

SPECIAL EDITION

# overView

TRAFFIC MANAGEMENT SOLUTIONS

**Congestion  
continues to  
compromise  
air quality.**

Aldis "GridSmart" provides a vision processing platform that creates a broad "tracking" functionality with application potential for:

- traffic management
- traffic data collection
- security
- congestion mitigation
- pedestrian safety
- border or port security
- smart parking applications
- commercial applications





The Aldis **GridSmart** system dynamically tracks vehicles, pedestrians, even bicycles.

The nation faces a crisis. Our surface transportation system has deteriorated to such a degree that our safety, economic competitiveness, and quality of life are at risk.

*Report of the National Surface Transportation Infrastructure Financing Commission, February 2009*

Traffic congestion in many of the nation's metropolitan areas is endemic, with the cost of congestion—including lost time, wasted fuel, and vehicle wear and tear—topping **\$78 billion** per year for the nation's 437 urban areas. Traffic volume is increasing 20 times faster than the rate new roads are being built. And, with roughly twice the traffic traveling on essentially the same roadway capacity, congestion is at an all-time high while air quality continues to decline.

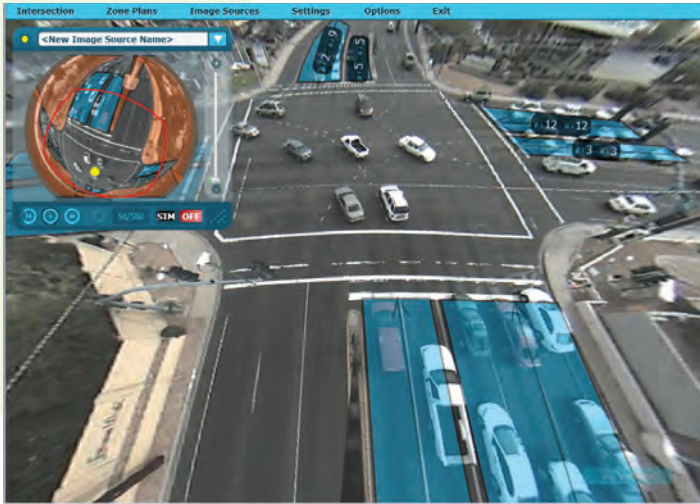
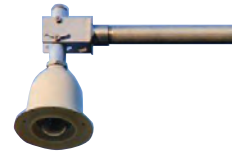
The problem continues to worsen. It is estimated that by 2032, the United States will add 58 million vehicles to highways, doubling **fuel wasted by congestion to 6.5 billion gallons while increasing greenhouse gas emissions attributable to congestion to 60 million tons.** To simply maintain current levels of congestion through 2032, the United States would need to add 400,000 additional lane miles of roads.

With passage of the Clean Air Act Amendments of 1990, the Congress made great strides in America's efforts to attain the National Ambient Air Quality Standards (NAAQS). The 1990 amendments required further reduction in the amount of allowable vehicle tailpipe emissions, initiated more stringent control measures in areas that still failed to attain the NAAQS—know as non-attainment areas—and provided for a stronger, more rigorous link between transportation and air quality planning. As a result, the Congestion Mitigation and Air Quality (CMAQ) Improvement Program—established with a five-year authorization level of \$6 billion—was conceived to support surface transportation projects and other related efforts that contribute to air quality improvements and provide congestion relief.

Given the heightened awareness and concerns around congestion mitigation and air quality, the federal government is encouraging Municipal Planning Organizations to address these alarming trends through CMAQ and other discretionary funding programs. The 2007 National Traffic Signal Report Card (produced by the American Association of State and Highway Transportation) estimates that **proper timing and optimization of traffic signals would save the United States 17 billion gallons of fuel**, nearly three times the 2007 domestic ethanol production of 6.4 billion gallons. As defined by former U.S. Secretary of Transportation Mary Peters, **technology is the only logical solution to congestion.**



# The Aldis Revolution—Solutions for Smart Cities of All Sizes

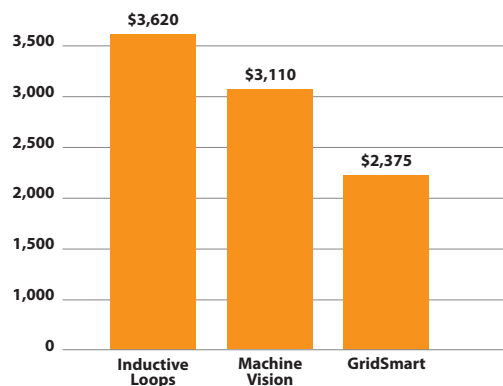


Aldis is a sustainable energy company focused on the advancement of video traffic management. The company’s vision processing software platform, **GridSmart**, uses adaptive vehicle tracking algorithms to provide data for signal optimization and intersection efficiency. Using a **single camera** for the entire intersection, **GridSmart’s** non-intrusive video tracking solution empowers traffic professionals to actuate and maintain any intersection, large or small. Improved efficiency of traffic flow results in reduced congestion and improved air quality, all at a significant savings in terms of cost, installation time, and maintenance.

Aldis’ **GridSmart** product line uses an ultra-wide-angle lens CMOS camera for full view of the intersection. The **GridSmart** software actively tracks trucks, cars, bicycles, and pedestrians within the camera’s field of view, and within customer- defined zones of interest. Aldis’ advantage centers on patent pending vision processing achievements and expertise. Competitive machine-vision companies use multiple cameras requiring complicated and extended installation

periods, additional power, greater equipment costs, and reduced aesthetics. The unique, streamlined approach of Aldis guarantees a coveted low-cost leadership position in the industry, as well as an advanced software solution with additional functionality.

**Total Cost of Ownership (10 yr. avg)**



Source: Research and Innovative Technology Administration (RITA)

For a detailed comparison of technologies, visit our website: [www.aldiscorp.com/comparison](http://www.aldiscorp.com/comparison)

**GridSmart** is a software camera solution allowing for new functionality and performance enhancements to be easily deployed.

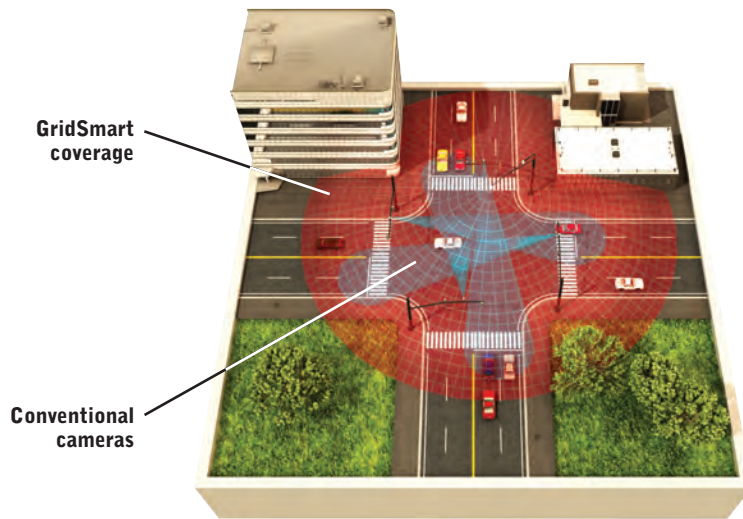


## ADVANTAGES

- **ECONOMICAL**
  - Lower initial investment
  - Less equipment necessary
  - Reduced maintenance costs
- **DYNAMIC DATA**
  - Improve driver and pedestrian safety
  - Better planning decisions
  - Better control of traffic
- **EASY-TO-USE**
  - Simple installation
  - Intuitive software
  - Easy to maintain, alter, and adjust remotely

In the ten most congested areas, each rush hour traveler “pays” an annual virtual “congestion tax” of between \$850 and \$1,600 in lost time and fuel.

—National Strategy to Reduce Congestion on America’s Transportation, 2006 report from the United States Department of Transportation



One **GridSmart** camera can dynamically track what would require as many as eight conventional camera systems or even more inductive loops.

**Aldis Corporation**

Aldis’ hardware is marketed and installed through an established distribution network, reducing support cost, improving response times and customer satisfaction. With a software-based solution, **GridSmart** can be updated remotely in the field for maintenance, upgrades, and new functionality. This approach empowers customers to easily implement technically advanced solutions.

**GridSmart** has over 150 deployments in nine countries including China, Australia, Canada,

Malaysia, Columbia, Brazil, Italy and Germany.

Aldis products are built on a proprietary vision processing platform (**GridSmart**) leveraging state-of-the-art developments in computer vision and image processing to create broad “tracking” functionality with application potential for traffic management, traffic data collection, security, congestion mitigation, pedestrian safety, border and port security, and smart parking and commercial applications.

**Technical Specifications**

	Control Unit	Camera
Dimensions	12.25" x 11.25" x 5" (w x d x h)	10" diameter x 9"
Weight	12 lbs.	9 lbs.
Operating Temp	-29F to +165F (-34C to +74C)	-31F to +140F (-35C to +60C)
Humidity	0 - 95% non-condensing	0 - 100%
Power	30W, 120 - 240 VAC; 50 60 Hz	48VDC
Connection	LAN interface, Camera interface WAN interface	
Display	Indicates inputs and outputs and active zones	

**Control Unit Features**

- Onboard display indicates input and output status and active zones
- Interface to TS1 and TS2 controllers
- 24 optically isolated inputs for TS1 installation
- Monitor phases and loops
- 24 optically isolated outputs
- Generate calls to controller
- SDLC interface for TS2 installation
- Responds to addresses 8-11
- 64 inputs

**Aldis**<sup>TM</sup> Solutions for Smart Cities of All Sizes

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