

Global smart textile market to grow to US \$ 15.6 billion by 2030



The smart textiles industry is expected to increase at a compound annual growth rate (CAGR) of 25.4 per cent from 2024 to 2030, from its 2024 valuation of US \$ 4 billion to US \$ 15.6 billion.

The creation and uptake of smart fabrics have been greatly accelerated by technological developments. Advances in materials science, such as the creation of flexible electronics and conductive fibres, have made it possible to incorporate electronic components into textiles without sacrificing their wearability or comfort. Furthermore, smart fabrics with improved features like self-cleaning capabilities, UV protection, and antibacterial qualities have been made possible by developments in nanotechnology.

Smart textiles can connect to other smart devices through the use of wireless communication technologies like Bluetooth and NFC, forming an integrated ecosystem that can offer extensive data and insights. Additionally, the mass production of smart textiles has been made easier by the application of modern manufacturing techniques, such as roll-to-roll processing and 3D printing, which has reduced their cost and increased their accessibility.

Given that smart textiles provide special capabilities for tracking and enhancing physical well-being, the expanding consumer awareness of health and fitness as well as the growing desire for wearable technology are significant drivers. Smart textiles are becoming more practical and user-friendly due to technological developments in electrical components and materials, which is promoting their adoption across a range of industries.

Furthermore, the growth of the Internet of Things (IoT) is facilitating the incorporation of smart textiles into larger smart systems, increasing their usefulness and attractiveness. Market expansion is also being aided by government programs and financing for sophisticated textile research and development.



全球智能纺织品市场预计到 2030 年将增长至 156 亿美元



从 2024 年估值的 40 亿美元起，全球智能纺织品行业预计将在 2024 至 2030 年间以 25.4% 的复合年增长率 (CAGR) 迅速扩张，到 2030 年达到 156 亿美元的市场规模。

智能织物的开发与应用正因技术进步而迅速加快。材料科学的发展，特别是柔性电子技术和导电纤维的出现，使电子元件能够集成进纺织品中，同时保持良好的穿戴舒适性。

此外，纳米技术的突破也使得具备自清洁、紫外线防护、抗菌等功能的智能织物成为现实。

智能纺织品可通过蓝牙、NFC 等无线通信技术连接其他智能设备，构建互联生态系统，从而提供丰富的数据与洞察。

现代制造技术（如卷对卷加工和 3D 打印）的应用进一步推动了智能纺织品的规模化生产，降低了成本，提高了市场可及性。

由于智能纺织品能实现身体监测等独特功能，消费者对健康与健身的关注正带动其需求上升。

同时，电子元件与材料的不断革新使智能纺织品更实用化、用户友好，正在被广泛应用于医疗保健、体育、时尚、军事、安全等多个行业。

物联网的发展正进一步推动智能纺织品与更大规模的智能系统整合，提高其实用性与市场吸引力。

各国政府对先进纺织研发的支持与资金投入也是市场快速增长的重要推动力之一。

