received from a camera. The following figure shows a sample screen shot. The system updates the classified vehicle count in the display panel so that an operator can view the real-time vehicle statistics.

In offline mode the system can read a captured video stream for specified time intervals and perform the analysis. This is especially suitable when a video feed is captured outdoor and later analyzed.



Product features:

- Real-time vehicle traffic information at your fingertips
- Easy to use user interface
- Time-based filters for maximum data clarity
- Easy integration with many types of camera
- Easy installation , configuration and management

Hardware requirements

CPU	Intel Core 2 Duo Processor
RAM	Minimum 2GB
HD	Minimum 250 GB SATA
Camera Inputs	Analog PAL/NTSC or IP Video Inputs
OS	Windows XP or above