

First Read

China Auto Supply Chain

Optimus march into mass production, which auto parts suppliers are better positioned?

Equities

China

Auto Parts

Nora Min

Analyst

nora.min@ubs.com

+86-21-3866 8905

Paul Gong

Analyst

paul.gong@ubs.com

+852-2971 7868

Jenny Wang

Analyst

S1460523110001

jenny-zb.wang@ubs.com

+86-21-3866 8837

Supply chain catalysts expected; reducer & actuator leaders well positioned

According to Tesla, it is planning to officially unveil its Gen 3 Optimus humanoid robotics in mid-2026, with mass production slated to commence in late July or early August. As the timeline for mass production draws near, we expect incremental positive news flows from the supply chain in May-June, potentially including formal project designations and orders. Auto parts suppliers under our coverage have been actively positioning themselves in humanoid robotics over the past two years, developing components such as reducers, actuators, motors, structural parts, and intelligent skins. We summarise the core components of humanoid robots and key Chinese suppliers' positioning in [Figure 1](#). Within our coverage, we are upbeat on **Kedali** and **Shuanghuan** for their reducers, and **actuator leaders**.

Kedali and Shuanghuan - high visibility in reducers

Kedali has established a JV with Taiwan-based Mirle Group and MAIN DRIVE Corporation, leveraging Kedali's long-term commercial partnership with Tesla and the partners' profound technical expertise in harmonic reducers, Kedali has successfully delivered several rounds of prototypes to Tesla, which have generated positive feedback.

Shuanghuan is a leading transmission gear supplier with deep robot reducer expertise, Tesla is one of the largest customers of its NEV transmission gear business. It has been engaged in collaborative R&D with Tesla since 2025 to develop customised new-type reducer products tailored to Optimus' technical specifications.

Tuopu and Sanhua - potential core actuator suppliers

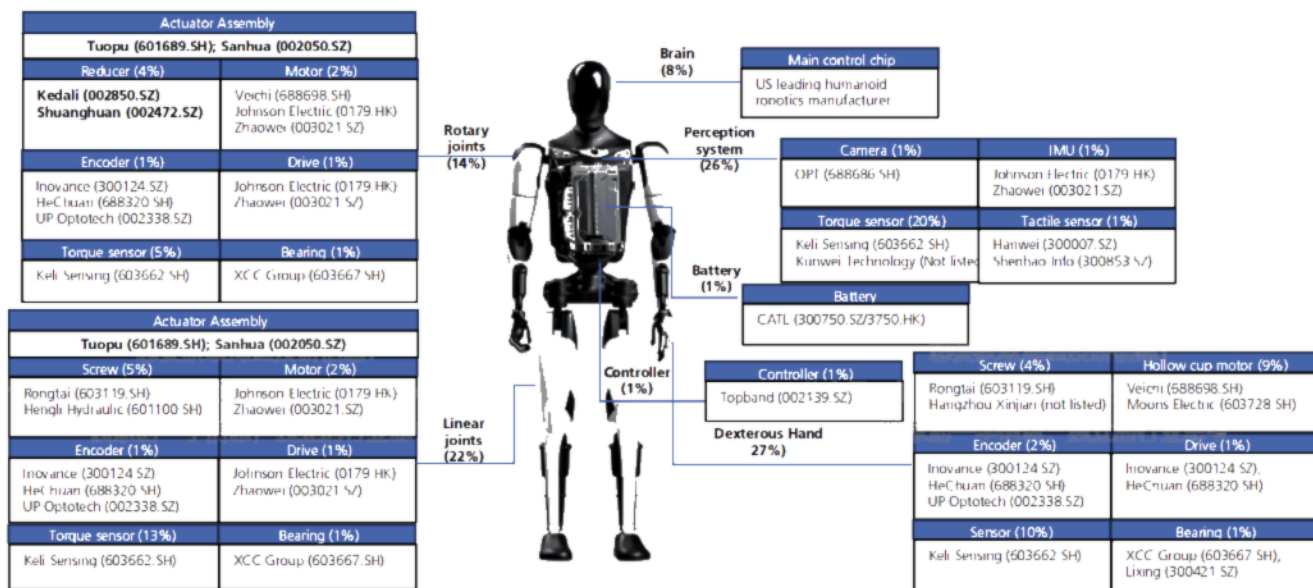
Within the actuator supply chain, **Tuopu** and **Sanhua** are widely regarded by the market as possessing proven track records and strong technical capabilities. Both companies have maintained years of close collaboration with Tesla in the NEV business, and are leveraging their technical expertise and integration capabilities accumulated in their core businesses for humanoid robotics. Currently, **Tuopu** is already partnering with Tesla on linear actuators, rotary actuators and dexterous hand motors. It is also diversifying into robot body structures, sensors, foot shock absorbers and electronic flexible skins. **Sanhua** closely teamed up with Tesla on rotary actuators and linear actuators, and is actively expanding the assembly business.

Stock preference

Amid the broader industry trend of auto parts suppliers pivoting into the humanoid robotics sector, we view Kedali, Shuanghuan, and actuator leaders as the most likely winners of the humanoid robotics business among our coverage. **Our top pick is Kedali**, driven by its robust core business growth coupled with high visibility in its robotics business.



Figure 1: Core components of humanoid robotics and key Chinese suppliers' positioning



(%) represent the proportion of each component in the humanoid robotics BOM

Source: Company data

Valuation Method and Risk Statement

We think risks to China's auto parts sector include: 1) demand for auto parts being dampened by lower auto production; 2) automakers, with earnings squeezed by slowing car sales, passing price pressure onto parts suppliers; 3) price pressure brought by intensified competition; 4) higher auto part costs due to raw material cost inflation; 5) worse-than-expected sector consolidation; and 6) product recalls triggered by product quality issues.

Kedali: Our price target is based on DCF. We think the main company-specific risks facing Kedali are: 1) slower-than-expected capacity building and launch; 2) slower-than-expected capacity building at major customers; 3) significant loss of share at major customers; and 4) product quality issues. We think the main industry risks facing Kedali are: 1) a weaker-than-expected rise in EV penetration; 2) significant price pressure placed by battery firms on upstream structural parts businesses; 3) capacity launch by, and market share losses to, competitors; and 4) rising prices of main raw materials including copper and aluminum. We think the main macro and regional risks facing Kedali are: 1) declining passenger vehicle sales volume amid a macro downturn; and 2) adverse impact of trade friction on parts imports and exports.

Shuanghuan: We base our price target on DCF. We believe risks to our estimates include: 1) a slower rise in EV adoption than we expect; 2) weaker willingness of OEMs to apply dual-motor systems and coaxial reducers than we expect; 3) bottlenecks in overseas expansion; 4) humanoid applications falling short of our expectation.