

# Track-and-Trace Packaging for Supply Chains Market Forecasts to 2032 – Global Analysis By Packaging Type (Rigid Packaging, Flexible Packaging and Specialty Packaging), Technology, Application, End User and By Geography

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## Abstracts

According to Statistics MRC, the Global Track-and-Trace Packaging for Supply Chains Market is accounted for \$2.6 billion in 2025 and is expected to reach \$5.4 billion by 2032 growing at a CAGR of 10.7% during the forecast period. Track-and-trace packaging for supply chains refers to packaging solutions integrated with technologies that monitor and record the movement of products throughout the supply chain. By using tools like barcodes, RFID tags, QR codes, and IoT sensors, each product can be uniquely identified, allowing real-time visibility from production to delivery. This system enhances inventory management, prevents counterfeiting, ensures regulatory compliance, and improves recall efficiency. It enables stakeholders to track location, condition, and authenticity, ensuring transparency and accountability. Track-and-trace packaging strengthens supply chain integrity, reduces losses, and fosters consumer trust by providing verifiable product information at every stage.

### Market Dynamics:

Driver:

Rising demand for counterfeit prevention solutions

Companies in pharmaceuticals, food, and luxury goods are increasingly implementing serialization, barcodes, and QR codes to ensure product authenticity. Track-and-trace systems provide transparency by enabling real-time verification of product origin and

movement. Regulatory bodies are mandating anti-counterfeit measures to protect consumer safety and brand integrity. Retailers and logistics providers benefit from reduced fraud and improved trust in supply chains. This driver continues to anchor growth by aligning product security with consumer confidence.

#### Restraint:

##### High implementation and maintenance costs

Companies face significant expenses in deploying serialization systems, IoT sensors, and cloud-based platforms. Smaller manufacturers struggle to justify investments due to limited budgets and uncertain ROI. Maintenance of hardware and integration with legacy systems adds further financial burden. Price-sensitive markets are slower to adopt advanced track-and-trace technologies despite proven benefits. This restraint continues to limit widespread adoption across diverse industries.

#### Opportunity:

##### Growth in e-commerce and logistics sectors

Online retail platforms are increasingly demanding secure packaging to ensure product authenticity and delivery accuracy. Track-and-trace systems provide visibility into last-mile logistics, reducing risks of theft and misplacement. Integration with blockchain and AI enhances transparency and predictive analytics in e-commerce supply chains. Logistics providers are leveraging track-and-trace to optimize inventory management and reduce operational inefficiencies. This opportunity is unlocking new revenue streams and reinforcing the role of packaging in digital commerce.

#### Threat:

##### Data security and privacy concerns

Companies face risks related to unauthorized access of serialized product data and consumer information. Inconsistent global standards create challenges in securing supply chain networks. Cyberattacks targeting packaging and logistics platforms reduce confidence in digital adoption. Regulatory uncertainty further complicates compliance across regions. This threat continues to constrain long-term growth despite rising demand for secure packaging solutions.

### Covid-19 Impact:

Covid-19 accelerated demand for track-and-trace packaging as supply chains faced disruptions and heightened safety concerns. Lockdowns highlighted vulnerabilities in manual monitoring, boosting interest in digital serialization and real-time tracking. Pharmaceutical and food industries adopted track-and-trace systems to ensure compliance and reduce risks of counterfeit products. E-commerce growth during the pandemic created new opportunities for packaging visibility in last-mile delivery. Supply chain disruptions also emphasized the need for predictive analytics and resilience.

The barcodes & QR codes segment is expected to be the largest during the forecast period

The barcodes & QR codes segment is expected to account for the largest market share during the forecast period owing to widespread adoption. Companies are increasingly using barcodes and QR codes for serialization and product authentication. Retailers benefit from cost-effective solutions that integrate easily with existing infrastructure. Consumers are leveraging QR codes to verify product authenticity and access digital information. Advances in mobile scanning technologies are accelerating adoption across industries.

The specialty packaging segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the specialty packaging segment is predicted to witness the highest growth rate due to rising demand for customized solutions. Companies are adopting track-and-trace systems in packaging tailored to pharmaceuticals, luxury goods, and perishable items. Specialty formats require advanced monitoring to ensure safety and authenticity. Integration with eco-labels and certifications enhances transparency and consumer trust. Retailers are promoting specialty packaging as part of premium product strategies.

### Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share owing to advanced infrastructure and strong regulatory frameworks. The U.S. and Canada are leading adoption through high demand for secure packaging and supply chain visibility. Retailers and consumer goods companies are partnering with IoT startups to scale track-and-trace solutions. Venture capital funding is accelerating

innovation in packaging platforms. Regulatory clarity and strong marketing campaigns are fostering confidence in serialization adoption. E-commerce integration is strengthening the role of track-and-trace in logistics and retail.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR due to rapid urbanization and rising consumer demand for safe products. Countries like China, India, Japan, and South Korea are investing heavily in track-and-trace initiatives. Government-led programs are fostering infrastructure development for secure supply chains. Local startups and global players are scaling mobile-first solutions tailored to regional needs. Rising middle-class incomes and digital adoption are accelerating participation in secure packaging models. E-commerce growth in Southeast Asia is creating new opportunities for track-and-trace integration.

Key players in the market

Some of the key players in Track-and-Trace Packaging for Supply Chains Market include Avery Dennison Corporation, Zebra Technologies Corporation, Seiko Epson Corporation, SATO Holdings Corporation, CCL Industries Inc., Datalogic S.p.A., Honeywell International Inc., Siemens AG, SAP SE, IBM Corporation, Oracle Corporation, Domino Printing Sciences plc, Videojet Technologies Inc., OPTEL Group and TraceLink Inc.

### **Key Developments:**

In October 2025, Avery Dennison expanded its strategic partnership with Wiliot, scaling ambient IoT-based supply chain intelligence. These collaborations embed real-time tracking into packaging, improving visibility and sustainability across food and retail supply chains.

In May 2025, Zebra announced strategic expansion in India and Asia-Pacific, embedding AI-driven track-and-trace solutions into retail, manufacturing, and logistics. This expansion reflects rising demand for Industry 4.0 packaging visibility and strengthens Zebra's footprint in emerging markets.

Packaging Types Covered:

Rigid Packaging

Flexible Packaging

Specialty Packaging

Technologies Covered:

Barcodes & QR Codes

RFID & NFC Labels

Blockchain & Cloud Platforms

IoT Sensors & Connectivity

Other Technologies

Applications Covered:

Product Authentication & Anti-Counterfeiting

Supply Chain & Logistics Tracking

Consumer Engagement & Transparency

Food Safety & Freshness Monitoring

Pharmaceutical Cold Chain

Other Applications

End Users Covered:

FMCG Companies

Pharmaceutical Manufacturers

Retailers & E-Commerce Platforms

Luxury Goods Brands

Logistics Providers

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

**What our report offers:**

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment

Opportunities, and recommendations)

- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

### **Free Customization Offerings:**

All the customers of this report will be entitled to receive one of the following free customization options:

#### Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

#### Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

#### Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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