

## **Iris Recognition - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)**

Market Report | 2025-07-01 | 120 pages | Mordor Intelligence

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### **Report description:**

Iris Recognition Market Analysis

The iris recognition market size stands at USD 5.14 billion in 2025 and is forecast to expand to USD 12.92 billion by 2030, reflecting a compound annual growth rate (CAGR) of 20.23%. This robust trajectory shows how the technology has moved beyond niche government deployments into everyday consumer environments. Heightened demand for contact-free authentication, rising cyber-threat exposure, and stronger compliance expectations from regulators have all accelerated adoption across banking, healthcare, travel, and consumer electronics. Hardware remains the largest cost center, yet software gains more strategic weight as cloud-native matching engines improve speed and lower entry barriers for mid-sized buyers. Asia-Pacific commands an early-mover advantage through scaled national identity programs, while the Middle East delivers the fastest CAGR on the back of airport modernization and tourism facilitation mandates. Intensifying competition now revolves around algorithmic accuracy, multimodal integration, and privacy-centric design features that can withstand evolving data-sovereignty rules.

Global Iris Recognition Market Trends and Insights

Growing National-ID & e-Passport Programs in Asia

Asia-Pacific governments keep scaling iris-enabled digital identity platforms to streamline public-service delivery and financial inclusion. India's DigiLocker upgrade now allows corporate entities to verify staff credentials through the Aadhaar database, widening the addressable base beyond individual citizens. Thailand's public-health authorities have introduced multimodal

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enrolment kiosks for migrant workers, linking iris scans to vaccination and benefits eligibility. Optical module costs have fallen toward single-digit USD levels in high-volume production, giving budget-constrained agencies an entry point. As enrollment momentum continues, vendors see durable revenue from maintenance contracts and periodic sensor refresh cycles that follow increased performance standards.

#### Rising Border-Control Spending Across Middle-East Corridors

Gulf states deploy iris recognition at scale to balance security thresholds with passenger-flow targets in flagship airports. The UAE's eGate program, delivered with IDEMIA, employs iris-at-distance capture to process residents and visitors without touching immigration counters. Saudi Arabia's Vision 2030 task force mandates multimodal biometrics for all new terminals, prompting suppliers such as Invixium to commit to local assembly lines for quicker customization. The resulting procurement pipeline favors high-throughput scanners and cloud-ready matching engines that can clear several thousand travelers per hour while logging audit-grade evidence for immigration officials.

#### High CAPEX of Multimodal Biometric Hubs at Airports

Airports face steep upfront costs when retrofitting existing checkpoints with multimodal pods that include iris, face, and fingerprint options. U.S. Transportation Security Administration trials show passenger throughput gains yet require specialized lanes, LED-safe lighting, and dedicated fiber backhauls to central matching engines. Smaller regional airports postpone rollouts until passenger volumes justify the payback, creating a two-tier adoption curve that suppliers must navigate with modular, pay-per-use pricing models.

Other drivers and restraints analyzed in the detailed report include:

Smartphone OEM Adoption of On-Device Iris Sensors / Expansion of Contactless Patient-ID Mandates in U.S. Healthcare / Data-Sovereignty & Biometric-Template Storage Regulations (EU GDPR) /

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

#### Segment Analysis

Hardware accounted for 73% of 2024 revenue and continues to anchor the iris recognition market, given the need for precision optics, controlled illumination, and rugged housings. Growth, however, shifts toward software as cloud inference engines raise recognition speeds and enable agile feature updates without forklift replacements. System operators report average upgrade cycles of four to five years for cameras, yet deploy quarterly algorithm patches to improve accuracy against evolving demographic mixes.

Software's 22.8% CAGR from 2025-2030 underscores the pivot from capital expenditure to subscription models, letting smaller enterprises trial enterprise-grade accuracy through pay-as-you-go APIs. The layered architecture supports quick rollouts when new privacy mandates emerge, a factor that materially influences procurement committees in health and finance. In parallel, component suppliers miniaturize infrared LED arrays and apply automotive-grade temperature ratings, expanding outdoor deployment windows where lighting is unpredictable. Open-API lenses invite cross-modality fusion, letting operators stream both iris and face images from a single sensor to common back ends.

The 1:N mode represented 66.2% iris recognition market size in 2024, supported by border-control, voter registry, and welfare-benefit rollouts requiring one-to-many searches against multimillion-record galleries. Governments reserve significant compute budgets for peak travel seasons, validating the architecture's resilience for concurrent queries.

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Over the next five years, 1:1 verification is expected to record a 20.6% CAGR as corporates and mobile-wallet providers focus on rapid user validation rather than exhaustive de-duplication. The convenience angle resonates where latency must stay below 250 milliseconds to avoid checkout abandonment. Early adopter banks in Europe now pair iris scans with dynamic QR tokens to bind the transaction session, reducing phishing risk without noticeable user friction. As these point solutions scale, they feed data back into adaptive thresholding engines that improve false-accept/false-reject balances across culturally diverse user cohorts.

The Iris Recognition Market Report is Segmented by Component (Hardware, Software), Authentication Mode (1:1 Verification, 1:N Identification), Application (Access Control and Time-Attendance, ID and Border Control, and More), End-User Industry (Government and Law-Enforcement, BFSI, and More), and Geography (North America, South America, Europe, and More). The Market Forecasts are Provided in Terms of Value (USD).

## Geography Analysis

Asia-Pacific held 36% of global revenue in 2024, underpinned by India's Aadhaar enrollment of over 1.2 billion citizens and rapid smartphone penetration that normalizes biometric interactions. Chinese handset vendors bundle iris unlock in flagship models to underpin Alipay and WeChat Pay transfers, while Japan's NEC commercializes its Bio-IDiom suite across transportation and retail self-checkout lanes. Regulatory clarity, strong mobile data coverage, and price-sensitive yet tech-savvy consumers create a fertile setting for sustained installation growth.

The Middle East records the fastest trajectory at 21.3% CAGR through 2030, fueled by Gulf airports' shift to seamless passenger corridors and national digital-ID roadmaps. The UAE's decision to retire physical Emirates ID cards in favor of a facial-and-iris credential highlights the policy's will to leapfrog legacy cards. Saudi Arabia's localization drives push vendors to co-manufacture scanners, positioning the region as both a demand hub and a production base.

Europe and North America display mature yet policy-shaped demand curves. GDPR obligations force privacy-by-design architectures, prompting greater investment in in-country cloud nodes and encryption overlays. The U.S. market banks on federal funding to update border checkpoints and aviation hubs, with Customs and Border Protection extending iris capture pilots to additional crossings. Civil-liberties groups monitor deployments, so accurate liveness detection and transparent audit trails are critical to winning public acceptance.

## List of Companies Covered in this Report:

NEC Corporation / IDEMIA / HID Global (ASSA ABLOY) / Thales Group (Gemalto) / Iris ID Inc. / IriTech Inc. / EyeLock LLC / Princeton Identity Inc. / BioEnable Technologies Pvt. Ltd. / IrisGuard UK Ltd. / Aware Inc. / Vision-Box / DERMALOG Identification Systems / Cognitec Systems GmbH / Smartmatic / Samsung Electronics Co., Ltd. / Fujitsu Limited / CLEAR Inc. / CMITech Company Ltd. / SRI International /

## Additional Benefits:

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

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