

# Collision Avoidance System



## Features

- Vehicle to Vehicle and Vehicle to Worker
- High resolution up to 1,000 feet
- Vehicle awareness up to 1/2 mile
- 16/8 inputs and outputs
- RS232, RS485 and Ethernet
- Geo-Fencing
- Emergency Notification (Optional)
- Data Logging (Optional)
- GPS
- 30 second acknowledgement for operator to help prevent fatigue
- Automatic 5 mph speed activation sensor



# Collision Avoidance System

## Description

In partnership with Protran Technology, Harsco has developed the Protran Collision Avoidance System (CAS). With multiple features in one system, it keeps the vehicle operator's attention when approaching other vehicles and workers on the right of way. The system has two modes, "travel" and "workzone" mode.

With thousands of CAS's in operation, the newest vehicle mounted unit is equipped with a high resolutions LCD daylight display and generates an audible and visual alert when distances and asset thresholds have been violated depending on the mode of operation. Once in range, the system constantly detects distances of vehicle to vehicle and vehicle to workers to a very high resolution especially in curves, tunnels and adverse environments.

Protran holds the only patents for Positive Train Control (PTC) for the safety overlay protection for collision avoidance between moving, human and fixed assets. Having thousands of systems in operation and the only system with over 5 years proved revenue service, Protran has been recommended by the NTSB, APT, and CPUC for both the Federal Railroad Administration (FRA) and Federal Transit Administration (FTA) implementation.

## Specifications

### Collision Avoidance System, PN 0072

DC Input	12, 36 and 18-75 VDC
Fuse Protected	Yes
Transceiver Frequency	Proprietary/Secure
Tx/Rx Range	Within the operations of driver
Enclosure	Polycarbonate/IP6, NEMA 4, 4x
Operating Temperature	-40°C to +85°C

## Approvals

United States (FCC)	OUR-XBEE
Canada (IC)	4214A-XBEE
Europe	RoHS/WEEE – upon request

Item	Part Number
Collision Avoidance V-V Unit	5040642
Collision Avoidance V-V H&FA	5040643



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