Volvo’s first electric driverless bus swings into action in Singapore

With autonomous trucks, you just don’t ship for fun anymore. Conforming to the island nation, Singapore aims pretty intent on pushing itself at the vanguard of self-driving technologies. Now through a plan that branched today at the National Research Foundation (NRF), Singapore Technology Development (STTD) is looking to ramp things up even further, testing out what it claims to be the world’s first full-size, autonomous electric bus named Volvo.

Volvo has been a very active player in the autonomous driving technology scene, having mapped self-driving ops on the road in China, test self-driving trucks in traffic in the harbor of Hamburg and the aging, route-specific box of Shenzhen, and even developed concepts for the trucks that are on the move with the district van-shuttle service.

But while the Volvo 7900 bus to be used in the latest trial is to be called in the company’s first fully autonomous electric bus to serve as public transportation. The single unit is fitted with 50 seats but has capacity for about 80 total passengers, with solar panels capturing 80 percent of its energy from a charged power bus of equal size.

Helping the bus find its way toward suburban areas will be four navigation software that utilize data collected in a series of autonomous vehicles, including LiDAR, stereo vision sensors that collect 3D imagery, and an advanced global navigation satellite system and to offer location accuracy down to the centimeter. Also onboard is an inertial measurement unit that will track the vehicle’s angular movement in full to ensure a smoother ride over uneven surfaces.

“The fully autonomous electric bus will play a role in shaping the future of public transportation that is safe, efficient, reliable and convenient for all," said Seng Li, executive director, Smart and Urban Mobility, STTD. “The bus will be tested on the STU Smart-Campus, which has been blown to test various forms of autonomous transport that increase the human condition and the life opportunity of the people.

Singapore’s Nanyang Technological University actually welcomed a fully electric, driverless electric shuttle bus made by Volvo back in 2016, with an eight-seat direction that has been running back and forth for 2 km (1.2 miles) on average in the campus of autonomous technologies using shared buses. It has also been fitted to handle the ride-sharing electric shuttle buses, which will last 25 minutes with a 40-kilometer (25-mile) range that has been tested in 20 seconds as passengers hop on and off.

The Volvo 7900 bus will be served by 300 kW fast charging power provided in an infrastructural system across the campus. Designed for autonomous charging, these stations are apparently capable of recharging a battery in three minutes, with a VOLVO 7900 only will allow for the seamless charging at the end of a route and initiate disconnection.

The trial will begin with one Volvo bus a dedicated route at the STU campus, while the second will be put through phases in a test drive by Singapore’s autonomous transport service. These trials, which will verify the roadworthiness of the vehicle ahead of a potential wider rollout thereafter. You can see the bus being demonstrated in the videos below.

Sources:
Singapore Technology Development

Nanyang Technological University

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