

# SPEED CONTROL AND TRAFFIC MANAGEMENT



CAPIS s.p.a.

# Individual Customer Needs:

- \* We define a special project according to demands and needs of each customer
- \* Our highly trained and well qualified after sales services team is with you and assures our guarantee and well-functioning of CAPIS projects.
- \* All CAPIS products in speed control and traffic management use state of The art technology developed by our international research and development Team.



# New Generation of Online Speed Control and Traffic Management Products

## \* Multiple Lane

Using the most advanced technology, CAPIS-RC 301 controls and records speeds of all vehicles on 1 lane up to 6 lanes.

## \* Classifications

Using the state of art technology, the system classifies the vehicles in 5 different categories, cars, motorcycles, Trucks and etc. CAPIS -RC 301 precisely controls speed limits for each class of vehicle with regards to timing, lane and date. Automatic vehicle identification

## \* CAPIS -RC301 automatically reads license plates number using the latest technology, evaluates the license plate number for vehicle identification (search, stolen and...)

## \*Anti-vandalism and harsh environmental adaptation

CAPIS-RC301 housing and its special protection modules boxes make the system bullet proof and anti-break along with secure locks. The system is designed for functioning in harsh environments.



## Technical specifications

- Recording speed range 5 Km/h to 320 Km/h
- Speed step setting 1 Km/h
- Simultaneous speed detection and control from 1 lane to 8 lanes
- Online setting and downloading via GPRS, LAN, wireless LAN and, Satellite and etc.
- Temperature functioning range -20°C to -60°C
- Internal recoding capacity From 80,000 photos and Extendable to 500,000 photos
- K-band radar 10mw output
- HD digital Camera up to 10M Pixels

# Intelligent Traffic Management and Speed Control Center, CAPIS-BM301

Online monitoring and controlling of an Intelligent multiple lane photo radar from a remote control center is done by CAPIS-BM301. This system make it possible to do different tasks from the control center such as data collection, communicating with other sections, setting and resetting photo radars and etc.





# Traffic detector handbook

Table 1-1 Summarizes the strengths and weaknesses of inductive loop, Magnetometer, microwave radar, Active infrared, passive infrared, ultra sonic, acoustic, and video image processor sensors.

## The good performance of in roadway

sensors such as inductive loops, magnetic, magnetometer sensors is based in part, on their close location to the vehicle.

Thus, they are insensitive to inclement weather due to a high signal-to-noise ratio.

Their main disadvantage is their in-roadway installation, necessitating physical changes in the roadway as part of the installation process.

Over-roadway sensors often provide

Data not available from in roadway sensors and some can monitor multiple lanes with one unit.

Table 1-1. Strengths and weaknesses of commercially available sensor technologies

Technology	Strengths	Weaknesses
Inductive loop	<ul style="list-style-type: none"> <li>* Flexible design to satisfy large variety of applications.</li> <li>* Mature, well understood technology.</li> <li>* Large experience base.</li> <li>* Provides basic traffic parameters (e.g., volume, Presence, occupancy, speed, headway, and gap).</li> <li>* Insensitive to inclement weather such as rain, fog, and snow.</li> <li>* Provides best accuracy for count data as compared with other commonly used techniques.</li> <li>* Common standard for obtaining accurate occupancy Measurements.</li> <li>* High frequency excitation models provide Classification data.</li> </ul>	<ul style="list-style-type: none"> <li>* Installation requires pavement cut</li> <li>* Improper installation decreases pavement life.</li> <li>* Wire loops subject to stresses of traffic and temperature.</li> <li>* Multiple loops usually required to monitor a location</li> <li>* Insensitive to inclement weather such as rain, fog and snow.</li> <li>* Detection accuracy may decrease when design requires detection of a large variety of vehicle</li> </ul>
Video image processor,	<ul style="list-style-type: none"> <li>* Monitors multiple lanes and multiple detection zones /lane.</li> <li>* Easy to add and modify detection zones.</li> <li>* Rich array of data available.</li> <li>* Provides wide-area detection when information gathered at one camera location can be linked to another</li> </ul>	<ul style="list-style-type: none"> <li>* Installation and maintenance , including periodic lens cleaning , require lane closure when camera is mounted over roadway (lane closure may not be required when camera is mounted at side of roadway)</li> <li>* Installation and maintenance , including periodic lens cleaning , require lane closure when camera is mounted over roadway (lane closure may not be required when camera is mounted at side of roadway)</li> <li>* Performance affected by inclement weather such as fog, rain, and snow; vehicle shadows; vehicle projection into adjacent lanes; occlusion; day-to-night transition; vehicle/road contrast; and water, salt grime, icicles, and cobwebs on camera lens.</li> <li>* Reliable nighttime signal actuation requires street lighting</li> <li>* Requires 30- to 50-ft (9- to 15-m) camera mounting height (in a side-mounting configuration) for optimum presence detection and speed measurement.</li> <li>* Some models susceptible to camera motion caused by strong winds or vibration of camera mounting structure.</li> <li>* Generally cost effective when many detection zones within the camera field of view or specialized data are required</li> </ul>
Microwave radar	<ul style="list-style-type: none"> <li>* Typically insensitive to inclement weather at the relatively short ranges encountered in traffic management applications.</li> <li>* Direct measurement of speed</li> <li>* Multiple lane operation available</li> </ul>	<ul style="list-style-type: none"> <li>* Continuous wave (CW) Doppler sensors cannot detect stopped vehicle</li> </ul>



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