



**We can't make the night less dark,  
but we can make it less dangerous.**



**We can't make the rain less torrential,  
but we can make it less treacherous.**



**We can't make the fog less impenetrable,  
but we can make it less intimidating.**

In fact, we can make  
any driving situation anytime,  
day or night, safer for you  
and everyone on the road.



# Take a look at the most advanced, most sophisticated, most effective accident avoidance system ever developed. The Eaton® Vorad® EVT-300 Collision Warning System.

It's not getting any easier on the roads for today's trucking companies. Accident costs continue to go through the roof. So, how do you keep your operating costs down to manageable levels and ensure that your fleet's as safe as humanly possible? You take advantage of one of the most sophisticated tools modern technology has to offer.

The Eaton® Vorad® EVT-300 Collision Warning System (CWS).

## Cut your serious accidents by as much as half.

NHTSA research<sup>†</sup> indicates that collision warning systems can reduce rear-end accidents by 51%, lane change accidents by 47%. And in hundreds of billions of miles on thousands of CWS-equipped trucks, fleets have seen accident reduction averaging 73%.

The Eaton® Vorad® 300 Collision Warning System is like a "Safety Director" riding with your drivers. Always on the lookout for potentially hazardous situations. Helping them run the day-to-day gauntlet of hostile weather conditions and traffic-snarled highways. Making sure they reach their destinations safely.

Fewer accidents means reduced accident claims costs; fewer trucks out of commission; fewer potentially devastating legal settlements; lower insurance costs, and healthier profit margins.

## EVT-300 tracks around curves in the road.

Eaton® Vorad® EVT-300 is a high frequency radar system that transmits radar signals from the front and side of the truck. When it detects a potential hazard, a small display unit

on the dash emits a combination of lights and audible tones at three, two, one, and half-second intervals to warn the driver to take evasive action *before* the accident happens.

EVT-300 can 'see' and track up to 20 vehicles at one time, even those travelling in adjacent lanes. But it reports only the ones within your truck's own lane – even if the lane curves to the left or right. How? By two methods.

First, a yaw sensor calculates the truck's turning rate in a curve and shapes the radar reporting zone to match the lane of travel. At the same time, Eaton® Vorad®'s patented mono-pulse radar design continually tracks your vehicle's rate of speed, its closing rate on other vehicles, and determines the angle of the other vehicles relative to your own, deciding in nanoseconds which of them present a hazard to you.

Through this technologically sophisticated data flow, your drivers receive fast, highly accurate warnings.



▲ Eaton® Vorad® EVT-300 detects hazards ahead even when the road curves left or right. Its patented monopulse technology, coupled with an internal yaw rate sensor, enables the system to distinguish between those vehicles ahead which present a danger and those vehicles in adjacent lanes which do not.

<sup>†</sup> NHTSA Study, 1996.  
<sup>§</sup> Daimler-Benz research



▲ Total weight of the Eaton® Vorad® EVT-300 Collision Warning System ranges from 4,5 kg with no side sensor to 6 kg with 2 side sensors.

## 93% of all accidents involve driver error.

Research shows that 93% of all accidents involve driver error like not recognizing a hazardous situation until it is too late. And that 54% of accidents are caused by driver inattention.

Another study reveals that an extra half second warning could prevent up to 60% of vehicle rear-end and intersection accidents. A full second up to 90%. But EVT-300 gives drivers up to three seconds more time to react.

Those three seconds could make the difference between an enthralling truck-stop anecdote and a serious accident inflicting heavy damage to your company's bottom line – not to mention the possibility of serious injuries or costly litigation.

***"It's a necessary part of any truck. Just as important as mirrors or headlights."***

*Glen Rice, Overdrive Trucker of the Year*

Make no mistake, Eaton® Vorad® is not an expensive luxury. It's an indispensable tool designed specifically for today's traffic-crammed highways.

***Most important of all, just one costly accident avoided can pay for the investment for your whole fleet.***

## Data recording options provide greater operational efficiency.

In addition to its myriad safety benefits, the EVT-300 offers many more operational features, such as the optional VIMS (Vehicle Information Management System), VIMS+ Satellite Connection, and Accident Reconstruction.

VIMS not only checks engine idle time, driving time, nondriving time, speeding, hard braking etc., but also how much time your vehicle spends within one, two or three seconds of another vehicle (excluding cut-ins). It gives you a detailed record of your drivers' safe driving habits.

### Driver Display Unit Warnings

WARNING	DISTANCE/RANGE	LIGHTS	SOUND
Detect	105 meters	● ○ ○	–
1st Stage	3 seconds	● ● ○	–
2nd stage	2 seconds	● ● ○	Single
3rd stage	1 second	● ● ●	Triple
4th stage	1/2 second	● ● ●	Triple Repeating
Danger	Slow or Stationary	● ● ●	Triple

VIMS+ uses a satellite system interface to allow for remote download of VIMS data, and to send exception basis vehicle operational data – such as close following distances, speed and hard braking – from the truck to your fleet’s base station via satellite no matter where your truck is.

Accident Reconstruction provides a second-by-second analysis of the speeds, deceleration, and trajectory of not only your vehicle, but of other vehicles in the radar beam pattern.

**Eaton®Vorad®CWS can save you even more by helping your drivers perform much better.**

Finally, consider the many other bonus benefits that come your way with a CWS-equipped fleet. Prompted by EVT-300’s warning alerts, your drivers will be continually reminded to drive more carefully and maintain longer, safer following distances. This can help you achieve extra fuel savings, and less wear and tear on brakes, tires, engine and drivetrain. Additional fuel savings can also result from reductions in idle time from use of the unit’s optional trip recorder (VIMS).

What all this means is that Eaton®Vorad® can reduce your operating costs and increase your profits in ways you might not even have thought of yet. But once CWS is in daily use, you’ll soon come to appreciate.

Just think of it. A safety measure which keeps your driver and vehicles safer and your bottom line healthier! Isn’t that just what you’ve been looking for?

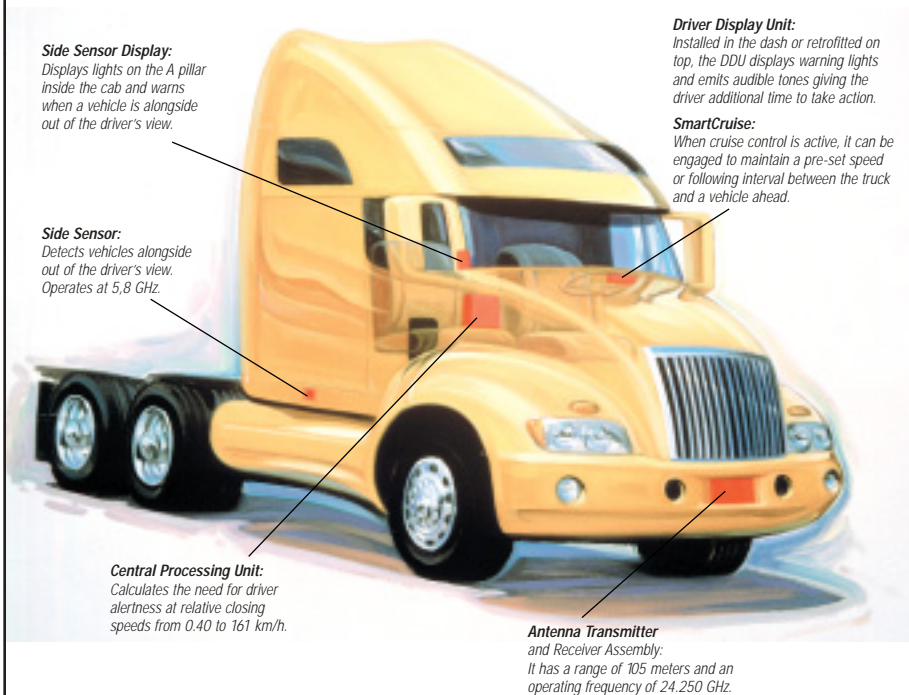
**You can’t afford to be left behind.**

Although the Eaton®Vorad®CWS is on the cutting edge of technology, it’s already been proven over hundreds of billions of miles of day-in-day-out highway usage. A fact that hasn’t escaped many of today’s major truck fleets.

Carriers like US Xpress, Averitt, TMC, Maverick, Comcar, Prime, Boyle Transportation, Conway, Cardinal Freight, Penske Logistics, Praxair and JCJ Trucking rely on CWS to improve safety and cut operating costs. And manufacturers such as Freightliner, International, Kenworth, Peterbilt, Volvo, and Mack make Eaton®Vorad®CWS an OEM-installed option. Leasing companies like Penske Truck Leasing offer it as a safety option

to their customers. And after exhaustive testing, the United States Army has adopted CWS as standard equipment on all its new, heavy-duty trucks.

What secret do they all know? Simply that Eaton®Vorad® is the most valuable tool at their disposal to sharply reduce accident costs. These fleets are already convinced that one accident avoided is enough to justify the whole investment. As their accident rates go down and their bottom lines go up, Eaton®Vorad®CWS makes more and more sense. Why let accident costs eat into your fleet’s profitability any more? You can’t afford to be left behind by your competitors.



**Side Sensor Display:**  
Displays lights on the A pillar inside the cab and warns when a vehicle is alongside out of the driver’s view.

**Side Sensor:**  
Detects vehicles alongside out of the driver’s view. Operates at 5.8 GHz.

**Central Processing Unit:**  
Calculates the need for driver alertness at relative closing speeds from 0.40 to 161 km/h.

**Antenna Transmitter and Receiver Assembly:**  
It has a range of 105 meters and an operating frequency of 24.250 GHz.

**Driver Display Unit:**  
Installed in the dash or retrofitted on top, the DDU displays warning lights and emits audible tones giving the driver additional time to take action.

**SmartCruise:**  
When cruise control is active, it can be engaged to maintain a pre-set speed or following interval between the truck and a vehicle ahead.

**▲ The Eaton®Vorad® Collision Warning System:**  
A highly sophisticated, high frequency, monopulse radar system that transmits signals from the front and side of the truck. When sensing a potential hazard, it emits a combination of alert lights and audible tones to warn drivers that they may need to take evasive action.

## Spec on your new truck or retrofit.

Talk to your dealer about including the EVT-300 on your next truck order. Or retrofit\* your existing vehicles. (EVT-300 can easily be installed because it requires only standard wiring and connectors.) Either way, it's an investment that can pay for itself many times over. For more information, call **+3120 655-6700** or visit our Web site.

The EVT-300 Driver Display Unit.



Alert level 1  
(Approx. 3 sec.)

Alert level 2  
(Approx. 2 sec.)

Alert level 3  
(Approx. < 1 sec.)

**Eaton B.V.**  
Truck Components Division  
Boeing Avenue 11  
1119 PC Schiphol-Rijk  
The Netherlands

**Eaton® Vorad®**

[www.eaton.com/VORAD/](http://www.eaton.com/VORAD/)  
[InfoVorad@eaton.com](mailto:InfoVorad@eaton.com)