

**Factsheet: New Three-Door Double-Decker Electric Bus**

ST Engineering's new three-door double-decker electric bus (e-bus) co-developed with CRRC prioritises safety, reliability, and sustainability. Exclusively distributed in Singapore by ST Engineering's Mobility Services business, the new e-bus offers the following capabilities and features:

- **AGIL® DriveSafe+**: The first-of-its-kind, all-round advanced collision warning system to be piloted on Singapore's public buses, AGIL DriveSafe+ leverages AI video analytics technology to provide accurate and reliable 360° detection of potential collisions in blind spots together with other Advanced Driver Assistance Systems (ADAS) capabilities, to improve driver situational awareness and road safety. Key capabilities include:
  - Forward Collision Detection
  - Time-to-Collision Monitoring
  - Lane Departure Detection
  - Pedestrian Collision Detection
  - Blind Spot Detection and Warning
- **Driver Anti-Fatigue System**: Using machine vision and AI with real-time camera feeds, the driver anti-fatigue system detects signs of tiredness and abnormal driving behaviour and sends alerts to the driver.
- **Camera Mirror System**: The camera mirror system provides improved all-weather visibility even in challenging conditions such as rain, fog or at night, enabling greater clarity and situational awareness for drivers.
- **UVC LED Air Disinfection System**: Integrated with the air-conditioning vent, the UVC LED Air Disinfection System eliminates 99.9% of airborne viruses, ensuring clean air circulation in the bus.
- **Automatic Fire Extinguishing System (AFES)**: The AFES detects and suppresses vehicle fires at their earliest onset, enabling rapid emergency response and improving overall safety.
- **Spacious Interior with Charging Convenience**: Designed with passenger comfort in mind, the e-bus also offers accessible USB charging ports and wireless charging points.

- **Automatic Boarding Ramp:** The automatic boarding ramp eases accessibility for wheelchair users and is easy to operate for bus captains.
- **Next-generation Batteries:** Powered by CATL's next-gen LFP batteries with a high energy capacity of 528kWh, the e-bus delivers an improved range of up to 310km on a full charge.
- **Solar Roof Panels:** Roof-mounted solar panels can recover up to 4kW of energy, reducing overall power consumption and load on the engine.
- **Automatic Water Drainage System:** This prevents moisture from entering the compressor, reduces rusting and maintenance cost while prolonging the e-bus' lifespan.

## Technical Specifications

<b>BASIC PARAMETERS</b>	
Length*Width*Height (mm)	12000*2550*4390
Wheel Base (mm)	5220+1550
Laden Weight (kg)	24420
Axle Maximum Laden Load (Front/Centre/Rear) (kg)	7460/6560/10400
Passenger Capacity	Seating: 63; Standing: 57. Total 120
Power Battery	528kWh Lithium Iron Phosphate, CATL
Cruising Range	260km <sup>①</sup> / up to 310km <sup>②</sup>
Maximum Allowable Charger Power	175kW (single gun), 280kW (dual gun)
<b>KEY COMPONENT CONFIGURATION</b>	
Drive Motor	CRRC permanent magnet synchronous motor (PMSM), peak power 350kW, peak torque 3500Nm, maximum speed 3300rpm, liquid cooling
Steering Booster Pump	Electric steering booster pump
Air Compressor	Electric air compressor
Cooling System	Intelligent cooling system
Front Axle	ZF RL82A rigid steering axle
Middle Axle	ZF RL82A tag rigid axle
Rear Axle	ZF AV133
ECAS	With kneeling function

Steering	Recirculating ball type hydraulic power steering machine
Tyre	275/70R22.5
Bus Body	Aluminium alloy body
Multiple Access Points	3 doors, 2 staircases
Exterior Mirror	Camera mirror system
Roof Fitting	Solar panel
Interior Floor	Fire retardant, anti-rot treated structural plywood
Multi-Functional Area	2 Wheelchair space, automatic boarding ramp
Floor Covering	Fire retardant, anti-slip material
Advanced Driver Assistance Systems	AGIL DriveSafe+: Forward Collision Detection, Time-to-Collision Monitoring, Lane Departure Detection, Pedestrian Collision Detection, Blind Spot Detection and Warning, and Driver Anti-Fatigue System

**Note:**

- ①: Urban bus driving cycles.
- ②: Equal speed cycles.