

Kodiak Robotics Readies Itself for Autonomous Long-Haul Trucking, With Partners & Fallback

Lynn Walford - Nov 29 2022



Kodiak Robotics is developing a full-stack suite of hardware, software and services for autonomous long-haul trucking. Michael Wiesinger, Head of Commercialization, Kodiak, talked to Auto Futures and revealed how the company is working to create system of partners and a pay-per-mile autonomous trucking solution.

"We do our commercial operations out of our Texas office here in Dallas, where we have most of our trucks in Dallas, Texas," says Wiesinger.

Dallas is a freight-rich environment. Texas is friendly to innovation and regulations for autonomous commerce trucks and has mostly friendly weather, adds Wiesinger.

Kodiak was the first autonomous trucking company to move to Dallas. Now every other autonomous trucking company has a presence in Texas, he says.

"The reason Kodiak focuses on commercial trucks is that it is a very different business case than autonomous passenger car vehicles. The technology and sensors needed are different from what is needed for very complex city street driving."

Kodiak completed an autonomous class 8 truck pilot running between Dallas and Atlanta, keeping a truck running 24 hours a day for six days.

"It showcases the utilization potential of autonomous trucks and what the future deployment model will look like."

Kodiak provided the long-haul driving. Human drivers did the last-mile driving in Atlanta. The trucks made round trips. There were eight commercial loads between Dallas and Atlanta in just under six days, says Wiesinger.



Kodiak's Fallback And Stack

Kodiak recently announced its fallback manoeuvre. The system continuously performs vehicle health checks. If something goes wrong, the truck pulls over to the shoulder with lights flashing and comes to a safe stop.

The truck sends a signal to the remote operation centre, explains Wiesinger.

The remote operator will dispatch help which could be somebody who repairs a sensor pod, a driver to drive the truck or a tow truck depending on the problem.

Kodiak technology is a full package of safety, hardware and software, as well as some services around it. It includes the sensors, LiDARs, radars, cameras, thermal cameras and sensor fusion.

"Everything is on the truck, including the computer. This is a really important piece. Everything that is safety critical needs to be on the truck. It's not run from the cloud," he says.

"We are currently establishing additional partnerships with companies that can help us with roadside assistance, servicing our system if there is any issue," he adds.

"In addition to the normal camera, radar, LiDAR, we have a thermal camera we can detect if something is living."

If a deer is on the road, the system will calculate the best course of action to stop or swerve. If a human being is detected, the truck will stop.



Kodiak Goes the Distance

Kodiak is working with US Express, Warner, Ten Roads Express, Ceva Logistics and IKEA.

"There are more partners that we have not yet publicly announced with announcements of them in the upcoming months and quarters," says Wiesinger.

Kodiak trucks can run between 1200-1400 miles on one tank of fuel. Kodiak is not ready for electrification, yet.

"We are absolutely exploring all kinds of zero-emission vehicles. From a deployment model, it is not yet there from a range perspective, as well as from an infrastructure perspective. As soon as that becomes available and makes commercial sense for us. We will definitely see what we can do there."

Currently, Kodiak trucks have safety drivers, but the plan is to be driverless.

"Once we have proven with statistical methods with data and with simulation, that our system is safer than the average human driver. Once we have done that safety case, then we will go without drivers. Then the next step will be from using our system on our trucks to giving the system to our customers such as carriers."

Kodiak sees its autonomous trucks as a solution for long-haul trips of more than 400-450 miles.

"We consider our business model having the most impact beyond what one human driver is currently allowed to drive. Human drivers are currently allowed to drive 11 hours in a 14-hour window. That gives them maybe 400 to 450 miles. Autonomous trucks will have the most benefits for everything that is beyond 400-450 miles."



Autonomous Trucking Without Stopping

"We are working with carriers to determine the right pricing. But we do not yet really publicly talk about that. It will be a per-mile subscription fee," says Wiesinger.

Kodiak is developing a network of transfer hubs where trucks can go for fuel and service. For example, Pilot Flying J, which is one of the partners.

"We are partnering with them to explore what the travel centre of the future will have to look like to accommodate autonomous trucks."

Kodiak has already worked out a way for the autonomous Kodiak trucks to skip the weigh and safety stations en route.

He says autonomous trucks are being inspected in an enhanced and more regular fashion before going on the highway. Kodiak worked with CVSA (the North American Standard Inspection Program) so that Kodiak autonomous trucks are not required to stop for inspections or weighing.

"That allows us to bypass roadside inspections and weigh stations," notes Wiesinger.

Tags

[Michael Wiesinger](#) [Kodiak Robotics](#) [Ikea](#)



https://www.autofuture: [Copy](#)

Popular Categories

[Autonomous Driving](#)

[Connectivity](#)

[Startups](#)

[Business](#)

[Electrification](#)

[Tech Innovation](#)

The Latest

"The Entire Business is Built on Trust & People" - How OX Delivers is Jumpstarting Logistics for Emerging Markets - MD, Simon Davis

Rahul Dutta Roy - May 18 2023

OX Delivers is revolutionising the logistics space in Africa by adding electric mobility into the mix. Founded in the thick of the Covid-19 pandemic in 2020, the company's proprietary software,...

BMW Announces Plans to Produce NEUE KLASSE EVs in China From 2026

Adrian Smith - May 18 2023

Following the market launch in 2025, BMW Group says models of the next vehicle generation, called NEUE KLASSE, will also be produced from 2026 onwards in Shenyang, China. The announcement was made...

Suzuki, Daihatsu & Toyota to Develop Mini-Commercial Van Electric Vehicles

Staff Writer - May 18 2023

Suzuki Motor Corporation, Daihatsu Motor Co., Ltd., and Toyota Motor Corporation have announced plans to develop prototype mini-commercial van electric vehicles (BEVs) equipped with a jointly...

How Germany's Swobbee is Creating Unique Battery Swapping Stations for Micromobility - CEO, Thomas Duscha

Adrian Smith - May 17 2023

Germany's Swobbee started life as GreenPack. In 2017 the startup was founded with the aim of creating a removable battery. It successfully developed a standardised battery with the same name,...