

Aldis™ Solutions for Smart Cities of All Sizes

GridSmart™

Description

GridSmart is an all new concept in video traffic management delivering a best-in-class solution with the lowest cost of ownership on the market today. GridSmart combines a single or dual (available with 720 series) ultra wide angle lens camera with a ruggedized cabinet mounted processor, creating a non-intrusive video tracking solution that empowers traffic professionals to actuate and maintain any intersection, large or small. GridSmart is a practical, cost-effective alternative, even when compared to simply replacing and maintaining failing inductive loops.

Platform and Design

GridSmart is designed on an advanced platform architecture combining stop-bar functionality with advanced feature including vehicle counts and intent, classification, emergency vehicle identification, pedestrian and bicycle handling, dilemma zone control and adaptive traffic management. GridSmart is rapidly scalable and easily interfaced to other 3rd party products and peripherals. The configuration management software is designed to be user friendly and allow access both local and remotely through a secure VPN connection. The software provides access to all of the GridSmart features and can grow with the needs of the intersection.



Software Features

- Digital flattening of image
- Digital pan-tilt-zoom
- Easy set-up and management
- Point and click zone drawing
- Zone design simulation
- Expandable features including heuristic algorithms



Advanced Video Tracking

GridSmart is a single camera video tracking solution for use in isolated or coordinated intersection management systems. All GridSmart products are engineered for rapid installation through a single wire with an intuitive GUI configuration. GridSmart can track:

- Vehicles
- Bicycles
- Pedestrians
- Trains
- Turn counts
- Golf Carts
- Speed
- Emergency vehicles
- Classification

Additional System Applications

- Parking Management
- Freeway Monitoring
- Remote Surveillance
- Portable Traffic Surveying
- Ramp Management
- Incident Detection

720 Series

The 720 Series is available for all GridSmart versions and provides video tracking for larger highways, tunnels and bridges utilizing two ultra wide angle lens cameras. The system set-up and configuration remains the same while providing additional field-of-view and a larger detection area.

GridSmart Explorer permits two modes of operation over the Internet or fiber optics. A simple view only mode provides access to watch the detection area while administrator mode allows remote setup, monitoring and configuration.

865 482 2112 direct
866 OK Aldis toll free
865 482 2117 fax
sales@aldiscorp.com

702 S. Illinois Ave.
Ste. B101
Oak Ridge, TN 37830
www.aldiscorp.com



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Features

Always in Focus Color Camera with electronic shutter speed control.

Proprietary Occlusion Mitigation provides improved performance as objects that enter the area of interest are tracked until exit.

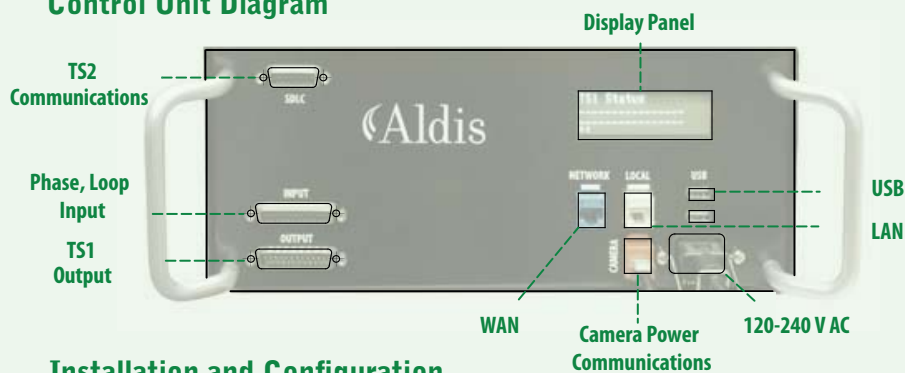
Vehicle Tracking monitors vehicle presence, stopped vehicles and direction.

Vehicle Classification monitors turn and vehicle speed data, vehicle count data by lane, class data with 32 or 64 user-defined bins.

Traffic Safety Solutions include emergency vehicle identification, passive pedestrian detection, automated pedestrian clearance time.

Fail-Safe Controller Outputs with self diagnostic keeps the system up and running.

Control Unit Diagram



Installation and Configuration

GridSmart was designed to reduce install and configuration time while providing engineers with an easy-to-use customized video traffic management solution. Aldis' single ultra wide angle lens camera is mounted in the intersection with a single encrypted IP connection to a video processor card located in the traffic control cabinet. The video processor card is an embedded PC-104 compliant and the processor is installed in a standard NEMA TS-1, TS-2 & 170/2070 traffic control cabinet. The system plugs into any rack that provides standard 120 or 240 VAC connectivity, no modification to the cabinet is necessary.

Technical Specifications

	Control Unit	Camera
Connectivity	LAN interface, Camera interface, WAN interface	IP addressable, Digital camera (single or dual)
Output Interface	NEMA TS1/TS2, Type 170 and 2070 ATC	--
Outputs	24 Optically isolated outputs, SDLC interface w/ TS2, Responds to addresses 8-11	--
Display	Indicates inputs, outputs and active zones	--
Additional Features	Monitors phases and loops, Generates calls to controllers	Color imager, 2560 x 1920 effective pixels, 2.0 lux, Dynamic range 55 dB, 360 degree FOV
Dimension and Weight	12.25" x 11.25" x 5" (w x d x h) 12 lbs.	10" diameter x 9" 9 lbs.
Environmental	-29F to +165F (-34C to +74C) 0 - 95% non-condensing	-29F to +165F (-34C to +74C) 0 - 100%
Power/Communications	30W, 120-240 VAC, 50 to 60 Hz	48 VDC, Single burial grade CAT5e cable

Aldis reserves the right to update or change specifications at any time without prior notice. Some features and functionality are forward looking, please contact Aldis for availability. GridSmart is a registered trademark of Aldis, Corp. All other trademarks or registered trademarks are property of their respective owners.



Benefits

Cost Effective - Single camera solution competes in cost with inductive loops.

Fast Install - Single wire run with remote set-up and configuration gets the crew out of the intersection fast.

Full Field of View - GridSmart monitors the middle of the intersection providing for more information over standard machine vision solutions.

Easy Configuration - GUI-based software with adaptable user-defined detection zones make set-up fast.

Easy to Use - User interface reduces training while improving overall productivity level.

Low Maintenance - Camera has no moving parts and a sealed housing with a built-in-heating system making it virtually maintenance free in all conditions.

Proven Technology - Fully tested in all climates and conditions.



GridSmart is the only video tracking system that comes with an intersection simulator allowing traffic professionals to model various scenarios based on actual vehicle counts. (scheduled 2010)

