Embark Universal Interface Accelerates Integration of Self-Driving Technology Across Major Truck OEM Platforms

March 31, 2021

Embark launches an interoperable self-driving stack that will work across Freightliner, International, Peterbilt, and Volvo trucks.

SAN FRANCISCO, March 31, 2021 /PRNewswire/ -- Embark, a leading developer of autonomous technology for the trucking industry, today launches the Embark Universal Interface (EUI), a set of standardized self-driving components and the flexible interfaces necessary for major truck OEMs to more easily and robustly integrate Embark's autonomous technology onto their vehicle platforms.

The EUI program sets Embark apart as the first autonomous developer to pursue integration with all four major US OEMs. By focusing on the intersection of four platform specifications, instead of designing to one OEM platform, Embark is building the industry's first universal system that is intentionally designed to integrate into any platform. Embark has designed its system from the beginning to work across platforms, a decision that has required an immense amount of upfront investment and thoughtfulness around cross-platform trade-offs. The EUI effort is the manifestation of this philosophy into a product.

The industry has seen a number of early stage, non-exclusive partnerships announced between ADS developers and OEMs in the last year. Embark made a decision in early 2020 to pursue a different approach to OEM integration, informed by Embark's exclusive focus on the trucking industry since its founding in 2016. Trucking OEMs have a long tradition of offering trucks with key components sourced from multiple suppliers, including engines, transmissions, and braking systems, in response to carrier demand. By developing a strong technology platform that can be rapidly integrated on all major OEM trucks, Embark will provide OEMs with autonomous technology that is most responsive to their carrier customers' needs.

The EUI achieves its universality through a two-part design. Part one consists of a standardized components package – sensors and compute system – which have been determined through thousands of hours of design, testing, and analysis. Between these standardized components and the truck is part two of the EUI design, a set of physical, electrical, and software interfaces that enable the standardized components package to connect to and communicate with any OEM platform's steering, braking, throttle, telematics, power, chassis, and HVAC. This two-part approach, standardized components and flexible interfaces, achieves the best of both worlds for Embark and OEMs.

At the center of the interface package is the Embark Gateway, an automotive-grade ECU developed by Embark to enable API communication between Embark's technology and any OEM platform.

Embark's long-term vision is for OEMs to integrate Embark's technology with their truck platforms, which the OEMs will then sell with the maintenance and warranty support carriers demand. Embark supports this model and undertook the EUI effort to accelerate this process. The benefits of the program for Embark and the freight ecosystem manifest themselves in both the short-term and long-term.

"We absolutely believe that integrating with OEMs is the path to market for self-driving trucks," said **Alex Rodrigues, co-founder and chief executive officer of Embark**. "We also believe that being cross-compatible and easy to integrate into all OEM's vehicles as their level 4 platforms continue to develop gives us a competitive advantage."

Currently, the EUI program helps demonstrate the Embark Driver's compatibility with the four major OEM platforms, an industry first and important milestone to carriers who purchase from multiple OEMs. The EUI program also enables Embark to grow its test fleet across the four major OEM brands, increasing Embark's truck count and fleet diversity which will improve the fidelity of our test program and therefore accelerate our time to deployment.

"The launch of EUI opens the door to a much larger market opportunity for Embark by making their self-driving technology platform-agnostic," said **Pat Grady, Partner at Sequoia Capital**. "We've seen time and time again how the emergence of an open platform can serve as a galvanizing force in fast-developing markets, and this breakthrough technology from Embark has a chance to do the same for what's historically been a complex and fragmented industry. This is a huge step forward both for Embark and for the entire trucking industry."

In the long run, the EUI program will generate novel learnings around standardized sensor placement, vehicle communication protocols, telematics standardization, power management, and many other areas. These learnings and the associated proprietary designs will inform Embark partnership and integration decisions with each OEM, by helping Embark and OEMs better understand the feasibility of different integration approaches. Most importantly, the learnings from the EUI effort will increase the efficiency, robustness, and safety of future commercial integration programs between Embark and OEMs, resulting in a better product for the end-customer – carriers.

Most major carriers see maintaining multi-OEM fleets as a key element of their business strategy, and the development of EUI sends a strong signal to the trucking industry that Embark is best-positioned to meet the needs of carriers.

"We currently purchase trucks from multiple OEMs and plan to continue this strategy to optimize the experience for our drivers and meet our Total Cost of Ownership objectives," said **Trevor Fridfinnson, Chief Operating Officer at Bison Transport**. "Embark's investment to integrate its autonomous driving system with the major OEMs will allow us to test and deploy autonomous trucking capabilities without introducing a new OEM into our fleet for that sole purpose."

About Embark

Embark is building self-driving truck technology to make highways safer and the transport of goods more efficient. Our self-driving trucks are moving freight for Fortune 500 companies using our purpose-built transfer hubs, setting a new standard for how driverless trucks will move freight in the future. Since our founding in 2016, we have been on a mission to work closely with the trucking industry and public sector stakeholders to bring this

technology to market.

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