

Smart Textile Market Growth Driven by AI Wearables, Healthcare Demand, and Fashion-Tech Integration | DataM Intelligence

Smart textiles merge tech with fabric to transform fashion, healthcare, and sports. AI, IoT, and wearables fuel a 26.1% CAGR through 2032.

INDIANA, IN, UNITED STATES, August 4, 2025 /EINPresswire.com/ -- Market dynamics in the [Smart Textile Industry](#) are being propelled by rapid technological innovation, rising demand for wearable electronics, growing emphasis on health monitoring, and expanding applications in sectors such as military, sports, fashion, and healthcare. Driven

by the integration of sensors, actuators, and communication technologies into fabrics, smart textiles offer real-time data, adaptability, and interactivity. With the advent of IoT, AI, and nanotechnology, textile manufacturers are leveraging advanced materials and smart systems to create garments that monitor physiological parameters, improve comfort, and enable seamless

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Smart textiles are weaving the future of connected living merging fashion, function, and data to enhance lives across sports, healthcare, defense, and everyday wear”

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connectivity. The market is further energized by sustainability initiatives and consumer interest in next-gen functional apparel. Smart textiles find applications in fitness tracking, remote patient monitoring, soldier uniforms, temperature control clothing, and even connected fashion accessories.

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Smart Textile Market Recent Innovations :-

July 2025: Google announced a collaborative project with Levi's and MIT to develop AI-enabled denim jackets embedded with voice-command features and gesture-responsive fibers.

June 2025: Infineon Technologies launched a new ultra-low-power microcontroller optimized for smart wearable textiles, enhancing battery life and data processing capabilities.

May 2025: Adidas AG unveiled its latest smart training gear with pressure-sensitive textiles that provide real-time biomechanical feedback to athletes.

April 2025: Ohmatex ApS introduced washable, stretchable conductive yarns tailored for sportswear and medical wearables, gaining traction across EU and North American markets.

Smart Textile Market Mergers and Acquisitions :-

Gentherm completed the acquisition of a minority stake in Fibertronic Ltd. in June 2025 to expand its smart heating textile portfolio and develop integrated automotive seating solutions.

Textronics merged its wearable biosensing unit with Peratech Ltd. in Q2 2025, aiming to co-develop flexible pressure-sensing smart fabrics.

Opportunities in the Smart Textile Market

Healthcare Expansion: Increasing prevalence of chronic conditions and rising aging populations present opportunities for remote health monitoring through smart garments.

Defense Modernization: Governments are investing in smart uniforms with physiological and environmental sensors for enhanced soldier safety.

Fashion-Tech Synergy: Collaborations between technology firms and fashion brands are unlocking creative and commercially viable smart clothing.

Sustainability and Recycling: Demand for biodegradable and reusable smart fabrics is pushing innovation in eco-friendly textile solutions.

Integration with IoT and 5G: Growing 5G penetration offers enhanced connectivity and faster data transmission for real-time responsive textiles.

Smart Textile Market Key Players are :

Textronics
Gentherm
Google
Texas Instruments
Milliken & Company
Adidas AG
Ohmatex ApS
Peratech Ltd.
Infineon Technologies

Fibertronic Ltd.

Smart Textile Market Segmentation :-

By Type: Passive Smart Textiles, Active Smart Textiles, Ultra-smart Textiles

By Function: Sensing, Energy Harvesting, Luminescence & Aesthetics, Thermoelectricity

By Application: Healthcare, Sports & Fitness, Military & Defense, Fashion & Entertainment, Automotive, Industrial

By Region: North America, Europe, Asia-Pacific, Latin America, Middle East & Africa

Latest News – USA

In July 2025, Adidas America partnered with Stanford University to conduct large-scale testing of smart athletic wear that enhances athlete posture and movement analytics. Meanwhile, the U.S. Department of Defense allocated additional grants for smart textile R&D, focusing on battlefield wearables.

Latest News – Japan
In June 2025, Japan's Ministry of Economy, Trade and Industry (METI) launched a public-private consortium to drive innovation in smart textiles for elderly care. Additionally, Ohmatex expanded its presence in Japan by opening a new research office in Osaka.

Conclusion :-

The Smart Textile Market is undergoing a dynamic transformation, fueled by technological convergence, evolving consumer expectations, and expanding use cases across industries. As AI, IoT, and wearable computing continue to advance, smart textiles are transitioning from niche applications to mainstream adoption. With increased investment in R&D, strategic partnerships, and sustainable design, the market is set to experience robust growth over the coming years. Companies that prioritize innovation, interoperability, and user-centric designs are well-positioned to lead this future-facing industry.

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