

Xtand Launches AI-Powered Patella Strap for Running and Dynamic Movement Support

Lightweight wearable combines real-time motion recognition with dynamic support technology for sports, fitness and everyday mobility

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Xtand today announced the global launch of its AI-powered patella strap, a new wearable support device designed to respond dynamically to changes in human movement. Developed for athletes, active consumers and people seeking additional knee support for sports during daily activities, the device combines motion sensing, intelligent analysis and adaptive pressure adjustment in a compact 57-gram design.



Xtand AI-powered patella strap showcased with its smart packaging during the global product launch.

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Xtand CEO

Conventional patella straps typically provide a fixed level of compression regardless of whether the user is walking, running, jumping or changing direction. Xtand takes a different approach. Its integrated motion-perception system identifies changes in movement and adjusts support according to the detected activity.

According to data from an independent third-party testing organization, the system achieved motion-recognition accuracy of up to 99.6% and an improvement of up to 87.8% in support rigidity under defined test conditions.

These results reflect the specified test setup; performance

may vary depending on fit, activity, user characteristics and testing methodology.

The product is worn approximately one to two centimeters below the kneecap. Its lightweight structure is intended to reduce the bulk commonly associated with traditional hinged supports, while an external electronic module houses the device's sensing and control components to

enable movement-responsive support during high-impact activities. "Most knee-support products remain passive once they are secured. Our goal was to develop a lightweight system that could recognize movement and adapt its support without requiring the user to stop and make repeated manual adjustments." The launch targets a broad range of movement scenarios, including running, basketball, hiking, strength training, stair climbing and physically demanding occupations. Xtand positions the product as a complementary smart sports wearable that provides responsive external movement support alongside appropriate training and muscle conditioning.

Product development focused on three priorities: rapid motion recognition, practical comfort and unobtrusive daily use. The device combines an ergonomic strap structure with soft-touch materials and a compact intelligent module positioned on the outer side of the knee.

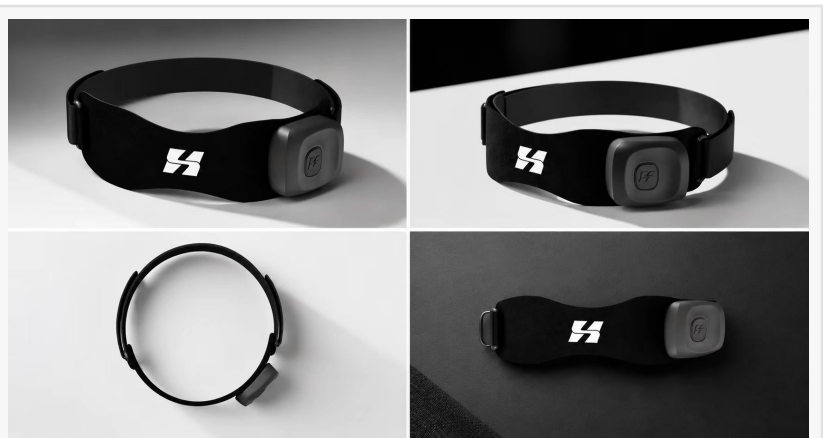
The global launch will be supported by demonstrations, professional partnerships and distribution programs across selected international markets. Xtand is also exploring cooperation with sports retailers, professional movement and fitness service providers, fitness organizations and regional distributors.

The Xtand AI-powered patella strap will be available through xtandtech.com and participating distribution partners. Pricing, warranty terms and market-specific availability will be announced separately.

About Xtand

Xtand develops intelligent wearable-support products that combine biomechanics, motion sensing and adaptive technology. The company aims to create lightweight equipment that supports movement while remaining practical for sports and everyday use.

Aileen



Close-up details of the Xtand AI-powered patella strap highlighting its minimalist design, intelligent module and premium materials.



An athlete wearing the Xtand AI-powered patella strap during an outdoor running session, demonstrating smart knee support in everyday movement.

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