

URBAN TRANSPORT

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



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With autonomous truck, car, taxi and shuttle bus trials already underway on the island state, Singapore appears intent on positioning itself at the vanguard of self-driving technologies (Credit: Nanyang Technological University)

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With autonomous [truck](#), [taxi](#) and [shuttle bus](#) trials already underway in the island nation, Singapore seems pretty intent on positioning itself at the vanguard of self-driving technologies. Now through a pilot launched today at Nanyang Technological University (NTU) it is looking to ramp things up even further, testing out what it claims to be the world's first full size, autonomous electric bus in partnership with Volvo.

Volvo too has been a very active player in the autonomous driving technology scene, having [tested self-driving cars](#) on the road in China, put self-driving trucks to work in the [mines of Norway](#) and the [sugar cane fields of Brazil](#), and even developed concepts for [trucks](#) that do away with the driver's cabin entirely.

But the Volvo 7900 to be used in the latest trial is billed as the company's first fully autonomous and electric bus to serve as public transportation. The single-decker is fitted with 36 seats but has capacity for almost 80 total passengers, while apparently requiring 80 percent less energy than a diesel-powered bus of equal size.



Helping the bus find its way around campus will be AI navigation software that works with data collected by a suite of advanced sensors, including LIDAR, stereo-vision cameras that collect 3D imagery, and an advanced global navigation satellite system said to offer location accuracy down to the centimeter. Also onboard is an inertial measurement unit that will track the vehicle's angular movement to help ensure a smoother ride over uneven terrain.

"This fully autonomous electric bus will play a role in shaping the future of public transportation that is safe, efficient, reliable and comfortable for all commuters," said NTU President Professor Subra Suresh. "It will soon be tested on the NTU Smart Campus, which has been home to a number of innovations as a living testbed for technologies that impact the human condition and the quality of life.

Singapore's Nanyang Technological University actually welcomed a [self-driving shuttle](#) onto campus way back in 2013, with an eight-seat driverless bus called Navia running back and forth over a 2-km (1.2-mile) route as part of a research initiative into last-mile transport. It has also dabbled in fast-charging electric shuttle buses, [trialing a 22-seat bus](#) (with a driver) last year that recharged in just 20 seconds as passengers hopped on and off.

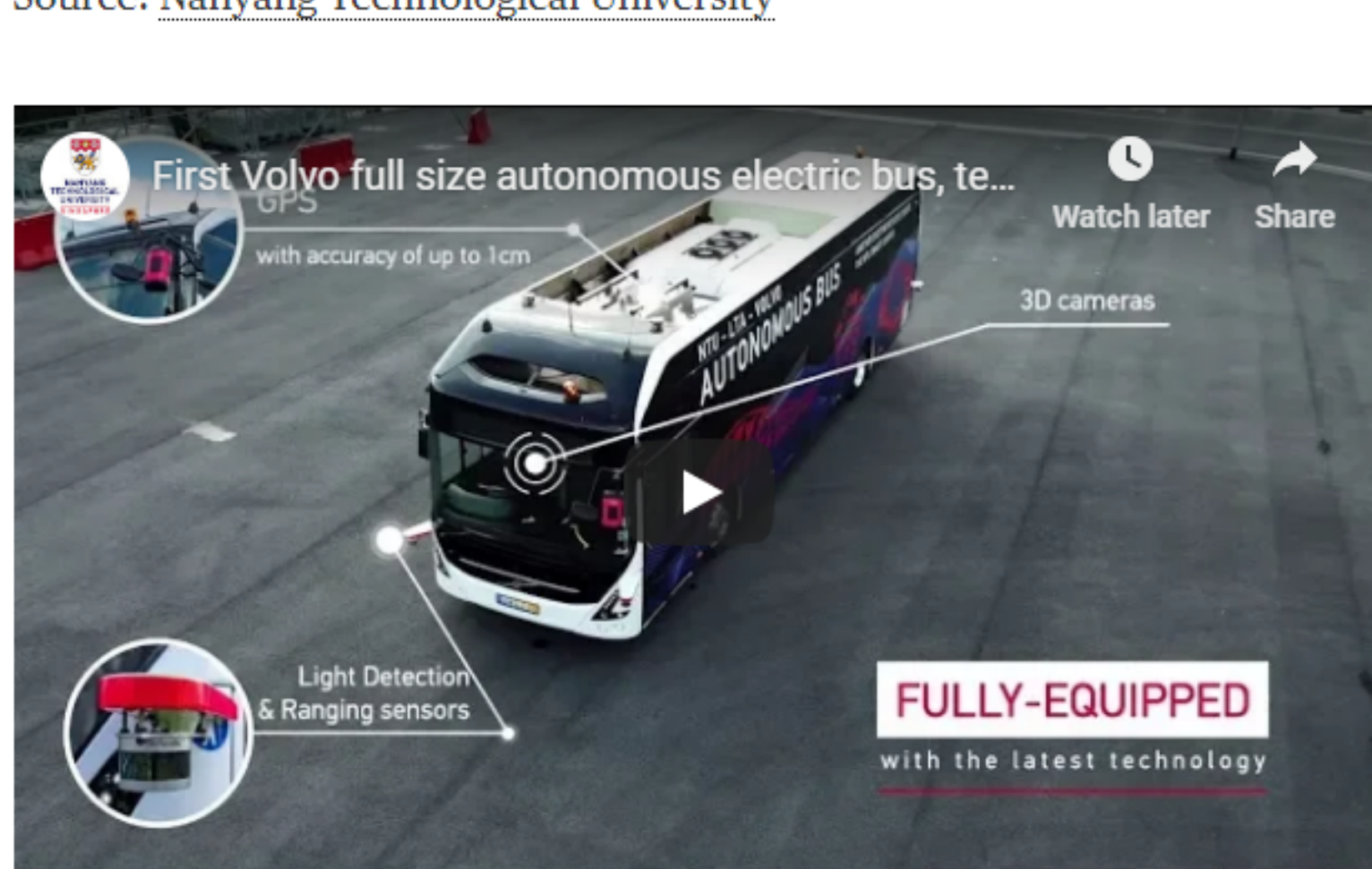


The Volvo 7900 bus will be serviced by 300-kW fast-charging ports mounted on infrastructure around the campus. Designed for autonomous charging, these stations are apparently capable of recharging a battery in three to six minutes, which NTU says will allow for seamless charging at the end of a route and minimize downtime.

The trials will begin with one Volvo bus on a fixed route at the NTU campus, while a second will be put through its paces at a bus depot by Singapore's public transport operator SMRT. These initiatives, it is hoped, will verify the road worthiness of the vehicles ahead of a potential wider rollout thereafter.

You can see the bus being demonstrated in the video below.

Source: [Nanyang Technological University](#)



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