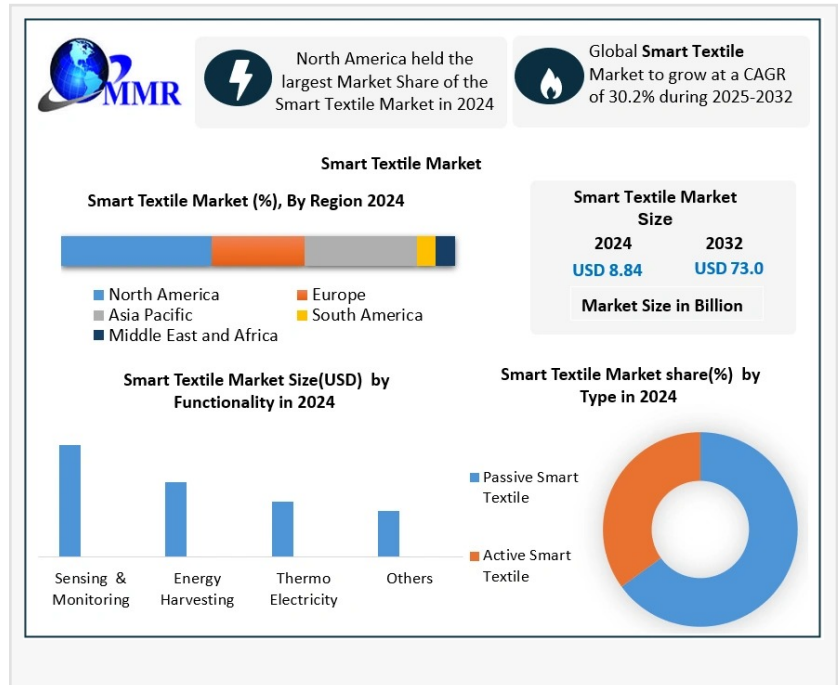


Smart Textile Market to Hit USD 73B by 2032 | Growth Driven by Wearables, IoT Fabrics & AI-Enabled Textile Solutions

Smart Textiles are an advanced textile with integrated electronics: a textile based on a material that incorporates a sensor, conductive fibers

WILMINGTON, DE, UNITED STATES, October 22, 2025 /EINPresswire.com/ -- Global [Smart Textile Market](#) was valued at USD 8.84 Billion in 2024 and is projected to expand at a CAGR of 30.2% from 2025 to 2032, reaching nearly USD 73.0 Billion.

Global Smart Textile Market Overview:
Futuristic Wearable Electronics, IoT-Enabled Fabrics, and AI-Powered Textile Solutions Driving Healthcare, Sports, Defense, and Automotive Innovations



Global Smart Textile Market is rapidly transforming the future of wearable electronics, IoT-enabled fabrics, and AI-enabled textile solutions. Revolutionizing healthcare smart textiles, sports smart textiles, defense smart textiles, automotive smart textiles, and building smart textiles, the Smart Textile Market is driven by innovations in real-time physiological monitoring, energy-harvesting fabrics, sustainable smart textiles, and connected garments, creating futuristic, high-performance applications while opening lucrative opportunities for investors, innovators, and technology leaders worldwide.

“Wearable electronics, IoT-enabled fabrics, and AI-powered textile solutions are driving the Smart Textile Market, redefining healthcare, sports, and defense innovations globally.”

”

Dharti Raut

For more information, contact us at info@maximizemarketresearch.com or visit our website at <https://www.maximizemarketresearch.com/request-sample/28970/>

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Global Smart Textile Market Drivers:
Wearable Electronics, IoT-Enabled
Fabrics, and AI Solutions
Revolutionizing Healthcare, Sports, and
Defense

Global Smart Textile Market is accelerating as wearable electronics, IoT-enabled fabrics, and AI-enabled textile solutions revolutionize healthcare smart textiles, sports smart textiles, and defense smart textiles. Smart garments embedded with biosensors, conductive yarns, and wireless modules deliver real-time physiological monitoring, advanced performance analytics, and soldier situational awareness, positioning the Smart Textile Market at the forefront of the digital health and connected lifestyle evolution.

Global Smart Textile Market Segments Covered	
By Type	Passive Smart Textile Active Smart Textile
By Form	Wearable Non Wearable
By Fabric Type	Cotton Nylon Conductive Polymers Wool Silk Others
By Functionality	Sensing & Monitoring Energy Harvesting Thermo-Electricity Others
By Technology	Nanotechnology Biosensors RFID Others
By End User	Military & Defense Sports & Fitness Building & Construction Automotive Textile Healthcare Others

Global Smart Textile Market Challenges: High Production Costs, Complex Manufacturing, and Scalability Limits for Wearable Electronics and AI-Enabled Textile Solutions

Global Smart Textile Market faces significant restraints due to high production costs and complex manufacturing processes. Integrating nanomaterials, microelectronics, and conductive polymers into IoT-enabled fabrics requires precision engineering, specialized equipment, and skilled professionals, limiting scalability. As a result, wearable electronics, AI-enabled textile solutions, and connected garments remain largely confined to premium or niche applications rather than mass-market adoption.

Global Smart Textile Market Opportunities: IoT-Enabled Fabrics, AI-Enabled Textile Solutions, and Connected Garments Transforming Automotive, Building, and Industrial Sectors

Global Smart Textile Market is unlocking unprecedented opportunities across automotive smart textiles, building smart textiles, and industrial sectors. IoT-enabled fabrics enhance connected cars, smart interiors, and energy-harvesting textiles, while expanding beyond wearables into smart homes, smart curtains, upholstery, and sustainable smart textiles, creating new revenue streams and driving adoption of AI-enabled textile solutions in futuristic, connected environments.

Global Smart Textile Market Segmentation: Passive Smart Textiles, Sensing & Monitoring, Wearable Electronics, and AI-Enabled Solutions Driving Healthcare, Sports, Defense, Automotive, and Building Innovations

Global Smart Textile Market is segmented by type, form, fabric, functionality, technology, and end user, with Passive Smart Textiles and Sensing & Monitoring solutions dominating growth. Wearable electronics, IoT-enabled fabrics, AI-enabled textile solutions, and connected garments are transforming healthcare smart textiles, sports smart textiles, defense smart textiles, automotive smart textiles, and building smart textiles, while emerging energy-harvesting fabrics and nanotechnology-driven innovations are unlocking new revenue streams and futuristic applications.

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Global Smart Textile Market Trends: IoT-Enabled Fabrics, AI-Powered Solutions, Wearable Electronics, and Sustainable Smart Textiles

Global Smart Textile Market is being transformed by the integration of IoT-enabled fabrics with AI-powered textile solutions, revolutionizing wearable electronics and connected garments while enabling real-time health monitoring, predictive analytics, and personalized performance insights across healthcare smart textiles, sports smart textiles, and defense smart textiles.

Global Smart Textile Market is also witnessing a surge in eco-friendly smart textiles using recycled fibers, biodegradable materials, and closed-loop production, driving a new era of sustainable smart textile solutions and enhancing adoption in healthcare, automotive smart textiles, and building smart textiles.

Next-generation energy-harvesting fabrics and self-powered smart textiles in the Global Smart Textile Market reduce dependence on batteries, enabling long-lasting, portable AI-enabled textile solutions for wearable electronics, connected garments, and IoT-enabled fabrics in futuristic, high-performance applications.

Key Developments in the Global Smart Textile Market: Innovations in Healthcare, Wearable Electronics, AI-Enabled Solutions, IoT Fabrics, and Sustainable Smart Textiles

Trelleborg & Nottingham Trent University Innovate Smart Medical Textiles: In April 2025, the partnership developed advanced smart medical textiles like a smart mattress system, highlighting the Global Smart Textile Market's potential in healthcare smart textiles, wearable electronics, and AI-enabled textile solutions.

DuPont Expands into High-Performance Smart Textiles: DuPont launched "Activegrid" conductive ink and film technologies targeting LiDAR heating, EMI shielding, smart surfaces, and OLED displays, expanding AI-enabled textile solutions, IoT-enabled fabrics, and connected garments across the Global Smart Textile Market.

Syre Drives Circular Economy with Recycled Polyester: In June 2025, Syre partnered with Gap and

Target to supply 10,000 tons of recycled polyester annually, scaling sustainable smart textiles and reinforcing the Global Smart Textile Market's focus on eco-friendly, energy-efficient, and wearable smart textile solutions.

Regional Insights: North America and Asia Pacific Smart Textile Market Driving Innovation in Wearable Electronics, AI-Enabled Solutions, IoT Fabrics, Healthcare, Fitness, and Automotive Smart Textiles

North America Smart Textile Market is poised for rapid growth, driven by strong R&D investments and early adoption of wearable electronics, AI-enabled textile solutions, connected garments, and IoT-enabled fabrics. Key sectors such as defense smart textiles, healthcare smart textiles, and sports smart textiles leverage smart fabrics in military uniforms, medical monitoring systems, and performance wear, positioning the North America Smart Textile Market as a global innovation hub.

Asia Pacific Smart Textile Market is the fastest-growing region, fueled by rapid industrialization, rising disposable incomes, and tech-savvy consumers. Leading countries like China, Japan, South Korea, and India drive adoption of healthcare smart textiles, fitness wearables, automotive smart textiles, and IoT-enabled fabrics, establishing the Asia Pacific Smart Textile Market as a global manufacturing and innovation hub for futuristic connected garments and wearable electronics.

Key players in the Smart Textile Market:

North America

DuPont de Nemours, Inc. – USA

Hexoskin – Canada

Sensoria Inc. – USA

Myant – Canada

LOOMIA – USA

BeBop Sensors – USA

Noble Biomaterials – USA

Jabil (Clothing+ unit) – USA

Europe

Schoeller Textil AG – Switzerland

Ohmatex A/S – Denmark

Interactive Wear AG – Germany

Clothing+ (Jabil) – Finland

Nanoleq – Switzerland

Sensing Tex – Spain

Baltex – United Kingdom

Peratech – United Kingdom

Asia-Pacific

Toray Industries, Inc. – Japan

AiQ Smart Clothing – Taiwan

Mitsufuji Corporation – Japan

Asahi Kasei Corporation – Japan

Far Eastern New Century Corporation – Taiwan

Asiatic Fiber Corporation (AFC) – Taiwan

TexRay Industrial Co., Ltd. – Taiwan

Middle East & Africa

Nano Textile Ltd. – Israel

HealthWatch Ltd. – Israel

Sonovia Ltd. – Israel

Latin America

Vicunha Têxtil – Brazil

Fabricato S.A. – Colombia

Santista Work Solution – Brazil

FAQs:

What is the projected growth of the Global Smart Textile Market?

Ans: Global Smart Textile Market is expected to grow from USD 8.84 Billion in 2024 to nearly USD 73.0 Billion by 2032, expanding at a CAGR of 30.2% due to rising demand for wearable electronics, AI-enabled textile solutions, IoT-enabled fabrics, healthcare smart textiles, and connected garments.

Which regions are leading the adoption of the Global Smart Textile Market?

Ans: North America Smart Textile Market leads in innovation and adoption with strong R&D investments across defense smart textiles, healthcare smart textiles, and sports smart textiles, while the Asia Pacific Smart Textile Market is the fastest-growing region driven by industrialization, tech-savvy consumers, and adoption of automotive smart textiles, healthcare smart textiles, fitness wearables, and IoT-enabled fabrics.

What are the key trends shaping the Global Smart Textile Market?

Ans: Global Smart Textile Market is being transformed by IoT-enabled fabrics, AI-powered textile solutions, wearable electronics, sustainable smart textiles, energy-harvesting fabrics, and connected garments, enabling high-performance healthcare monitoring, sports tracking,

defense smart textiles, and futuristic smart textile applications across multiple sectors.

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Analyst Perspective:

From a third-party perspective, the Global Smart Textile Market is demonstrating significant growth potential, driven by innovations in wearable electronics, IoT-enabled fabrics, AI-powered textile solutions, and connected garments. Strong adoption across healthcare smart textiles, defense smart textiles, sports smart textiles, automotive smart textiles, and building smart textiles offers lucrative opportunities for investors. Key players like DuPont, Toray Industries, Hexoskin, and Schoeller Textil are shaping the competitive landscape, while strategic collaborations and sustainable smart textile initiatives signal promising returns and long-term market potential.

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Contact Us :

MAXIMIZE MARKET RESEARCH PVT. LTD.

2nd Floor, Navale IT park Phase 3,

Pune Bangalore Highway, Narhe

Pune, Maharashtra 411041, India.

+91 9607365656

sales@maximizemarketresearch.com

Lumawant Godage

MAXIMIZE MARKET RESEARCH PVT. LTD.

+ +91 96073 65656

[email us here](#)

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