AI-500-087
Optical Data Aggregator (ODA)

Overview

Applied Information's AI-500-087 Optical Data Aggregator (ODA) card modernizes optical-based preemption and priority infrastructure, providing enhanced tools for improved system operation. Working in tandem with Applied Information's AI-500-085-02 Field Monitoring Unit (FMU), the ODA bridges the gap between modern and legacy infrastructure, facilitating the transition towards a smarter, more reliable preemption and priority solution.

The Optical Data Aggregator card is designed to replace traditional phase selectors while integrating with existing optical detectors including Opticom™ and Tomar™. The ODA facilitates optical-based preemption calls, while the FMU enables cellular, GPS-based preemption. This configuration provides mutual aid capability across jurisdictions, ensuring support for vehicles with legacy emitters or new cellular-based on-board units.

Connectivity via the FMU provides access to the Glance® Platform enabling advanced monitoring, remote control, and comprehensive reporting capabilities. Key features include real-time system health metrics, four configurable preempt channels, and remote customization of vehicle class and IDs for improved emergency response and traffic infrastructure management. The introduction of remote monitoring, performance analysis, and diagnostic capabilities offers insights previously unavailable with legacy optical-based preemption systems.

Features & Benefits

- Integrates with preemption capable controllers
- Simple to install and retrofit
- Access to the Glance platform
- Enhanced reporting capability
- Remote monitoring of existing optical preemption
- Plugs into standard 4 Ch input file slot
- Compatible with Opticom™ and Tomar™ optical
- Supports either NEMA or Caltrans input files
- Four configurable preemption channels per intersection

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Hardware Specification

AI-500-087 ODA

Connectivity

Ethernet Port (10/100 Base-T)	Yes

Inputs/Outputs

Preempt Outputs	4
Optical Detector Inputs	4

Miscellaneous

Operating Systems	FreeRTOS
Input Voltage	10-30V DC/90-135V AC
Operating Temperature	-37°C to 74°C
Humidity	5-95% non-condensing
Dimensions	1U rack interface card