Tuya Smart Unveils New Era of Smart Hardware with AI Technology at the 2025 Hong Kong Electronics Fair (Spring Edition)

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Tuya Smart (NYSE: TUYA, HKEX: 2391), the global AI cloud platform service provider, is exhibiting at the 2025 Hong Kong Electronics Fair (Spring Edition), held at the Hong Kong Convention and Exhibition Centre. Under the theme "Innovate With AI," Tuya aims to drive product innovation and iteration in the consumer electronics industry through AI technology, enabling developers to respond swiftly to market shifts and meet the evolving needs of consumers.



With the rapid advancement of technologies such as generative AI, multimodal large language models, and deep learning optimization, AI-powered products have transitioned from research labs to the mass market. Groundbreaking AI innovations like AI rings and smart speakers are emerging, creating remarkable commercial value. According to a report by Verified Market Research, the global AI hardware market is projected to reach approximately USD 1.1 trillion by 2030.

To enable developers to seize new business opportunities, Tuya is showcasing a series of innovative AI hardware products aligned with the latest AI hardware trends. These span sectors such as smart healthcare, emotional companionship, and intelligent security—broadening the scope of AI applications and accelerating the realization of AI's commercial potential.

AI PresGuard Sensor: Advanced Technology for Fall Prevention

As the global trend of population aging continues to accelerate, the demand for health and wellness solutions is rapidly increasing. According to the World Health Organization, by 2030, approximately one-sixth of the global population will be aged 60 or older. In response, Tuya continues to deepen its presence in the field of intelligent healthcare, empowering developers to create a variety of AI-driven health products and helping them overcome commercial barriers.



At this exhibition, Tuya is showcasing an AI PresGuard Sensor that utilizes high-precision millimeter-wave radar technology with multiple transmitters and receivers, supporting large-scale spatial deployment. Its boundary and area division accuracy reaches up to 10 centimeters, effectively eliminating spatial interference and enabling more refined and responsive zone-based linkages.

The device is equipped with key features such as multi-person fall detection and individual respiratory and heart rate monitoring. The multi-person fall detection function can simultaneously monitor several family members, triggering an immediate alert if a fall occurs to ensure timely assistance. Meanwhile, the respiratory and heart rate monitoring function enables real-time tracking of various health indicators, providing comprehensive protection for the health and safety of family members.

AI Doll: A Comforting Companion for Emotional Support

Driven by the dual trends of the "lonely economy" and intelligent parenting, AI hardware products in the field of emotional companionship have gradually become a vital and fast-growing segment of the market. In response to this demand, Tuya has proactively collaborated with developers to launch a range of AI-powered companion products.



The AI dolls showcased at Tuya’s booth support four interactive modes: long-press dialogue, button-activated dialogue, voice-activated dialogue, and casual conversation. These diverse interaction methods enrich the communication experience between children and the dolls. Leveraging emotion perception algorithms, the dolls can detect subtle fluctuations in a child's voice—such as tone, speed, and signs of distress—to determine whether the child is experiencing positive or negative emotions and respond with appropriate, emotionally attuned language.

Adding to their charm, Tuya AI dolls Solution can also featured two display screens driven by dual SPI, which serve as an expressive pair of animated eyes. These eyes are capable of displaying a wide array of emoticons. By integrating large-model emotion perception capabilities, the dolls can respond to a user’s emotional state by switching to corresponding facial expressions, enhancing the fun and emotional resonance of child-doll interactions.

AI Smart Earphones: A Practical Solution for Cross-Border Office Work

According to a forecast by Canalys, the number of AI audio devices worldwide is expected to exceed 500 million by 2025. To help developers expand their innovation in this field, Tuya showcased a variety of AI audio products, among which AI smart earphones with intelligent analysis capabilities attracted significant attention from visitors.



These AI smart earphones can accurately record the entire process of online meetings and convert spoken content into text in real time. Powered by AI technology, they also feature advanced intelligent analysis functions. These capabilities enable users to extract key topics, decision points, and notable remarks made by participants, and automatically generate structured meeting minutes—helping users review discussions at a glance and quickly grasp the meeting's core messages.

When traveling abroad or engaging in cross-border business activities that require face-to-face, cross-lingual communication, these AI smart earphones also serve as real-time translators. They provide simultaneous interpretation, enabling smooth communication across languages. This eliminates the awkwardness of language barriers and allows users to conduct international work with greater ease and confidence.

4G LTE Outdoor Camera: An All-Weather Security "Guardian"

With the ongoing evolution of technologies such as intelligent perception and AI computing, security applications are expanding beyond traditional domains into general-purpose scenarios like buildings, parks, and construction sites. However, the high deployment cost and limited flexibility of traditional surveillance cameras have spurred rapid growth in the AI mobile camera market. Tuya is supporting this trend by empowering the development of a series of AI-powered mobile cameras, helping developers seize emerging opportunities.



At the fair, Tuya unveiled its 4G LTE Outdoor Camera equipped with AI capabilities. The devices can operate using virtual SIM cards to perform real-time detection of people and vehicles. Leveraging AI algorithms, the 4G LTE Outdoor Camera can intelligently track monitoring targets, keeping constant watch over suspicious individuals and vehicles. Additionally, it can accurately predict the movement trajectory of these targets, ensuring smooth tracking and complete video recording. This significantly enhances the efficiency and accuracy of security operations, offering robust support for safeguarding a wide range of environments.

Smart Multi-Mode Gateway: A Breakthrough in Comprehensive Interconnection

As a crucial bridge for device connectivity, gateways are widely used across smart home systems, the industrial Internet of Things, and smart building applications. According to Verified Market Research, the global gateway market is projected to reach USD 2.917 billion by 2030. In response to this trend, Tuya has developed a variety of gateway solutions, including the smart multi-mode gateway.



This gateway supports multiple networking options such as Wi-Fi, wired connections, and 4G, and is compatible with protocols like Zigbee, Bluetooth, and Thread. It enables seamless networking and interaction with various devices, offering users more efficient and secure connectivity options for home environments.

Moreover, the smart multi-mode gateway is compatible with major platforms such as Apple Home, Google Home, and Samsung SmartThings. This means users across Apple, Google, and Samsung ecosystems can effortlessly connect their devices to a unified smart home management system built around the gateway. Through this cross-platform bridging capability, users can achieve seamless interconnection and collaboration between devices of different brands and categories, making smart home ecosystem integration simpler and more efficient.



At the fair, Tuya is showcasing its latest breakthroughs in AI technology, empowering developers to turn their ideas into reality and unlock greater commercial value from AI. Looking ahead, Tuya will continue to invest in the research and development of next-generation AI hardware solutions, while accelerating global collaboration with an open and neutral approach—working hand-in-hand with more developers to explore the boundless potential of AI technology.