

Healthcare RFID - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-07-01 | 156 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License \$4750.00
- Team License (1-7 Users) \$5250.00
- Site License \$6500.00
- Corporate License \$8750.00

Report description:

Healthcare RFID Market Analysis

The Healthcare RFID market size reached USD 18.63 billion in 2025 and is forecast to rise to USD 42.40 billion by 2030, representing a 17.88% CAGR during the period. Growth is being fueled by regulatory serialization mandates, the post-pandemic focus on operational resilience, and the maturing economics of ultra-high-frequency (UHF) RAIN infrastructure. Momentum is strongest where advanced tracking intersects with clinical risk reduction, such as drug authentication, cold-chain assurance, and real-time location of surgical assets. Technology suppliers are layering artificial intelligence onto RFID data streams, translating raw location pings into prescriptive recommendations that eliminate manual searches, minimize inventory loss, and compress procedure turnover times. Meanwhile, semiconductor availability is gradually normalizing, easing prior cost spikes in tag production and allowing providers to scale pilots into enterprise-wide deployments.

Global Healthcare RFID Market Trends and Insights

RFID-enabled Drug Authentication to Curb Counterfeits

Serialization milestones under the FDA Drug Supply Chain Security Act now compel manufacturers, repackagers, and distributors to exchange electronic product data by staggered deadlines in 2025, driving hospitals and wholesalers toward RFID because 2D barcodes strain high-volume verification lines. Oracle and Avery Dennison recently launched an integrated replenishment platform that marries EPC tags with cloud analytics to automate stockouts, reflecting how solution vendors are packaging

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

compliance and efficiency in a single workflow. European health systems face a parallel imperative, with falsified medicines costing EUR 10.2 billion (USD 11.0 billion) annually, adding a tangible ROI argument that transcends mere regulatory checkbox. The bottleneck remains data completeness; up to half of drug SKUs still lack full Electronic Product Code Information Services (EPCIS) attributes, demanding middleware that can reconcile legacy ERP feeds with serialized identifiers.

Automated Cold-Chain Compliance for Temperature-Sensitive Biologics

Temperature excursions account for an estimated USD 35 billion in annual drug wastage worldwide, pushing logistics providers to embed temperature-sensing RFID tags that trigger alerts before thresholds are breached. Recent tags incorporate ionic-liquid phase-change materials whose melting points can be tuned to the stability band of each biologic, allowing one label to span use cases from insulin to CAR-T therapies. The COVID-19 vaccine rollout validated hybrid architectures that pair RAIN RFID with BLE beacons, enabling chain-of-custody firmware to sync readings as containers pass hubs. With biologics forecast to command a rising share of pipelines, regulators on both sides of the Atlantic now require temperature documentation across every node, converting RFID from nice-to-have to essential infrastructure.

Interference of UHF RFID with MRI/CT Imaging Suites

Hospitals aiming for wall-to-wall visibility face electromagnetic conflict between 860-960 MHz tags and imaging hardware. Zone-based architectures that power-down readers near magnet rooms add layers of middleware and raise commissioning costs. Alternative HF tags mitigate risk but sacrifice read distance, limiting their utility in large holding bays. Lack of cohesive regulatory guidance complicates procurement timelines, prompting many radiology departments to postpone rollouts until supplier documentation matures.

Other drivers and restraints analyzed in the detailed report include:

Rapid Adoption of UHF Tags in Real-Time Location Systems / AI-powered Inventory Optimisation in Operating Rooms / Capital-Intensive Retrofit of Legacy Pharmacy Dispensing Cabinets /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Tags and Labels captured 47.2% of the Healthcare RFID market share in 2024 because every deployment starts with a physical identifier anchored to an item. However, Software and Analytics is pacing the segment with an 18.7% CAGR, signaling a shift toward platforms that interpret raw tag reads into actionable dashboards. Oracle's cloud-native middleware sits atop edge readers, triggering replenishment orders the moment par levels dip, thereby monetizing data rather than hardware. Readers and antennas remain indispensable, yet their growth rate is moderating as unit prices fall and multi-protocol devices stretch lifecycle utility. The Services slice is becoming consultative, guiding hospitals through workflow redesign, cybersecurity hardening, and change-management sequencing that ensure adoption sticks. Collectively, this mix illustrates why software is now the gravitational center of the Healthcare RFID market.

Investment is tilting to artificial-intelligence modules that forecast demand spikes, flag utilization anomalies, and push predictive maintenance reminders. Those features elevate total cost-of-ownership arguments, persuading finance committees that payback periods sit well inside three years. Vendor selection gravitates toward platforms boasting open APIs that bind to electronic health records, enterprise resource planning, and biomedical engineering ticketing systems in one environment, supporting best-of-breed freedom without data silos.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

The Healthcare RFID market size for UHF/RAIN implementations stood highest in 2024 because those tags read hundreds of items across multiple rooms through standard passive portals. Economies of scale are accelerating as the RAIN Alliance tracked 44.8 billion chip shipments in 2023. Microwave tags, although nascent, recorded the swiftest trajectory at 19.3% CAGR as perioperative teams require centimeter-level pinpointing of scalpels and drill bits. HF/NFC tags occupy controlled-access environments like medication carts where short-range security adds value. LF continues in dialyzers and implants that must communicate through fluid or metal shielding, though volume remains niche.

Hospitals are converging on hybrid readers able to interrogate multiple frequencies, safeguarding against stranded assets when new clinical use cases materialize. Procurement teams favor antennas that adapt power output in response to zone risk, resolving interference concerns near imaging suites. The net effect is a portfolio where UHF remains backbone but microwave and HF carve premium footholds for precision and privacy scenarios.

The Healthcare RFID Market is Segmented by Component (Tags and Labels, Readers/Antenna and More), Tag Frequency (LF, HF/NFC, UHF/RAIN, Microwave), Application (Asset Tracking, Patient and Staff Tracking, and More), End User (Hospitals, Pharmaceutical Manufacturers, Clinics and Outpatient Centers, Research Labs and Biobanks, Contract Logistics & 3PL), and Geography. The Market Forecasts are Provided in Terms of Value (USD).

Geography Analysis

List of Companies Covered in this Report:

Zebra Technologies Corp. / Impinj Inc. / Avery Dennison Corp. / Honeywell International Inc. / Alien Technology LLC / Securitas Healthcare / GAO RFID Inc. / CCL Industries Inc. / S3Edge Inc. / Terso Solutions Inc. / Biolog-id SA / RF Technologies Inc. / STid Groupe / Spacecode Technologies SA / Identiv Inc. / Nedap N.V. / Tageos SAS / Denso Wave Inc. / Jadak (A Novanta Company) / SML Group Ltd. / Xerafy Ltd. / Invengo Technology Pte Ltd. / Turck Vilant Systems / MetraTec GmbH /

Additional Benefits:

The market estimate (ME) sheet in Excel format /
3 months of analyst support /

Table of Contents:

1 INTRODUCTION

- 1.1 Study Assumptions and Market Definition
- 1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET LANDSCAPE

- 4.1 Market Overview
- 4.2 Market Drivers
 - 4.2.1 RFID-enabled Drug Authentication to Curb Counterfeits (North America)
 - 4.2.2 Automated Cold-Chain Compliance for Temperature-Sensitive Biologics

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 4.2.3 Rapid Adoption of UHF Tags in Real-time Location Systems (RTLS)
- 4.2.4 AI-powered Inventory Optimisation in Operating Rooms (Europe)
- 4.2.5 Mandated Unique Device Identification (UDI) Roll-outs (Asia)
- 4.2.6 Enhanced Patient Safety Through Automated Medication Verification
- 4.3 Market Restraints
 - 4.3.1 Interference of UHF RFID with MRI/CT Imaging Suites
 - 4.3.2 Capital-intensive Retrofit of Legacy Pharmacy Dispensing Cabinets
 - 4.3.3 Data-privacy Concerns in Patient-wearable Tags (EU GDPR)
 - 4.3.4 Competing BLE/Ultra-wideband RTLS Platforms
- 4.4 Value / Supply-Chain Analysis
- 4.5 Regulatory Outlook
 - 4.5.1 US FDA DSCSA Milestones
 - 4.5.2 EU FMD Safety Features
 - 4.5.3 China NMPA Medical-device Coding
- 4.6 Technological Outlook
 - 4.6.1 HF vs UHF vs RAIN Standards
 - 4.6.2 Cloud-native RFID Middleware
- 4.7 Porter's Five Forces
 - 4.7.1 Bargaining Power of Suppliers
 - 4.7.2 Bargaining Power of Buyers
 - 4.7.3 Threat of New Entrants
 - 4.7.4 Threat of Substitute Products
 - 4.7.5 Intensity of Competitive Rivalry

5 MARKET SIZE AND GROWTH FORECASTS (VALUE)

- 5.1 By Component
 - 5.1.1 Tags and Labels
 - 5.1.2 Readers / Antennas
 - 5.1.3 Middleware / Edge Servers
 - 5.1.4 Software and Analytics
 - 5.1.5 Services
- 5.2 By Tag Frequency
 - 5.2.1 LF (125-134 kHz)
 - 5.2.2 HF / NFC (13.56 MHz)
 - 5.2.3 UHF / RAIN (860-960 MHz)
 - 5.2.4 Microwave (2.45 GHz)
- 5.3 By Application
 - 5.3.1 Asset Tracking
 - 5.3.2 Patient and Staff Tracking
 - 5.3.3 Pharmaceutical and Supply-chain Tracking
 - 5.3.4 Blood and Specimen Monitoring
 - 5.3.5 Surgical Instrument Visibility
 - 5.3.6 Biometric and Access Control
- 5.4 By End User
 - 5.4.1 Hospitals
 - 5.4.2 Pharmaceutical Manufacturers
 - 5.4.3 Clinics and Outpatient Centers

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

5.4.4 Research Labs and Biobanks
5.4.5 Contract Logistics and 3PL for Healthcare

5.5 By Geography

5.5.1 North America

5.5.1.1 United States

5.5.1.2 Canada

5.5.1.3 Mexico

5.5.2 South America

5.5.2.1 Brazil

5.5.2.2 Argentina

5.5.2.3 Colombia

5.5.2.4 Rest of South America

5.5.3 Europe

5.5.3.1 Germany

5.5.3.2 United Kingdom

5.5.3.3 France

5.5.3.4 Italy

5.5.3.5 Spain

5.5.3.6 Nordics

5.5.3.7 Rest of Europe

5.5.4 Asia Pacific

5.5.4.1 China

5.5.4.2 Japan

5.5.4.3 India

5.5.4.4 Australia

5.5.4.5 South Korea

5.5.4.6 ASEAN

5.5.4.7 Rest of Asia Pacific

5.5.5 Middle East and Africa

5.5.5.1 Middle East

5.5.5.1.1 GCC

5.5.5.1.2 Turkey

5.5.5.1.3 Rest of Middle East

5.5.5.2 Africa

5.5.5.2.1 South Africa

5.5.5.2.2 Nigeria

5.5.5.2.3 Kenya

5.5.5.2.4 Rest of Africa

6 COMPETITIVE LANDSCAPE

6.1 Market Concentration

6.2 Strategic Moves

6.3 Market Share Analysis

6.4 Company Profiles (includes Global level Overview, Market level overview, Core Segments, Financials as available, Strategic Information, Market Rank/Share for key companies, Products and Services, and Recent Developments)

6.4.1 Zebra Technologies Corp.

6.4.2 Impinj Inc.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 6.4.3 Avery Dennison Corp.
- 6.4.4 Honeywell International Inc.
- 6.4.5 Alien Technology LLC
- 6.4.6 Securitas Healthcare
- 6.4.7 GAO RFID Inc.
- 6.4.8 CCL Industries Inc.
- 6.4.9 S3Edge Inc.
- 6.4.10 Terso Solutions Inc.
- 6.4.11 Biolog-id SA
- 6.4.12 RF Technologies Inc.
- 6.4.13 STid Groupe
- 6.4.14 Spacecode Technologies SA
- 6.4.15 Identiv Inc.
- 6.4.16 Nedap N.V.
- 6.4.17 Tageos SAS
- 6.4.18 Denso Wave Inc.
- 6.4.19 JadaK (A Novanta Company)
- 6.4.20 SML Group Ltd.
- 6.4.21 Xerafy Ltd.
- 6.4.22 Invengo Technology Pte Ltd.
- 6.4.23 Turck Vilant Systems
- 6.4.24 MetraTec GmbH

7 MARKET OPPORTUNITIES AND FUTURE OUTLOOK

7.1 White-space and Unmet-need Assessment

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Healthcare RFID - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-07-01 | 156 pages | Mordor Intelligence

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	\$4750.00
	Team License (1-7 Users)	\$5250.00
	Site License	\$6500.00
	Corporate License	\$8750.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	<input type="text" value="2026-03-04"/>
		Signature	

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com



Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com