

Digital Product Passport Packaging Market Forecasts to 2034 – Global Analysis By Component (Software Platforms, Hardware Components, and Services), Packaging Type, Material Type, Technology, Application, End User, and By Geography

<https://marketpublishers.com/r/D22833605E40EN.html>

Date: May 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: D22833605E40EN

Abstracts

According to Statistics MRC, the Global Digital Product Passport Packaging Market is accounted for \$2.8 billion in 2026 and is expected to reach \$9.6 billion by 2034 growing at a CAGR of 16.6% during the forecast period. Digital product passport packaging integrates hardware identifiers such as QR codes, RFID, and NFC tags with software platforms to create a traceable, data-rich digital identity for each packaging unit throughout its lifecycle. Mandated under the European Union's Ecodesign for Sustainable Products Regulation and gaining traction across fashion, electronics, and food sectors, DPP packaging enables supply chain transparency, anti-counterfeiting, ESG reporting, and end-of-life recycling guidance.

Market Dynamics:

Driver:

Regulatory mandates driving digital product passport adoption in packaging
The European Union's Ecodesign for Sustainable Products Regulation, requiring digital product passports across multiple product categories by 2030, is the primary catalyst accelerating DPP packaging investments globally. Multinational brands operating across jurisdictions face compliance imperatives that are driving immediate deployment of QR code, RFID, and blockchain-enabled DPP infrastructure. National governments in the UK, Japan, and Canada are developing analogous traceability frameworks, expanding the regulatory addressable market. Retailers are simultaneously imposing supply chain transparency mandates on suppliers, creating top-down pressure on packaging converters to integrate digital identification capabilities across product categories.

Restraint:

High implementation costs and technology integration complexity

Deploying digital product passport infrastructure across packaging supply chains requires substantial upfront investment in hardware serialization systems, cloud data management platforms, and supply chain integration middleware. Smaller brand owners and converters face prohibitive technology adoption costs without scale benefits.

Legacy ERP systems in manufacturing environments require costly customization to interface with DPP data platforms. Interoperability between diverse QR, RFID, NFC, and blockchain protocols introduces integration complexity. Data governance, cybersecurity, and consumer data privacy compliance add operational overhead. These structural barriers slow DPP deployment rates among mid-market brands despite growing regulatory urgency.

Opportunity:

Expanding DPP applications in anti-counterfeiting and consumer engagement

Beyond regulatory compliance, digital product passport packaging unlocks significant commercial value through anti-counterfeiting authentication, real-time consumer engagement, and post-purchase loyalty programs. Luxury goods, pharmaceuticals, and premium food brands are leveraging NFC-enabled DPP packaging to deliver serialized product authentication directly to consumer smartphones, protecting brand integrity and enabling direct-to-consumer data collection. Additionally, brands linking DPP infrastructure to recycling reward systems and deposit return programs are demonstrating improved packaging recovery rates. As consumer smartphone penetration deepens globally, the interactive capabilities of DPP packaging create differentiated brand experiences that justify premium packaging investments.

Threat:

Data privacy regulations and cybersecurity risks in connected packaging

The collection and processing of consumer interaction data through DPP-enabled packaging creates significant exposure to data privacy regulations including GDPR, CCPA, and emerging Asia Pacific privacy frameworks. Non-compliant consumer data handling in DPP systems can expose brand owners to substantial regulatory fines and reputational damage. IoT-connected packaging tracking infrastructure presents attack surfaces for cybersecurity breaches that could compromise supply chain integrity or expose sensitive manufacturing data. Blockchain-based DPP systems, while enhancing data immutability, introduce energy consumption concerns and require ecosystem-wide adoption to deliver full traceability value, creating coordination challenges across fragmented supply chains.

Covid-19 Impact:

COVID-19 accelerated the strategic importance of supply chain transparency and product traceability, catalyzing early DPP packaging adoption in pharmaceutical, food

safety, and personal protective equipment sectors. Pandemic-era disruptions exposed critical vulnerabilities in opaque supply chains, motivating brand owners to invest in digital tracking infrastructure. Post-pandemic, sustainability regulation has emerged as the dominant DPP adoption driver, with EU policymakers fast-tracking Ecodesign regulations that embed DPP requirements as a cornerstone of the circular economy transition.

The Software Platforms segment is expected to be the largest during the forecast period. The software platforms segment is expected to account for the largest market share during the forecast period. DPP lifecycle management and traceability serialization platforms represent the core value-generating layer of digital product passport infrastructure, enabling brands to manage product data at scale across complex global supply chains. High recurring subscription revenue models, strong platform stickiness, and integration with ERP and PLM systems sustain software's revenue leadership throughout the forecast period.

The Blockchain-based DPP Systems segment is expected to have the highest CAGR during the forecast period.

Over the forecast period, the blockchain-based DPP systems segment is predicted to witness the highest growth rate. Immutable distributed ledger architecture provides unparalleled supply chain data integrity and authenticity verification for high-value applications in luxury goods, pharmaceuticals, and premium food. Growing brand investments in decentralized product traceability platforms, combined with improving scalability of permissioned blockchain networks, position this segment as the fastest-growing technology layer in the DPP packaging ecosystem.

Region with largest share:

During the forecast period, the Europe region is expected to hold the largest market share, driven by the EU's Ecodesign for Sustainable Products Regulation mandating digital product passports across key product categories by 2030. The region's advanced circular economy policy framework, strong brand sustainability commitments, and mature technology ecosystem for supply chain digitalization create the highest near-term DPP deployment concentration globally. Significant public funding for green digital transition further accelerates adoption.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, underpinned by rapid e-commerce growth requiring product authentication, government-backed supply chain traceability initiatives in China and Japan, and multinational brand compliance requirements cascading through Asian manufacturing supply chains. Growing luxury goods consumption and pharmaceutical traceability regulations further accelerate DPP packaging adoption across the region.

Key players in the market

Some of the key players in Digital Product Passport Packaging Market include Avery Dennison Corporation, Zebra Technologies Corp., Impinj Inc., Checkpoint Systems, Datalogic S.p.A., Zebra Technologies, Honeywell International Inc., SATO Holdings Corporation, Identiv Inc., Invengo Information Technology Co. Ltd., Alien Technology Corporation, Smartrac N.V., GAO RFID Inc., Brady Corporation, and Confidex Ltd.

Key Developments:

In March 2026, Honeywell introduced a new gas sensor that uses optical non-dispersive infrared (NDIR) technology to detect flammable gases, such as methane, propane and butane, in industrial settings. The NDIR Hydrocarbon Gas Sensor helps protect workers and infrastructure in industries such as mining, oil and gas, petrochemical and plastics manufacturing.

In October 2025, Zebra Technologies announced it has completed its acquisition of Elo Touch Solutions, Inc., an innovator of solutions that engage customers, enhance self-service and accelerate automation across retail, hospitality, quick service restaurants (QSR), healthcare and industrial markets. Elo had been majority owned since 2018 by funds managed by Crestview Partners.

Components Covered:

Software Platforms

Hardware Components

Services

Packaging Types Covered:

Rigid Packaging

Flexible Packaging

Semi-rigid Packaging

Corrugated Packaging

Smart & Active Packaging

Material Types Covered:

Plastic Packaging

Paper & Paperboard Packaging

Metal Packaging

Glass Packaging

Biodegradable & Sustainable Materials

Technologies Covered:

Blockchain-based DPP Systems

IoT-enabled Packaging Tracking

AI & Data Analytics Integration

Cloud Data Platforms

Digital Twin Packaging Systems

Applications Covered:

Supply Chain Transparency

Product Authentication & Anti-counterfeiting

Recycling & Waste Management

ESG & Sustainability Reporting

Regulatory Compliance

Consumer Engagement & Digital Labeling

End Users Covered:

Food & Beverages Packaging

Pharmaceuticals Packaging

Cosmetics & Personal Care

Consumer Electronics Packaging

Automotive & Industrial Packaging

E-commerce & Retail Packaging

Chemicals & Industrial Goods

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of 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 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

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

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL DIGITAL PRODUCT PASSPORT PACKAGING MARKET, BY COMPONENT

- 5.1 Software Platforms
 - 5.1.1 DPP lifecycle management software
 - 5.1.2 Traceability & serialization platforms
 - 5.1.3 Blockchain-based DPP systems
- 5.2 Hardware Components
 - 5.2.1 QR codes
 - 5.2.2 RFID/NFC tags
 - 5.2.3 Smart labels & digital watermarks
- 5.3 Services
 - 5.3.1 Consulting & advisory
 - 5.3.2 Integration services
 - 5.3.3 Compliance & regulatory services
 - 5.3.4 Maintenance & support

6 GLOBAL DIGITAL PRODUCT PASSPORT PACKAGING MARKET, BY PACKAGING TYPE

- 6.1 Rigid Packaging
- 6.2 Flexible Packaging
- 6.3 Semi-rigid Packaging
- 6.4 Corrugated Packaging
- 6.5 Smart & Active Packaging

7 GLOBAL DIGITAL PRODUCT PASSPORT PACKAGING MARKET, BY MATERIAL TYPE

- 7.1 Plastic Packaging
- 7.2 Paper & Paperboard Packaging
- 7.3 Metal Packaging
- 7.4 Glass Packaging
- 7.5 Biodegradable & Sustainable Materials

8 GLOBAL DIGITAL PRODUCT PASSPORT PACKAGING MARKET, BY TECHNOLOGY

- 8.1 Blockchain-based DPP Systems
- 8.2 IoT-enabled Packaging Tracking
- 8.3 AI & Data Analytics Integration
- 8.4 Cloud Data Platforms
- 8.5 Digital Twin Packaging Systems

9 GLOBAL DIGITAL PRODUCT PASSPORT PACKAGING MARKET, BY APPLICATION

- 9.1 Supply Chain Transparency
- 9.2 Product Authentication & Anti-counterfeiting
- 9.3 Recycling & Waste Management
- 9.4 ESG & Sustainability Reporting
- 9.5 Regulatory Compliance
- 9.6 Consumer Engagement & Digital Labeling

10 GLOBAL DIGITAL PRODUCT PASSPORT PACKAGING MARKET, BY END USER

- 10.1 Food & Beverages Packaging
- 10.2 Pharmaceuticals Packaging
- 10.3 Cosmetics & Personal Care
- 10.4 Consumer Electronics Packaging
- 10.5 Automotive & Industrial Packaging
- 10.6 E-commerce & Retail Packaging
- 10.7 Chemicals & Industrial Goods

11 GLOBAL DIGITAL PRODUCT PASSPORT PACKAGING MARKET, BY GEOGRAPHY

- 11.1 North America
 - 11.1.1 United States
 - 11.1.2 Canada
 - 11.1.3 Mexico
- 11.2 Europe
 - 11.2.1 United Kingdom

- 11.2.2 Germany
- 11.2.3 France
- 11.2.4 Italy
- 11.2.5 Spain
- 11.2.6 Netherlands
- 11.2.7 Belgium
- 11.2.8 Sweden
- 11.2.9 Switzerland
- 11.2.10 Poland
- 11.2.11 Rest of Europe
- 11.3 Asia Pacific
 - 11.3.1 China
 - 11.3.2 Japan
 - 11.3.3 India
 - 11.3.4 South Korea
 - 11.3.5 Australia
 - 11.3.6 Indonesia
 - 11.3.7 Thailand
 - 11.3.8 Malaysia
 - 11.3.9 Singapore
 - 11.3.10 Vietnam
 - 11.3.11 Rest of Asia Pacific
- 11.4 South America
 - 11.4.1 Brazil
 - 11.4.2 Argentina
 - 11.4.3 Colombia
 - 11.4.4 Chile
 - 11.4.5 Peru
 - 11.4.6 Rest of South America
- 11.5 Rest of the World (RoW)
 - 11.5.1 Middle East
 - 11.5.1.1 Saudi Arabia
 - 11.5.1.2 United Arab Emirates
 - 11.5.1.3 Qatar
 - 11.5.1.4 Israel
 - 11.5.1.5 Rest of Middle East
 - 11.5.2 Africa
 - 11.5.2.1 South Africa
 - 11.5.2.2 Egypt

11.5.2.3 Morocco

11.5.2.4 Rest of Africa

12 STRATEGIC MARKET INTELLIGENCE

12.1 Industry Value Network and Supply Chain Assessment

12.2 White-Space and Opportunity Mapping

12.3 Product Evolution and Market Life Cycle Analysis

12.4 Channel, Distributor, and Go-to-Market Assessment

13 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

13.1 Mergers and Acquisitions

13.2 Partnerships, Alliances, and Joint Ventures

13.3 New Product Launches and Certifications

13.4 Capacity Expansion and Investments

13.5 Other Strategic Initiatives

14 COMPANY PROFILES

14.1 IBM Corporation

14.2 SAP SE

14.3 Microsoft Corporation

14.4 Avery Dennison Corporation

14.5 GS1 Global

14.6 Optel Group

14.7 Antares Vision Group

14.8 Systech

14.9 Recykal

14.10 GS1 US / GS1 standards ecosystem

14.11 TraceLink Inc.

14.12 Eviden

14.13 Oracle Corporation

14.14 Verofax

14.15 Smurfit Kappa Group

List Of Tables

LIST OF TABLES

Table 1 Global Digital Product Passport Packaging Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Digital Product Passport Packaging Market Outlook, By Component (2023-2034) (\$MN)

Table 3 Global Digital Product Passport Packaging Market Outlook, By Software Platforms (2023-2034) (\$MN)

Table 4 Global Digital Product Passport Packaging Market Outlook, By DPP lifecycle management software (2023-2034) (\$MN)

Table 5 Global Digital Product Passport Packaging Market Outlook, By Traceability & serialization platforms (2023-2034) (\$MN)

Table 6 Global Digital Product Passport Packaging Market Outlook, By Blockchain-based DPP systems (2023-2034) (\$MN)

Table 7 Global Digital Product Passport Packaging Market Outlook, By Hardware Components (2023-2034) (\$MN)

Table 8 Global Digital Product Passport Packaging Market Outlook, By QR codes (2023-2034) (\$MN)

Table 9 Global Digital Product Passport Packaging Market Outlook, By RFID/NFC tags (2023-2034) (\$MN)

Table 10 Global Digital Product Passport Packaging Market Outlook, By Smart labels & digital watermarks (2023-2034) (\$MN)

Table 11 Global Digital Product Passport Packaging Market Outlook, By Services (2023-2034) (\$MN)

Table 12 Global Digital Product Passport Packaging Market Outlook, By Consulting & advisory (2023-2034) (\$MN)

Table 13 Global Digital Product Passport Packaging Market Outlook, By Integration services (2023-2034) (\$MN)

Table 14 Global Digital Product Passport Packaging Market Outlook, By Compliance & regulatory services (2023-2034) (\$MN)

Table 15 Global Digital Product Passport Packaging Market Outlook, By Maintenance & support (2023-2034) (\$MN)

Table 16 Global Digital Product Passport Packaging Market Outlook, By Packaging Type (2023-2034) (\$MN)

Table 17 Global Digital Product Passport Packaging Market Outlook, By Rigid Packaging (2023-2034) (\$MN)

Table 18 Global Digital Product Passport Packaging Market Outlook, By Flexible

Packaging (2023-2034) (\$MN)

Table 19 Global Digital Product Passport Packaging Market Outlook, By Semi-rigid Packaging (2023-2034) (\$MN)

Table 20 Global Digital Product Passport Packaging Market Outlook, By Corrugated Packaging (2023-2034) (\$MN)

Table 21 Global Digital Product Passport Packaging Market Outlook, By Smart & Active Packaging (2023-2034) (\$MN)

Table 22 Global Digital Product Passport Packaging Market Outlook, By Material Type (2023-2034) (\$MN)

Table 23 Global Digital Product Passport Packaging Market Outlook, By Plastic Packaging (2023-2034) (\$MN)

Table 24 Global Digital Product Passport Packaging Market Outlook, By Paper & Paperboard Packaging (2023-2034) (\$MN)

Table 25 Global Digital Product Passport Packaging Market Outlook, By Metal Packaging (2023-2034) (\$MN)

Table 26 Global Digital Product Passport Packaging Market Outlook, By Glass Packaging (2023-2034) (\$MN)

Table 27 Global Digital Product Passport Packaging Market Outlook, By Biodegradable & Sustainable Materials (2023-2034) (\$MN)

Table 28 Global Digital Product Passport Packaging Market Outlook, By Technology (2023-2034) (\$MN)

Table 29 Global Digital Product Passport Packaging Market Outlook, By Blockchain-based DPP Systems (2023-2034) (\$MN)

Table 30 Global Digital Product Passport Packaging Market Outlook, By IoT-enabled Packaging Tracking (2023-2034) (\$MN)

Table 31 Global Digital Product Passport Packaging Market Outlook, By AI & Data Analytics Integration (2023-2034) (\$MN)

Table 32 Global Digital Product Passport Packaging Market Outlook, By Cloud Data Platforms (2023-2034) (\$MN)

Table 33 Global Digital Product Passport Packaging Market Outlook, By Digital Twin Packaging Systems (2023-2034) (\$MN)

Table 34 Global Digital Product Passport Packaging Market Outlook, By Application (2023-2034) (\$MN)

Table 35 Global Digital Product Passport Packaging Market Outlook, By Supply Chain Transparency (2023-2034) (\$MN)

Table 36 Global Digital Product Passport Packaging Market Outlook, By Product Authentication & Anti-counterfeiting (2023-2034) (\$MN)

Table 37 Global Digital Product Passport Packaging Market Outlook, By Recycling & Waste Management (2023-2034) (\$MN)

Table 38 Global Digital Product Passport Packaging Market Outlook, By ESG & Sustainability Reporting (2023-2034) (\$MN)

Table 39 Global Digital Product Passport Packaging Market Outlook, By Regulatory Compliance (2023-2034) (\$MN)

Table 40 Global Digital Product Passport Packaging Market Outlook, By Consumer Engagement & Digital Labeling (2023-2034) (\$MN)

Table 41 Global Digital Product Passport Packaging Market Outlook, By End User (2023-2034) (\$MN)

Table 42 Global Digital Product Passport Packaging Market Outlook, By Food & Beverages Packaging (2023-2034) (\$MN)

Table 43 Global Digital Product Passport Packaging Market Outlook, By Pharmaceuticals Packaging (2023-2034) (\$MN)

Table 44 Global Digital Product Passport Packaging Market Outlook, By Cosmetics & Personal Care (2023-2034) (\$MN)

Table 45 Global Digital Product Passport Packaging Market Outlook, By Consumer Electronics Packaging (2023-2034) (\$MN)

Table 46 Global Digital Product Passport Packaging Market Outlook, By Automotive & Industrial Packaging (2023-2034) (\$MN)

Table 47 Global Digital Product Passport Packaging Market Outlook, By E-commerce & Retail Packaging (2023-2034) (\$MN)

Table 48 Global Digital Product Passport Packaging Market Outlook, By Chemicals & Industrial Goods (2023-2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) are also represented in the same manner as above.

I would like to order

Product name: Digital Product Passport Packaging Market Forecasts to 2034 – Global Analysis By Component (Software Platforms, Hardware Components, and Services), Packaging Type, Material Type, Technology, Application, End User, and By Geography

Product link: <https://marketpublishers.com/r/D22833605E40EN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/D22833605E40EN.html>