



AI dominates the best new and improved trucking product announcements of 2024.

There are a lot of “smart” products and technologies in this year’s HDT Top 20 Products, which honor the best new and improved products we reported on last year.

Many of the companies on this list leverage artificial intelligence and trucking vehicle connectivity to glean insights, communicate with drivers, automate processes, optimize dispatch, and improve efficiency and uptime.

They’re automating processes from hooking up a trailer to activating emergency lighting and notification systems. The latest sensors detect driver drowsiness and heat up lamps based on ambient temperatures.

The Top 20 Product awards were chosen by HDT’s editors with the help of a panel of fleet representa-

tives. We look for new or significantly improved products that stand out in three areas:

- Innovation
- Ability to address important industry issues
- Potential to improve a fleet’s bottom line.

To be considered for an HDT Top 20 award, a new product must have been reported on by HDT’s editors, either online or in print, over the past year.

Products must be commercially available or scheduled to become so within the year, so “concept” products are not eligible. Entire powered vehicles are excluded. Each company may only receive one award per year.

HDT has been awarding its Top 20 Products honors since 2011. The program was an upgrade of the previous Nifty Fifty awards.

The list is presented in alphabetical order by company name:

Anyline Commercial Tire Tread Scanner

1 Anyline's Commercial Tire Tread Scanner uses artificial intelligence with any camera-enabled smartphone or mobile device to measure tread depth simply by pointing the camera at the tire tread to be measured. Using computer vision and AI, it creates a digital model of the tire. Tread depth and tire sidewall information is recorded digitally, allowing operators to connect tread health to individual VINs or license plates, which can also be recorded digitally by Anyline. It allows fleet operators to improve tire performance and longevity, ensure driver safety and reduce vehicle inspection time, according to the company.



Aperia Technologies Halo Connect i3 Tread Diagnostics Suite

2 Aperia's Halo Connect i3 is an integrated, intelligent, automatic inflation solution that goes beyond automatic tire inflation and monitoring, with integrated pressure sensing, remote pressure set point adjustment, configurable alerts, and customized inflation settings. It allows two-way communication, integrating with other vehicle devices and fleet management systems, for comprehensive monitoring, adjustment, and control. A tire tread diagnostics suite helps fleets diagnose treadwear issues and allows them to change inflation setpoints remotely to help address some of those problems.



Bosch RevX Dispatcher Optimization Tool

3 The Bosch RevX dispatcher optimization tool is designed to make navigating the spot market easier by efficiently booking optimal loads and reducing empty miles. RevX will use artificial intelligence (AI) to turn searches across millions of potential loads into recommendations for the best load while minimizing

manual data entry and errors. The Bosch team has been reviewing feedback from the launch in 2024 and is using technologies such as AI to enhance the product for a 2.0 launch in 2025.



Dragonfly Energy Dragonfly IntelLigence

4 Dragonfly IntelLigence technology for heavy-duty trucking lithium power systems is a patent-pending smart battery technology that gives fleets and truck drivers real-time system monitoring and app-based connectivity, providing full visibility over their battery system. This new, advanced smart lithium solution provides a powerful addition to the company's Battle Born All-Electric Auxiliary Power Unit. The Battle Born mobile app can be used to monitor real-time state of charge, battery life, set custom alerts, and access historical usage data.



Electrans Technologies and Stoughton Trailers Auto Connect System

5 Stoughton Trailers dry van trailers are now exclusively compatible with Electrans Technologies' Auto Connect system. Auto Connect automatically connects truck and trailer air, seven-way electrical and communication lines between tractor and trailer. Drivers no longer need to step out of the truck to connect trailer lines. With a push of a button in the cab, Auto Connect couples the pneumatic airlines, electrical lines and the CAN bus or other communication wiring required to operate a wide variety of sensors and cameras.



Emergency Safety Solutions

HELP DeliverSafe

6 This digital lighting alert system takes hazard lights to an entirely new level. Once engaged, it automatically sends digital alerts to any oncoming vehicles in the area via navigation and mapping applications. The system works with smart onboard intelligence so emergency mode activation features deploy automatically upon collision or other safety trigger events. Since we wrote about it, ESS has updated the product to make installation and integration easier. A nose box solution configuration is available for installation on trailers, which supports HELP Lighting Alerts and HELP Digital Alerts as well as a companion mobile phone app for remote control.



IMI in Partnership with Redcat

Lug Linx Wheel Safety System

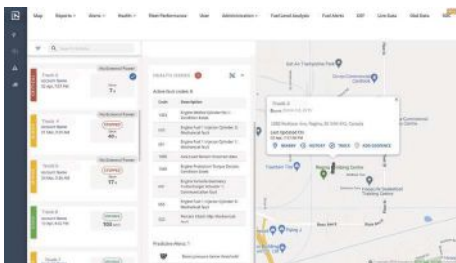
7 IMI said the Lug Linx wheel safety system provides an increased safety window to allow for identification and maintenance of pending wheel detachment or damage. Lug Linx indicates lug nut movement while acting as a retainer. It provides a quick visual indication of loose lug nuts for faster pre-trip and post-trip inspections.



PHOTO: IMI

Intangles InRoute Connect

8 InRoute Connect is designed to improve the turnaround time of commercial vehicles needing maintenance on the road. Intangles' predictive maintenance platform detects issues with a vehicle long before a truck's diagnostic trouble code is triggered. As soon as an Intangles-powered fleet receives a predictive alert warning, the fleet manager can direct the truck to a preferred maintenance shop on the truck's route — right from the Intangles platform. Since the announcement, Intangles has continued to add locations and has



introduced new predictive AI models. It also introduced Guided Repair, which helps direct mechanics to the correct repair.

ISEE Trailer Auto Coupling System

9 ISEE, an autonomous vehicle company, unveiled its fully automated, AI-powered trailer auto-coupling system for autonomous yard trucks. ISEE's technology autonomously couples the trailer and connects the airlines without any trailer modifications, adapters, markers, or remote control, using a six-axis robotic arm on the back of the autonomous yard truck cab.



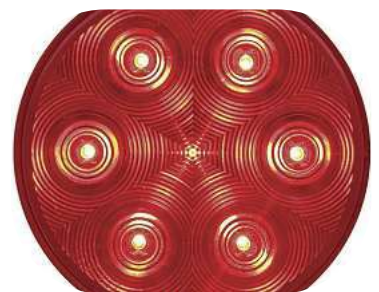
Netradyne Driver•i Drowsy Driver Detection

10 Netradyne Driver•i Driver Drowsiness with DMS Sensor works to detect both early and late stages of drowsiness as defined in research in academic literature. This allows the system to provide early warning to drivers and predict future acute drowsiness. In addition, the sensor is sensitive to work under low light at night and can detect drowsiness even if the driver is wearing sunglasses.



Optronics International Temperature-Sensitive Heated LEDs

11 Optronics' Temperature-Sensitive Heated LED Lighting Family heat up quickly to melt ice and snow from their lenses and housings. The company said most heated lamps on the market



use filaments embedded in their lenses, much like a rear-window defroster. Optronics' heated lamps, the TLL75 Series LED flood beam work light and STL13 Series 4-inch round LED stop, turn, tail light, begin the heating process at the core of the lamp, at the level of the circuit board. The heat then emanates throughout the lamp, quickly warming the entire body of the lamp, including its housing.

Outrider AI-Driven Autonomous Yard Management

12 Outrider, a developer of autonomous yard operations systems, says the next generation of its AI-driven perception technology is designed to help manage extremely fluid yard operations for freight distribution centers and other logistics hubs. The company said it is the first-to-market yard automation solution that performs fully autonomous, zero-emission trailer moves. Outrider's autonomous system is designed to work side-by-side with other yard trucks, tractors, trailers, delivery trucks, golf carts, pallets, personnel, and more.

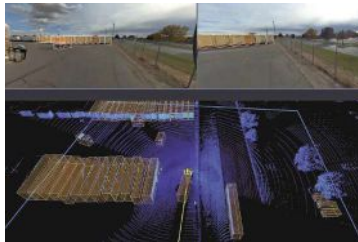


PHOTO: OUTRIDER

Penske Truck Leasing Catalyst AI

13 Penske Leasing introduced a fleet management platform that uses artificial intelligence to provide real-time insight into fleet performance, benchmarking against a group of similar fleets, and the ability to identify opportunities for improvement. The Catalyst AI platform compares a fleet's performance to similar fleets across Penske's live database of hundreds of thousands of vehicles in real time. This allows benchmarking using apples-to-apples comparisons. Targeted insights based on that data can help identify opportunities to improve fuel efficiency, utilization, and business performance. The Fleet Benchmarking Tool allows fleet users to experience the platform's capabilities firsthand.



Phillips Industries T/T Pair

14 Phillips Industries' T/T Pair advanced tractor-trailer pairing solution enhances trailer connectivity and delivers actionable insights to improve security and efficiency. T/T Pair can instantly detect unauthorized trailer connections and alert drivers and fleet managers, reducing the risk of theft and operational disruptions caused by miss-pulls. In both the 7-way socket and ABS harness configurations, T/T Pair integrates with Phillips Connect and other telematics providers. T/T Pair enhances fleet productivity by delivering faster, more accurate alerts through continuous integrations.

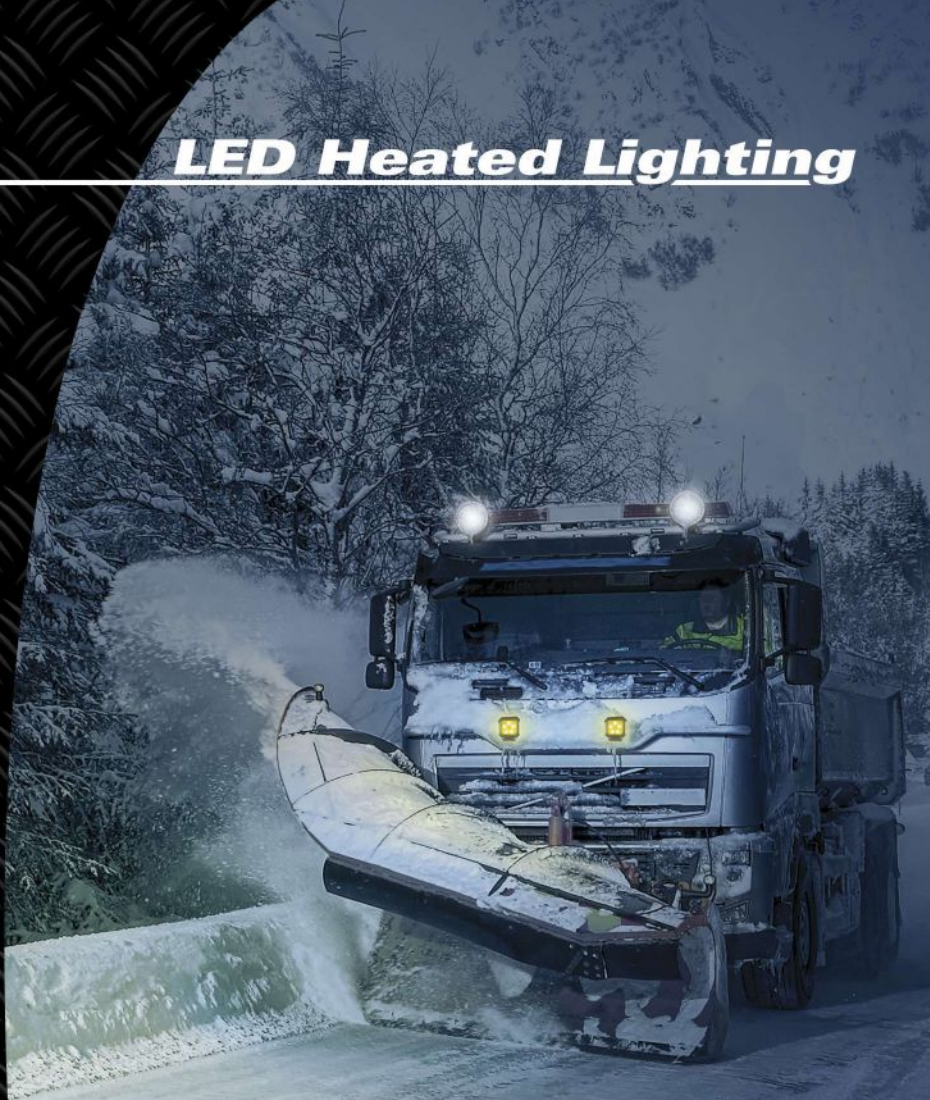
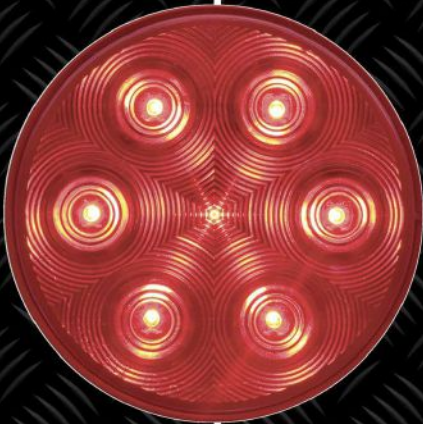


Samsara Samsara Intelligence

15 Samsara introduced an expanded suite of AI offerings, Samsara Intelligence, using artificial intelligence to help customers make smarter decisions and run safer, more efficient fleets. Samsara Intelligence can process more than 70 billion miles driven, 265 million digitized workflows, and 10 trillion data points each year. It includes Samsara Assistant, a generative AI tool that answers complex operational questions instantly, and Intelligent Experiences, which offer embedded AI-driven recommendations and actions throughout Samsara's platform to enhance operations processes.



LED Heated Lighting



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Ten5
Ten5 Voice Messenger

16 Ten5's Voice Messenger uses proprietary voice technology and artificial intelligence to allow hands-free voice communication between drivers and fleet back offices, with prioritization software for managers. Fleet managers can respond more quickly to driver questions and concerns and ensure the most important items are addressed first. Managers can also broadcast messages to multiple drivers or program messages to be sent at specific times for training and coaching purposes. An enhanced version later this year will include voice-based vehicle inspections and an AI-based voice assistant to give drivers quick access to information on services, loads, and routing.



TenStreet
Pulse+

17 Tenstreet added new capabilities to its software offerings, using the latest artificial intelligence technology to improve communication with drivers and productivity for fleets. Pulse+ uses generative AI to automate processes, freeing up recruiter time to build stronger connections while enabling instant after-hours and weekend replies to engage applicants. Pre-application messaging lets job seekers ask carriers questions before submitting a job application. New Pulse+ geolocation features, powered by TruckMap, allow drivers to share routes with carriers, shippers, and loved ones. Location-dependent actions can be triggered based on a driver's location, such as a "welcome back" message when a driver returns to the terminal.



AUTEL MAXISYS CV

MS909CV ADVANCED DIAGNOSTICS, BATTERY & ADAS CALIBRATION ALL-IN-ONE TABLET

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Transtex
DClimate eAPU



18 Transtex's DClimate says it has a new solution to keeping truck drivers comfortable in their sleepers without idling the main truck engine. Its electric auxiliary power unit uses a hybrid power system that supports 34-hour resets with fast recharge capabilities and long battery life. The system is made up of a battery management system; a high-efficiency alternator; an under-bunk unit with both air conditioning and a small diesel-fired bunk heater; and an auto start/stop feature that activates during extreme conditions.


Uptake
Uptake Tire Insights AI

19 Uptake's Tire Insights tire management program uses artificial intelligence to help fleets monitor and manage tire health. The company said Tire Insights can curtail significant failures by over 80%. The product suite, which currently

includes Tire Leak Insights and the Tire Pressure Monitoring System Insight, helps fleets improve fuel efficiency by 5%, avoid downtime, increase operational efficiency, and reduce unsafe driving days by over 90%. Uptake said it offers an 88% reduction in false positives compared to simple rule-based notification platforms.



ZF Group
Axtrax 2

20 ZF's Axtrax 2 is a scalable and modular e-axle fitted with a motor, inverter, ECU, actuator and transmission. AxTrax 2 is a compact, axle-based system designed to help maximize the available space for batteries while opening new chassis design options for OEMs. 

A large advertisement for ULINE safety products. The background is black. On the left, there is a collection of safety equipment: a white A-frame sign with orange and white diagonal stripes and a yellow reflective light on top; a tall orange and white striped safety post; a stack of orange traffic cones; a large orange and white striped barrel; and another orange and white striped safety post. On the right, the ULINE logo is displayed in white on an orange rectangular background. Below the logo, the text "SAFETY STARTS HERE" is written in white, followed by "COMPLETE LINE OF SAFETY PRODUCTS ALWAYS IN STOCK" in a smaller white font. At the bottom right, a white box contains the text "ORDER BY 6 PM FOR SAME DAY SHIPPING". At the bottom of the advertisement, a white bar contains the text "COMPLETE CATALOG 1-800-295-5510 uline.com".

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