

**Media Kit**

**For the Busworld Europe 2025**

**Yutong Technologies**

Yutong Bus Co., Ltd.

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**I. YUTONG EV Long-life Tech**

The “YUTONG EV Long-life Tech” is an innovative technology launched by Yutong to address customer pain points. Yutong has pioneered the using of traction batteries with longer lifecycle and more efficient hairpin motors, as well as 7-in-1 silicon carbide controller. The battery is designed for a 15-year/1.5 million-kilometer lifespan. The high integration efficiency and lightweight structure significantly enhance battery life and performance, improving structural strength and delaying battery degradation from multiple dimensions. The low-resistance and hairpin winding technology greatly improve motor efficiency and reliability. The integrated and lightweight controller not only significantly increases space utilization and reduces failure rates, but also greatly enhances safety and efficiency.

1. Long-life Traction Battery

Slow battery degradation: By adopting technologies such as the flat distribution of positive electrode particles and low-lithium-consumption graphite, the battery’s degradation is delayed, achieving a cycle life of over ten thousand times.

Corrosion and aging resistance: Durable coating technology is applied to solve the problem of extreme corrosion, ensuring the battery’s outstanding corrosion resistance over its entire 15-year lifespan. Under various harsh conditions, the coating demonstrates strong anti-corrosion capabilities: In high-salt conditions, after 4 weeks of de-icing salt corrosion testing, the coating shows no rust, bubbles, or other defects, fully ensuring the battery’s corrosion resistance in regions like Northern Europe where de-icing salts are heavily used in winter; in high-temperature and high-humidity conditions, after 10 weeks of high-temperature and high-humidity cyclic salt spray testing, the battery achieves corrosion resistance across different conditions throughout its lifecycle.

High Protection: Yutong’s long-life batteries are designed with multiple waterproof structures, allowing them to remain undamaged after being immersed in 1 meter of water for 48 hours. Unlike Chinese National Standard, which only conducts a standalone water immersion test, Yutong takes into account the actual working conditions of the vehicle throughout its entire life cycle. The batteries undergo continuous water immersion tests on the basis of combined tests with three factors: temperature cycling, high humidity, and vibration. This ensures that the batteries can withstand 1 meter of water for two days and two nights over their entire 15-year life cycle, significantly reducing the economic losses to the vehicle caused by floods.

High Specific Energy: While achieving long life, the battery energy density is increased to up to 175 Wh/kg, supporting the vehicle’s lightweight design, reducing overall energy consumption, and extending the driving range.

2. High Efficiency Flat Wire Motor

High Efficiency: Through the optimization of multi-layer hairpin winding design, loss separation and condition matching technology, and the use of 0.25 mm ultra-thin silicon steel laminations, the motor efficiency is further optimized with a maximum efficiency reaching 97.8%.

Low Resistance: Overcoming the challenges of multi-layer hairpin winding design and manufacturing, Yutong has pioneered the launch of 8/10-layer hairpin winding motors in the bus industry. Compared to round wire windings, the pure copper slot fill rate has increased from 40% to over 60%, the winding end length has been shortened by 10 mm, the resistance has decreased by 20%, and the motor copper loss has been reduced, resulting in an efficiency improvement of 0.5% to 1%.

Durability: By matching high coercive magnetic steel and optimizing the insulation coating of the magnet wire, a high-temperature-resistant insulation system has been developed. The motor’s temperature resistance capability has been increased by 30%, while delaying the electrothermal aging of the insulation system, extending the motor life to 20 years/2 million kilometers.

High Protection: Through the optimization of static and dynamic sealing combinations, and the use of high-wear-resistant oil seals and high-protection-grade connectors, the motor can withstand immersion in 2 meters of water for 72 hours without water ingress, achieving the highest level of protection in the industry.

3. Seven-in-One Silicon Carbide Controller

High Integration: The original multiple separate control units are integrated into one. The motor controller, steering motor controller, air compressor controller, electric accessory power distribution, vehicle DC/DC, DC charging circuit, and insulation detection functions are deeply integrated into one unit. It fully integrates high-voltage control and charging/distribution functions, becoming the most integrated controller in commercial vehicle industry.

Lightweight: The number of high-voltage connectors is reduced from 33 to 16, significantly lowering the failure rate. Meanwhile, the weight is reduced from 108 kg to 65 kg, and the volume is reduced by 40%, significantly improving the internal space utilization of the vehicle.

High Efficiency: By adopting SiC technology, the hardware limitations of Si-based IGBT power modules that restrict the improvement of driving efficiency are resolved. Leveraging the low conduction loss and high voltage tolerance of SiC, combined with high-frequency efficient control algorithms, the controller’s maximum efficiency can reach 99.8%. Compared to the previous generation, the high-efficiency area increases by 7%, supporting a 3% reduction in vehicle energy consumption.

High Protection: With advanced protection technology, it can be immersed in 2 meters of water for 72 hours without water ingress and meets the IP6K9K rating, achieving an internationally advanced level.

**II. LINK+ (YUTONG intelligent fleet management system)**

Link+ is a comprehensive intelligent management platform and data application for fleet operations. It offers five core functions: Vehicle Safety, Energy Consumption, Maintenance, Parts Service and Driver Service for enterprise managers, fleet managers, maintenance managers, parts managers, and drivers. The platform provides smart tools for managing, using, maintaining, and repairing vehicles, delivering intelligent services across all scenarios. By the end of 2024, Link+ has been operational in over 110 countries, serving over 440,000 vehicles.

Powered by AI and big data, Link+ drives data-based decision-making, revolutionizing the global bus industry by transitioning from “passive reactive services” to “proactive intelligent services”. This helps fleet operators to reduce costs and enhance efficiency. Link+ makes fleet management more hassle-free. With its two core modules of intelligent monitoring and intelligent control, it covers five major functional scenarios: vehicle monitoring, energy consumption management, driver services, maintenance services, and parts services. It helps users keep track of vehicle health status in real time and optimize operational efficiency in one go.

**Vehicle Management Service:**

Leveraging Internet of Vehicles (IOV) data and expert experience in vehicle R&M, Link+ can monitor conditions of vulnerable and consumable parts, and remind users for timely service. It provides one-stop real-time detection of ten types of common risks with alerts, while identifying abnormal vehicle operations and offering improvement recommendations.

Yutong Link+ provides one-stop risk monitoring, automatically detecting over 10 vehicle risks including malfunctions, full charger reminder, plugged but not charging, prolonged inactivity (centralized parking of high SOC vehicles), idling A/C, A/C off at high/low temperatures, abnormal tire pressure, brake shoe issues, and battery level below threshold. Customized alerts are tailored for different roles, such as charging administrator focuses on battery status. Upon risk detection, the system intelligently prioritizes urgency levels, avoids off-hour disruptions, and delivers alerts via mobile and desktop notifications.

The driving risk identification model (e.g., sudden braking, speeding) can intelligently detect 78 hazardous scenarios for both electric and fuel vehicles and provide recommendations across four key areas, namely safety, efficiency, vehicle protection, and comfort, to enhance fleet management.

**Energy Consumption Management Service:**

Intelligent vehicle control enables batch and remote operation of comfort features like air conditioning and interior lighting, meeting demands for comfort, fleet management efficiency, and safety.

Centralized time-based temperature management is designed for European operations with significant day-night temperature variations and high fleet A/C energy consumption; users can configure entire fleet A/C settings with one click, prioritizing passenger comfort during morning rush hours, auto-adjusting midday temperatures for efficiency, and turning off non-essential A/C at night.

Intelligent charging management delivers comprehensive charging monitoring and energy-saving solutions. It optimizes charging based on local electricity rates and operational needs to reduce costs, while preventing brake overheating through energy recovery to enhance safety.

**Repair Management Services:**

Link+ technology enables full cycle management from predictive fault detection to post-repair delivery. Proactive issue alerts, scheduled maintenance reminders, one-click repair bookings via the mobile app, and real-time progress tracking. Post-service, key metrics like response speed and repair duration are available for review, making maintenance faster and hassle-free.

Intelligent “Foundation Model + IoV” diagnostics enable remote troubleshooting with AI Q&A assistance. Users describe vehicle symptoms, and the system analyzes IoV and diagnostic data to identify faults and recommend repair plans.

The predictive maintenance algorithm based on vehicle operating data enables proactive failure alerts, while the integrated “customer-after-sales” one-click collaboration platform ensures transparent service processes.

**Driver Management Service:**

Provides drivers with end-to-end training management, covering learning, examination, and certification of vehicle maintenance knowledge. Resolves key pain points like technician skill gaps, high training costs, and outdated expertise, enabling users to learn online and effortlessly enhance their skills. Courses are tailored by vehicle and module, available in multiple formats including videos and online demos. Examinations combined with exercises precisely identify students’ weakness.

Moreover, Vela smart assistant offers convenient support for vehicle usage, maintenance, and repair queries, enabling second-level fault retrieval via AI-powered Q&A. In addition, it also features an online knowledge base with searchable electronic documents, videos, and digital models for easy access.

**Parts Management Services:**

Digitally reconstructs vehicle disassembly processes to achieve end-to-end integration of parts from design to production and maintenance, with real-time global inventory and logistics tracking.

LINK+ employs a unified coding system to establish comprehensive component identification standards, eliminating data inconsistencies caused by “multiple codes for single item”. Its 3D Visual Interaction can restore the vehicle structure with high accuracy and support layer-by-layer disassembly and parts interaction operations. Leveraging 5G and IoT technologies, the system achieves cross-regional warehouse data updates in seconds, real-time global inventory synchronization, and transparent parts supply management.