

Smart Packaging Market Size & Share Analysis - Growth Trends and Forecast (2026 - 2031)

> **Industry:** Smart, Active & Intelligent Packaging (Packaging)
> **Source:** https://www.mordorintelligence.com/industry-reports/smart-packaging-market
> **Scraped Date:** 2026-09-17

Executive Market Summary

Market Metric	Details
Base Market Size	USD 25.84 billion
Projected Forecast (2031)	USD 25.84 billion
Growth Rate (CAGR)	7.41 %
Largest Market Region	N/A
Fastest-Growing Region	N/A

Market Visualizations & Infographics

[Major players in Smart Packaging industry](images/chart_2.png)

[Smart Packaging Market (2026 - 2031)](images/chart_3.png)

[Smart Packaging Market: Market Share by Technology](images/chart_4.png)

[Smart Packaging Market: Market Share by Component](images/chart_5.png)

[Smart Packaging Market CAGR (%), Growth Rate by Region](images/chart_6.png)

[Smart Packaging Market](images/chart_7.png)

[Icon](images/chart_8.png)

[footer background image](images/chart_10.png)

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[ESOMAR](images/chart_17.png)

[GPTW](images/chart_19.png)

Comprehensive Research Analysis

Overview Points List Flex 49 Share Feature End

Market OverviewStudy Period | 2020 - 2031 |
Market Size (2026) | USD 25.84 Billion |
Market Size (2031) | USD 36.94 Billion |
Growth Rate (2026 - 2031) | 7.41 % |
Fastest Growing Market | Asia Pacific |
Largest Market | North America |
Market Concentration | Medium |
Major Players*Disclaimer: Major Players sorted in no particular order

Market Overview

Smart Packaging Market Analysis by Mordor Intelligence The smart packaging market size stood at USD 25.84 billion in 2026 and is projected to reach USD 36.94 billion by 2031, reflecting a 7.41% CAGR over the forecast period. The current smart packaging market size demonstrates how printed electronics, antimicrobial coatings, and IoT connectivity are redefining packages as active data points across digitized supply chains. Steady demand for shelf-life extension films in online grocery, falling RFID tag costs, and serialization mandates in pharmaceuticals jointly reinforce growth momentum. In parallel, European circular-economy rules, China's cold-chain modernization, and item-level inventory strategies in North American retail are widening the addressable base for technology vendors. Brands also view connected packs as a gateway to first-party consumer insights, an advantage that gains importance as browser cookies fade.

Key Report Takeaways* By technology, active formats led with 46.54% smart packaging market share in 2025, while intelligent formats are on course for the fastest 9.23% CAGR through 2031.

* By material, plastics commanded 42.43% share of the smart packaging market size in 2025; biodegradable polymers are forecast to post the strongest 8.43% CAGR between 2026 and 2031.

* By component, indicators contributed 38.64% revenue in 2025, and sensors are tracking an 8.83% CAGR through 2031.

* By end-user, food accounted for 28.76% of demand in 2025, whereas pharmaceuticals are set to expand at an 8.76% CAGR to 2031.

* By geography, North America remained the largest regional contributor with 39.74% revenue share in 2025; Asia-Pacific is poised for the fastest 9.76% CAGR out to 2031.

Key Market Trends

Market Trends and Insights
Drivers Impact Analysis of Smart Packaging Market*
 Driver I (~) % Impact on CAGR Forecast | Geographic Relevance | Impact Timeline |
 Advancement in Printed Electronics Enabling Cost-effective RFID and NFC Tags | +1.2% | Global, with early adoption in North America and Asia-Pacific | Medium term (2-4 years) |
 Growing Demand for Real-time Food Quality Monitoring in E-commerce Cold Chains | +1.5% | North America, Europe, and urban Asia-Pacific | Short term (≤2 years) |

Stringent Anti-counterfeiting Regulations in Pharmaceutical Supply Chains | +1.3% | North America, Europe, with spillover to South America and Middle East | Long term (≥4 years) |

Consumer Preference for Sustainable Packaging with Integrated Freshness Indicators | +0.9% | Europe, North America, and Australia | Medium term (2-4 years) |

Adoption of IoT-enabled Packaging by CPG Brands for Direct-to-Consumer Engagement | +1.0% | North America, Western Europe, and Japan | Medium term (2-4 years) |

Rapid Growth of Smart Retail Shelves Requiring Embedded Intelligent Packaging | +0.8% | North America, Europe, and select Asia-Pacific metros | Long term (≥4 years) |

Source: Mordor Intelligence |

Competitive Landscape

Competitive Landscape

The top ten players accounted for nearly 45% of the revenue in 2025, indicating moderate concentration. Scale converters like Amcor and Sealed Air synchronize oxygen-scavenging know-how with global plant footprints, winning multi-year contr

acts from food and pharma brands.

Technology specialists such as Pragmatic Semiconductor and Thin Film Electronics push printed IC costs below USD 0.05, unlocking item-level tagging for mass retail. Patent data points to focus areas, including a filing by Avery Dennison for a tamper-evident NFC strip that self-destructs when peeled, targeting drug safety, while a major chemical supplier patented a dual-function film that scavenges oxygen and signals pH shifts.

Biodegradable intelligent packs form a hotly contested niche. Stora Enso and Huhtamaki are piloting paperboard substrates with embedded circuits that meet EN 13432 composting rules. Interoperability remains a hurdle as ISO works toward unified calibration protocols, yet regional divergence in data privacy and waste-handling priorities slows consensus. White space persists in artisan food and emerging-market drug channels, where run lengths are short, and capital is tight, leaving opportunities for modular, lease-based equipment providers.

Smart Packaging Industry Leaders* Sealed Air Corporation

- * Amcor PLC

- * Ball Corporation

- * BASF SE

- * Huhtamaki Oyj

- * *Disclaimer: Major Players sorted in no particular order

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Scope Methodology P Space

For this report, smart packaging refers to packaging formats that add a measurable function beyond containment and labeling, such as identification, tracking, condition sensing, or consumer interaction, and the related materials and components needed to enable those functions.

Scope exclusions: We exclude general packaging that only uses standard printing or conventional barcodes without smart, trackable, or sensor-driven functionality.

Segmentation Container

- * By Technology* Active Packaging

- * Intelligent Packaging

- * Modified Atmosphere Packaging

- * By Material* Paper and Paperboard

- * Plastic

- * Glass

- * Metal

- * Biodegradable Polymers

- * By Component* Sensors

- * Indicators

- * Data Carriers

- * Antimicrobial Agents

- * By End-user Industry* Food

- * Beverage

- * Pharmaceuticals

- * Cosmetics and Personal Care

- * Electronics
- * Other End-user Industries
- * By Geography* North America* United States
- * Canada
- * Mexico
- * South America* Brazil
- * Argentina
- * Rest of South America
- * Europe* Germany
- * United Kingdom
- * France
- * Italy
- * Spain
- * Rest of Europe
- * Asia-Pacific* China
- * Japan
- * India
- * South Korea
- * Australia and New Zealand
- * Rest of Asia-Pacific
- * Middle East and Africa* Middle East* Saudi Arabia
- * United Arab Emirates
- * Turkey
- * Rest of Middle East
- * Africa* South Africa
- * Nigeria
- * Kenya
- * Rest of Africa

Frequently Asked Questions

How large is the smart packaging market in 2026 and what growth is expected?

The smart packaging market size reached USD 25.84 billion in 2026 and is forecast to hit USD 36.94 billion by 2031, delivering a 7.41% CAGR.

Which technology segment is expanding the fastest?

Intelligent formats, driven by low-cost RFID and real-time data needs, are forecast to grow at a 9.23% CAGR through 2031.

What is fueling smart packaging demand in pharmaceuticals?

Unit-level serialization mandates in the United States, European Union, and India push converters to embed RFID or 2D codes and temperature indicators, supporting an 8.76% CAGR through 2031 for pharmaceutical applications.

Why are biodegradable smart packs gaining traction?

EU regulations require all packaging to be recyclable or compostable by 2030, prompting brands to shift to polylactic-acid and paperboard substrates that integrate compostable freshness indicators.

Which region will grow the quickest?

Asia-Pacific is projected to register the highest regional CAGR at 9.76% thanks to China's cold-chain investments and India's serialization drive.

What is the chief barrier for new entrants?

High capital expenditure, often topping USD 15 million per line for sensor integration and chip placement, extends payback periods and limits participation from smaller converters.