

Xtand Earns International Recognition for AI-Powered Knee Support and Smart Patella Strap Design

Red Dot Design Award and Best of CES Speed Award highlight advanced AI knee wearable technology for running, sports and daily mobility

SHENZHEN, GUANGDONG, CHINA, August 18, 2026 /EINPresswire.com/ -- Xtand, a wearable AI technology company applying exoskeleton engineering to sports and everyday mobility, today announced a growing portfolio of international design and technology honors. The recognition reflects the company's long-term work in motion sensing, intelligent pressure control, industrial design and human-machine collaboration, establishing its AI-powered knee support and smart patella strap as a notable entry in the wearable sports technology market.



Xtand smart knee support technology receives international recognition through Red Dot Design Award 2025 and CES 2026 awards.

Among its latest distinctions are the Red Dot Design Award 2025 and the 2026 Best of CES Speed

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An award is meaningful when it recognizes engineering progress and user experience. We transformed exoskeleton tech into a light, responsive wearable for running and active lifestyles.”

Xtand CEO

Award, identified in Xtand's company materials as a CES official media award. Together, these honors recognize the design philosophy and technological direction behind Xtand's lightweight intelligent patella support system—a dynamic knee support solution that adapts to user movement in real time.

Unlike conventional knee supports that rely on constant compression, Xtand integrates its X-Intention Motion Engine with distributed sensors and AI-based movement analysis. The system is designed to identify changes in knee angle, cadence and impact load before adjusting support pressure to suit different movement conditions,

supporting activities such as running, jumping, squats and hiking.

According to data from an independent third-party testing organization, the platform recognized 12 movement patterns with accuracy of up to 99.6%, determined movement intention within approximately one to three seconds and regulated pressure across a range of 0-50 kPa under defined test conditions. These results reflect the specified test setup and may vary depending on fit, activity, user characteristics and testing methodology. The technology is incorporated into a 57-gram wearable made with Alcantara material selected for comfort, providing movement-responsive support without the bulk of traditional hinged supports.

"An award is meaningful when it recognizes both engineering progress and a better user experience. Our team has worked to transform technologies originally developed for professional exoskeleton systems into a wearable product that is lighter, more responsive and easier to use in real-world movement across running, jumping and other active lifestyle scenarios."

The technology foundation supporting Xstand has received recognition across several stages of its development. Earlier honors listed in the company's award portfolio include the 2022 Chapek Award for Industrial Design Product, the 2022 Exoskeleton Product Innovation Award and the 2020 Chapek Emerging Brand Award.

The broader exoskeleton and robotics program was also named a Star of Investment and Innovation at the 2021 World Robot Conference. Additional recognition includes an Excellent Product Solution honor in the special robot industry chain and the Best Industrial Design Award at the 2021 Robot Exhibition of the Popular Science Products Fair.

The company's technical background extends to artificial intelligence and innovation programs. Its portfolio includes the First Prize of Science and Technology Progress in the AI field in 2017, recognition as an Outstanding Enterprise in the China Innovation and Entrepreneurship Competition, and designation as a National High-tech Enterprise of China.

Xstand said these honors represent different aspects of one continuous development path—from AI and robotics research to industrial exoskeleton systems and, more recently, lightweight consumer wearables such as the patella knee strap and adjustable knee support designed for athletes, outdoor enthusiasts and physically active users.

According to company records, research and development investment reached approximately RMB 170 million. Development took place over two years, involved specialists from 10 countries and included more than 30,000 motion tests.

Xstand plans to continue expanding the platform across sports, training, active work and daily movement scenarios while pursuing cooperation with research institutions, professional organizations and international distribution partners. The company will continue developing its AI knee wearable portfolio, including smart patella strap and adjustable movement-support solutions for running, sports and active daily use.

About Xstand

Xstand is a wearable AI technology company originating from exoskeleton research and

development. The company brings motion recognition, adaptive pressure regulation and human-centered wearable design to sports and everyday mobility, with a focus on patella strap solutions that combine biomechanics, intelligent sensing and practical comfort.

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