



The software shall consist of:

The embedded software will incorporate multiple applications that perform a variety of diagnostic, installation, fault tolerant operations, data communications, digital video streaming, and vehicle/bicycle detection processing.

There will be a suite of client applications for the host client / server PC. The application will execute under Microsoft Windows XP, Vista or 7 operating systems. Available client applications will include:

- Master network browser: Learn a network of connected detection modules, display basic information, and launch applications software to perform operations.
- Configuration setup wizard and editors: Create and modify detector configurations for execution on the detection module.
- Front Panel displays and System Test utilities facilitate maintenance and troubleshooting.
- Operation log: Retrieve, display, and automatically save complete setup configurations and time-stamped event logs for maintenance and troubleshooting. The old log will configure a replacement unit. The user may add various detection alarms and user-defined events to the log.
- Software install: Quickly reconfigure one or more detection modules with a newer release of embedded system software.
- Streaming video player: Play and record streaming video with or without flashing detector overlay.
- Data Retriever: Fetch once or poll continuously for traffic data and alarms and store on PC storage media.
- Communications server as Windows service: Provide fault-tolerant, real-time TCP/IP communications to / from all devices and client applications with full logging capability for systems integration.
- Snapshot Retriever: Retrieve and store images for review or real-time display, such as on websites.
- An optional software developer's kit (SDK) or Traffic Data Protocol will provide necessary tools for software programmers to integrate the detection system into the larger, traffic management system.

1.3 Sensor Hardware

The hybrid sensor will be mountable on a wide variety of standard camera brackets. It contains a rugged, compact radar and 10x zoom lens color camera. The faceplate of the enclosure shall be glass and shall have a thermostatically controlled indium tin oxide (ITO) heater, directly connected to the faceplate to minimize power consumption, and to keep the faceplate clear in extreme weather conditions. The exterior of the lens shall have hydrophilic coating to reduce debris accumulation and maintenance of the lens, Nominal outside dimensions excluding connectors shall not exceed 13 in. x 5 in. x 11 in. The sensor weight shall not exceed 4.5 lb. (2.0 kg).

1.4 Interface Panel Hardware

The small footprint of the interface panel shall be cabinet rail, DIN rail, or computer rack mountable. The interface panel will support up to 4 sensors and detection modules. Typical dimensions are 11 in. x 7.5 in. but depend on the configuration ordered. Two SLO-BLO fuses and electrical surge protectors isolate the sensors from other cabinet equipment.

1.5 Detection Module Hardware

The detection module will be shelf or rack mountable. Nominal outside dimensions excluding connectors will not exceed 4.5 in. x 2.25 in. x 7 in. The detection module will be capable of mounting in a standard Detector Rack or Input File, or in an optional shelf-mounted enclosure. The module weight will not exceed 0.5 lb. (0.2 kg).