Gift Card Investor Supplemental

March 2026

DIGIMARC

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Presentation Abstract

- This presentation provides a comprehensive overview of
    1. the gift card industry,
    2. the gift card supply chain ecosystem,
    3. gift card economics,
    4. the growing incidence and sophistication of gift card fraud,
    5. current solutions available to address fraud,
    6. Digimarc's Secure Gift Card solution and its ecosystem-wide impact, and
    7. Digimarc's Serviceable Addressable Market (SAM).
- The purpose of this presentation is to provide Digimarc investors a clear understanding of the industry dynamics, risks, and opportunities shaping the gift card market, with a focus on how Digimarc's fraud prevention solution fits within the overall gift card ecosystem.

Executive Summary

- The gift card industry represents a large and growing global market. It serves as a material driver of revenue and profits for brands and retailers as well as the interdependent ecosystem of gift card networks, suppliers and partners that support them.
- Gift card fraud continues to grow, impacting brands' and retailers' reputations, threatening industry growth and profitability, and bringing increased regulatory pressure. In response, the gift card industry is increasingly collaborating to find solutions.
- Existing security measures, primarily relying on physical packaging and analog tamper-evident features, are increasingly ineffective against organized fraud networks.
- Digimarc's Secure Gift Card solution is highly differentiated and cost-effective vs. existing solutions.
- Results to date demonstrate the power of Digimarc's solution -- strong fraud-reduction, improved checkout experience, and high scalability across printers, brands, and retailers, all without any adverse impact on sales.
- The US serviceable addressable market (SAM) for Digimarc's solution is an estimated 3 billion to 5 billion cards annually. The global SAM is 7.5 billion to 17 billion cards annually.
- Key workstreams to enable large gift card printers are largely complete, and the focus for 2026 is commencing large-scale rollouts of Digimarc-enabled firmware across retailers' front-of-store scanners and catalyzing significant adoption of its solution by the gift card brands that are sold through those stores.

Gift Card Industry In Numbers

- **Popularity:** Ranked as the most-requested holiday item for 19 consecutive years (50% request rate).[1]
- **Brand Uplift:** A shopper using a gift card is estimated to generate 42% higher revenue and 30% higher profit compared to the same shopper without a gift card. [2]
- **Gift Card Program Contribution:** Typically account for 3% - 5% of a brand's total revenue, with top performing programs comprising as much as 8% of a brand's revenue.[2]
- **US Sales:** Estimated at $180 billion to $230 billion across all types of gift cards. 60% - 75% of sales are physical.[3]
- **US Production:** Estimated 3 billion to 5 billion physical gift cards are produced each year. This represents Digimarc's US serviceable addressable market opportunity.[3]
- **Global Production:** Estimated 7.5 billion to 17 billion physical gift cards are produced each year. This represents Digimarc's global serviceable addressable market opportunity.[4]
- **Fraud-Related Losses:** Estimated to be close to $5 billion per year, equal to 2% to 3% of industry gift card sales.[5]

Notes:
(1) See slide 6 for more details.
(2) See slide 10 for more details.
(3) See slide 13 for more details.
(4) See slide 53 for more details.
(5) See slide 34 for more details.

Table of Contents

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Market Overview: The Popularity of Gift Cards

Gift cards have become the most popular item on holiday wish lists, with 50% of people requesting them in 2025 and 64% of people buying them as gifts for others.

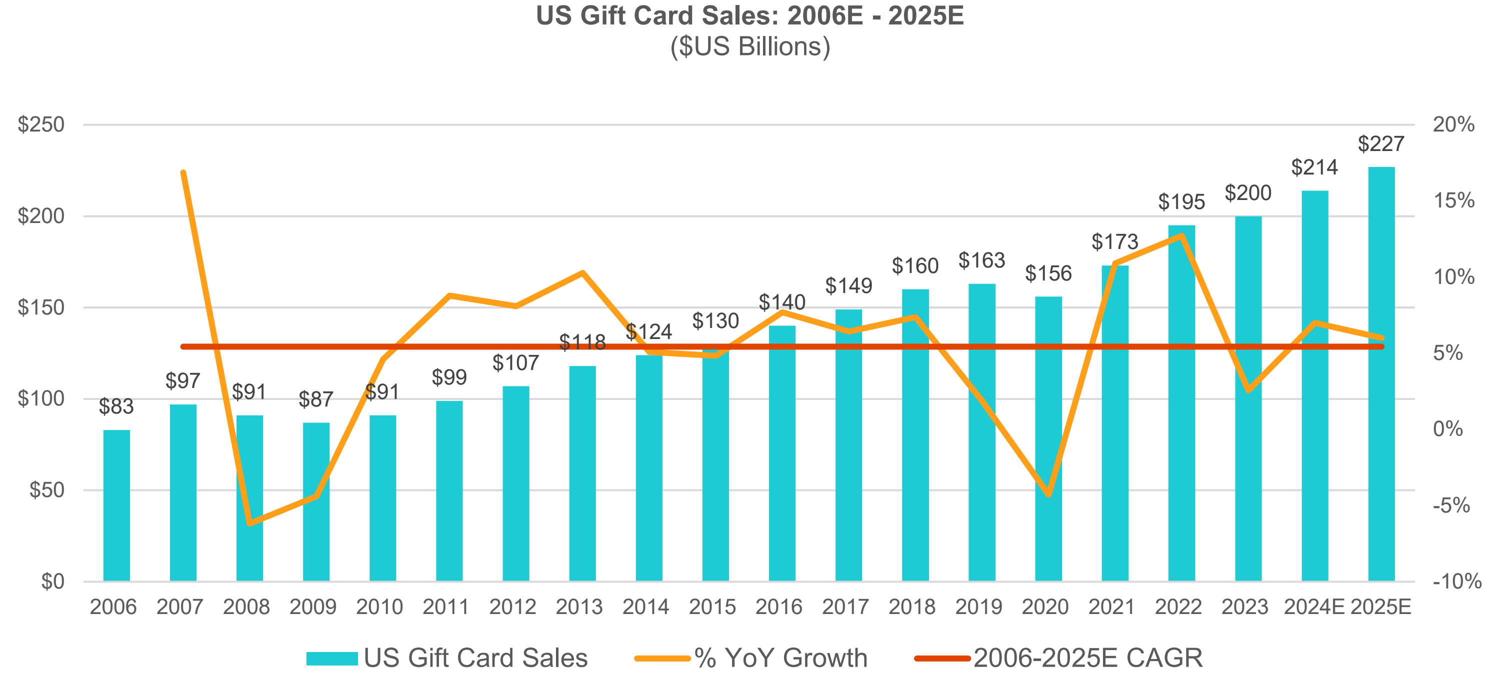
- Neiman Marcus was the first company to create and sell gift cards, introducing them in 1994.
- Over the years, the gift card industry has continued to evolve and incorporate different use cases, form factors, and security features.
- Gift cards have been the most popular item on holiday wish lists for the past 19 years, with 50% of people requesting them in 2025.[1]
- 64% of consumers buy gift cards as holiday gifts, making them a ubiquitous consumer shopping item with widespread retail and online distribution.[2]
- This popularity has positioned gift cards as a significantly profitable revenue stream and traffic driver for retailers as well as an effective customer acquisition and brand loyalty tool for brands, while also presenting new challenges related to security and fraud prevention.

Sources:
(1) NRF, 2025 October Holiday Consumer Survey
(2) Capital One Shopping, "Gift Card Statistics", November 2025

Market Overview: US Gift Card Sales Volumes

US gift card sales are estimated to have tripled over the past 20 years.

- Research estimates for the size of the gift card industry vary widely, ranging from ~$200 billion to ~$450 billion in the US.[1]
- Using relatively conservative estimates provided by Wallethub, the US gift card market has grown from $83 billion in 2006 to $227 billion in 2025, representing a 5.4% CAGR during this time period.[2]
- The industry is expected to grow between 5% and 15% over the next 10 years.[1]



Source:
(1) Wallethub, Mordor Intelligence, Data Bridge Market Research, Precedence Research.
(2) Wallethub, Statista, March 2025

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Market Overview: Key Industry Growth Drivers

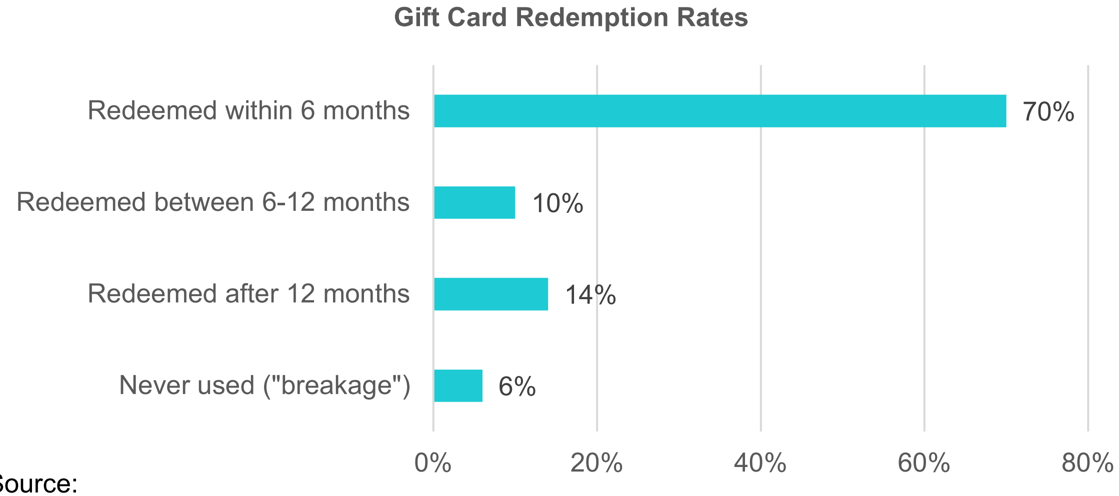
Gift card industry growth has benefitted significantly from favorable changes in consumer preferences, technological advancements, and the emergence of new use cases and verticals.

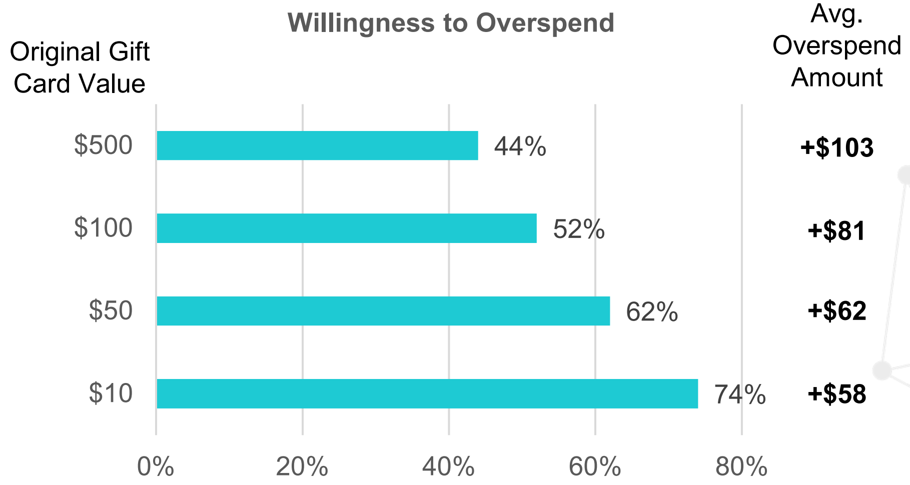
- **Brands** leverage gift card programs to enhance brand visibility, increase brand loyalty, cost-efficiently acquire new customers, boost upfront revenue, and capture customer overspend, with purchases often exceeding the card's value.
- **Retailers** gain the same benefits as brands for their first-party cards plus additional benefits from selling third-party gift cards, including increased customer traffic and higher average basket sizes. For most retailers, their gift card aisles/end-caps are the most profitable areas of their stores.
- **New Industry Verticals** are expanding their use of gift cards in experiential categories such as travel, spas and gaming.
- **Consumers** prefer cashless transactions and find cashback and discount offers linked to gift card purchases appealing. Many consumers prefer purchasing gift cards as they offer a way to control spending while still enjoying retail experiences. Technological advancements such as the integration of gift cards with mobile wallets and apps has made them more accessible and convenient.
- **Corporations** use gift cards for rewards and employee incentives. The B2B sector is a major source of industry growth, with businesses using gift cards for employee performance bonuses, incentives, and loyalty programs.

Market Overview: Redemption and Spend Behavior

80% of gift cards are fully redeemed within 12 months of receipt. When redeemed, gift cards drive significant customer overspend for brands.

- 70% of gift cards are redeemed within 6 months and 80% are redeemed within 12 months.
- At any given moment between 10% and 19% of gift card balances remain untouched, and 6% of gift cards are never used.[1]
- Partial redemptions prompt shoppers to return multiple times, boosting foot traffic.
- For a $100 gift card, 52% of shoppers spend more than the value of their gift cards, with average overspend of $81.[2]
- Gift card users are 2.5x more likely to pay full price than those paying with cash or credit.[3]





Source:
(1) Oxygen Financial, Paytronix
(2) BHN EQ Global Spring Gifting Report, n=2019, US 18+, January 2024
(3) Forbes, “Gift Cards: A Strategy For Retailers And Consumers“, February 2024

Market Overview: Revenue and Profit Uplift to Brand

Brands are estimated to generate 42% higher revenue and 30% higher profit from a shopper using a gift card vs. the same shopper without a gift card.

- Gift card programs typically account for 3% - 5% of a brand's total revenue, with top performing programs comprising as much as 8% of a brand's revenue.[1]
- Combined with the pure profit brands receive from unused gift cards ("breakage"), brands are estimated to generate 42% higher revenue and 30% higher profit dollars from a gift card recipient than from a customer spending $100 without a gift card.[2]

Estimated Brand Revenue and Profit Dollar Uplift From Purchase Made with Gift Card
(Assumes 40% Gross Margin Product)

		With Gift Card				% Uplift vs. No Gift Card Scenario			
	No Gift Card	No Overspend	Yes Overspend	Gift Card Never Used	**Wtd. Avg**	No Overspend	Yes Overspend	Gift Card Never Used	**Wtd. Avg**
% of Gift Card Users		42%	52%	6%	**100%**				
Status Quo Revenue	**$100**	$100	$100	$100	**$100**				
Add'l Rev From GC Overspend	**$0**	$0	$81	$0	**$42**				
Total Revenue	**$100**	$100	$181	$100	**$142**	0%	81%	0%	**42%**
COGS	**($60)**	($60)	($109)	$0	**($82)**				
GC-Related Costs and Fees (3)	**$0**	($8)	($8)	($8)	**($8)**				
Total Expenses	**($60)**	($68)	($117)	($8)	**($90)**	14%	95%	(86%)	**50%**
Profit ($)	**$40**	$32	$64	$92	**$52**	(21%)	60%	129%	**30%**

Source/Notes:
(1) Blackhawk Network, January 2026 Gift Card Essentials
(2) Analysis assumes that the gift card user already intended to shop at the brand's store or website. In reality, gift cards drive new customer growth for a brand, with 44% of consumers stating their intention to visit a store they would not have otherwise visited because they received a gift card (First Data, 2017 Prepaid Consumer Insights Study). In such a scenario, the gift card recipient's spend would be 100% incremental to the brand.
(3) Costs include revenue splits with ecosystem participants (retailer, gift card network, payment processor) as well as gift card manufacturing costs.

Market Overview: Gift Card Market Segmentation

The gift card market is analyzed through four primary lenses: format (physical vs. digital), redemption scope (closed-loop vs. open-loop), distribution channel (first-party vs. third-party) and customer base (B2C vs. B2B).

- **Physical vs. Digital (Format)** Approximately 60% - 75% of cards sold are physical. Although the share of digital gift cards continues to increase, physical gift card volumes continue to grow.

- **Closed-Loop vs. Open-Loop (Redemption Scope)** Closed-loop cards (tied to specific brands/retailers) comprise approximately 85% of gift card sales volumes. Open-loop cards (issued by the major credit card companies and redeemable anywhere that credit cards are accepted) comprise the remaining 15%.

- **First-Party vs. Third-Party (Distribution Channel)** First-party cards are sold directly by brands/retailers (e.g., a Starbucks card sold in a Starbucks). Third-party cards are distributed via vendors like grocery stores, home improvement stores, pharmacies, and online marketplaces (e.g., a Starbucks card sold at Walmart). First-party gift card sales volumes are likely larger than third-party gift card sales volumes.

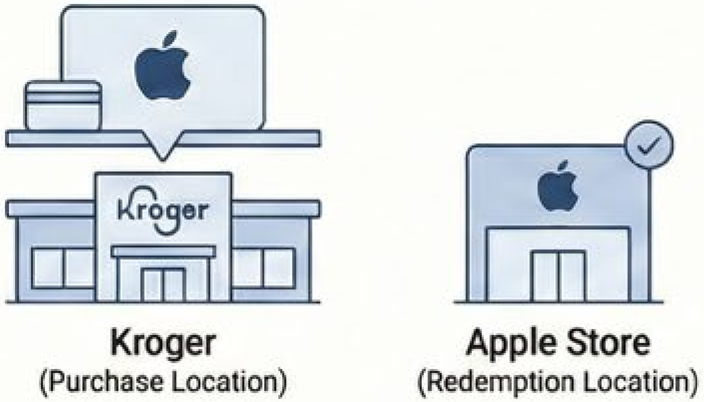
- **B2C vs. B2B (Customer Base)** The B2C channel is the most prevalent gift card distribution channel and represents sales directly to consumers via physical or digital retail storefronts. The B2B channel mainly represents gift cards purchased by corporations as part of employee benefits/incentives and loyalty programs.

Source: Blackhawk Network, Capital One Shopping, internal Digimarc data.

Understanding Gift Cards: The 3 Main Types

Distinct categories determine where a card can be bought and where its value can be redeemed.

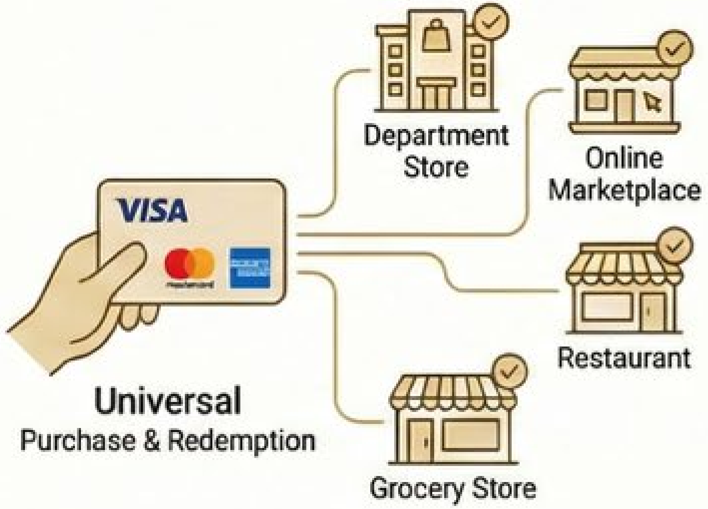
1. 3rd Party Closed Loop



Sold at many different retailers but can only be used at one specific business.

Example: An Apple gift card bought at Kroger, redeemable only at Apple.

2. 3rd Party Open Loop



Can be purchased and redeemed at any retailer that accepts major credit cards.

Example: Visa, Mastercard, or American Express branded gift cards.

3. First Party Direct

Sold by a retailer for use exclusively at that same retailer.

Example: A Walmart gift card that is both sold and redeemed at Walmart.

Market Overview: US Gift Card Production Volumes

An estimated 3 billion to 5 billion physical gift cards are produced each year in the US.

- Approximately 60% - 75% of gift cards sold are physical cards and the remainder are digital cards.
- 40% - 60% more gift cards are produced each year than are actually sold.
- Based on Digimarc's data aggregating the total physical print volumes from the top printers, an estimated 3 billion gift cards are produced each year in the US.
- However, this figure is intentionally conservative as it assumes these printers account for more than 75% of US gift card production and therefore the actual amount is likely higher.
- Using a low-end range of market value of gift cards sold in the US would imply 4.8 billion gift cards produced each year.

US Gift Card Production (mm)	Digimarc Bottom-Up	Market Est. Top-Down	Source / Comments
US Gift Card Sales ($mm)	$178,571	$226,840	Source for Market Estimate: Wallethub
Average Initial Value per Card ($)	$50	$50	Source: Capital One
Number of Gift Cards Sold (mm)	**3,571**	4,537	
% Physical	60%	75%	Digimarc estimate
Number of Physical Gift Cards Sold (mm)	2,143	3,403	
Produced But Unsold Cards (Waste) (mm)	857	1,361	40-60% more gift cards are produced than actually sold
Total Physical Gift Cards Produced (mm)	**3,000**	**4,764**	

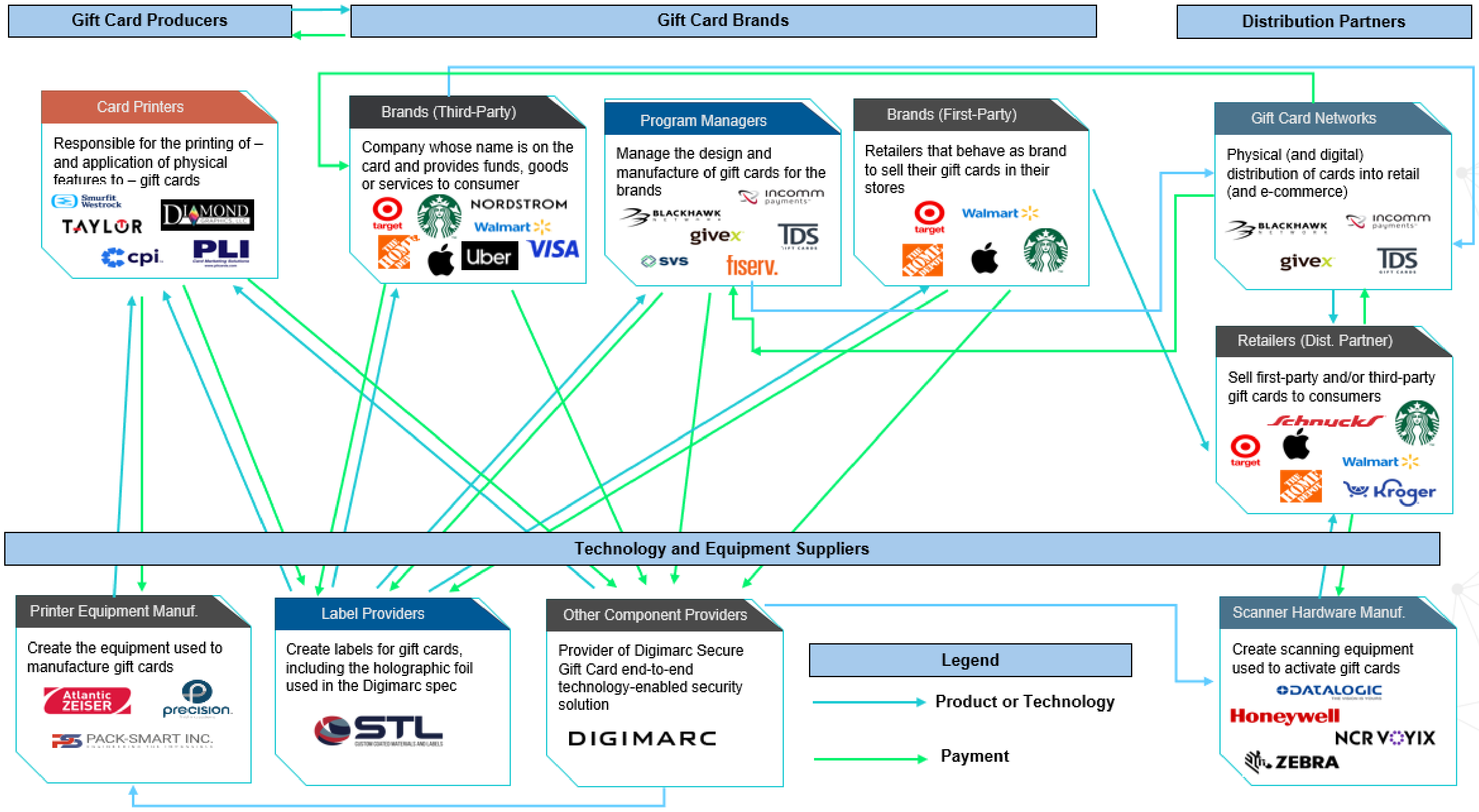
Notes:
Market Estimate Top-Down scenario: Total physical cards produced is calculated based on the following assumptions: lower-end market estimates for annual US gift card sales, $50 initial value per gift card, 75% of cards being physical and 40% more cards produced than sold.

Digimarc Bottom-Up scenario: US gift card $ sales estimate is driven from 3 billion produced cards, which is based on printer production volume data aggregated by Digimarc. Assumes $50 initial value per gift card, 60% of cards being physical and 40% more cards produced than sold.

Table of Contents

Gift Card Ecosystem Overview

The gift card ecosystem consists of several interdependent constituents, including brands, retailers, card printers, gift card networks, program managers, scanner hardware manufacturers, printer equipment manufacturers, and label providers.



Note: Logos shown above are provided for illustrative purposes only

Gift Card Ecosystem Overview

Digimarc plays a central role and interfaces with every entity in the ecosystem as a paid licensor and/or an unpaid technology enablement partner.

- **Digimarc as a Technology Enablement Partner**: Digimarc supplies its software and SDKs to printers, gift card equipment manufacturers and POS hardware providers and routinely collaborates with these entities to ensure their hardware and software can embed and/or read the digital watermarks.
- **Digimarc as a Licensor**: Digimarc licenses its Secure Gift Card solution to printers, brands and program managers.

Ecosystem Player	Example Companies	Function	Digimarc Relationship	Digimarc-Specific Commentary
Brands	Apple, Home Depot, Nordstrom Starbucks, Target, Uber, Visa, Walmart	Company whose name is on the gift card and provides funds, goods or services to consumer	Customer	Utilize Digimarc watermark security layer on gift card
Retailers (Distribution Partner)	Apple, Home Depot, Kroger, Schnucks, Starbucks, Target, Walmart	Sell first-party and/or third-party gift cards to consumers	Partner	Utilize Digimarc-enabled scanner hardware to activate untampered gift cards
Card Printers	CPI, Diamond, PLI, Taylor, Westrock	Print and assemble gift cards and gift card packaging	Customer or Partner	Configure printing lines to print watermarks on gift card
Gift Card Networks	Blackhawk, Givex, InComm, TDS	Distribute physical and digital gift cards into retailers and e-commerce	Partner	Distribute Digimarc-secured gift cards to retailers
Program Managers	Blackhawk, Fiserv, Givex, InComm, SVS, TDS	Provide outsourced design, procurement, and marketing for some brands	Partner or Customer	Can either be a direct customer or influence adoption by brands
Scanner Hardware Manufacturers	Datalogic, Honeywell, NCR, Zebra	Supply scanning equipment used by retailers to activate gift cards	Partner	Incorporate Digimarc reader SDK into scanner firmware
Printer Equipment Manufacturers	Atlantic Zeiser, Pack-Smart, Precision	Supply the equipment used to manufacture gift cards to printers	Partner	Incorporate Digimarc software and SDK into their print line hardware
Label Providers	STL	Provide consumable physical security features to printers	Partner	R&D partner to incorporate material science features into Digimarc gift card spec
Gift Card Processors	Fiserv, InComm, SVS, Target	Manage the issuance, redemption, and balance tracking of gift cards	None	Current Digimarc solution requires no change to activation process Could be a future partner based on Digimarc product roadmap

Ecosystem Overview – Brands

Brands are important decision-makers in the ecosystem, determining whether to -- and how to -- implement a gift card program.

- Brands manage their gift card programs through a set of interconnected functions that span design, procurement, distribution, logistics, security and fraud prevention.
- Some brands outsource some or all of these functions to third-party program managers.
- Brands (or their program managers) determine:
  - The form factor of the card (physical vs. digital)
  - Security features (scratch-off labels, secure pack, or enhanced solutions like Digimarc)
  - Production volumes
  - Packaging and merchandising strategy
- Brands sell gift cards through their owned retail stores (first-party) and non-owned retail stores (third-party).
- Digimarc sells its Secure Gift Card solution directly to brands or indirectly via their program managers and/or printers.

Ecosystem Overview – Retailers

Retailers play a central role in the gift card ecosystem by operating in-store and digital gift card malls that offer both open-loop and closed-loop cards from a wide range of brands.

- Retailers are responsible for merchandising gift card aisles and end-caps—though many retailers who carry third-party gift cards work with gift card networks to manage placement, assortment, and replenishment on their behalf.
- Gift card sections are often among the most profitable areas of the physical store on a per-square-foot basis, making effective merchandising and category management strategically important.
- Retailers must also comply with evolving state regulations governing gift card sales, secure packaging requirements, and fraud-prevention standards.
- Retailers are responsible for ensuring store associates are properly trained to activate gift cards accurately and securely at the POS.
- Digimarc works with retailers to ensure their front-of-store scanners are running firmware carrying Digimarc SDK versions capable of reading its Secure Gift Card solution.

Ecosystem Overview – Printers

Gift card printers specialize in the manufacturing, personalization, and fulfillment of gift cards.

- Key functions of printers include:
  - **Card Manufacturing and Printing**: Produce gift cards using various materials
  - **Customization and Specialization**: Offer branding, personalization and security features
  - **Fulfillment**: Manage the secure distribution process
  - **Packaging and Display Solutions**: Create custom packaging, carriers, and retail -purchase displays
  - **Security and Data Management**: Ensure secure handling of sensitive data during production.
- The larger printers have invested in gift card innovation ahead of projected demand, deploying new technologies and security features in an attempt to differentiate their offerings.
- Digimarc works with printers both as a vendor as well as a partner to certify their production lines can produce its Secure Gift Card solution.

Ecosystem Overview – Gift Card Networks

Gift card networks aggregate gift cards from multiple brand issuers and distribute them into physical and digital gift card malls hosted by retailers or e-commerce sites.

- Gift card networks have a deep understanding of gift card flows, including merchandising, sale, activation and redemption.
- Importantly, gift card networks exhibit significant influence over the acceptance of new security methods.
- Blackhawk Network and InComm are the two largest gift card networks, comprising the majority of third-party gift card distribution in the US. Most gift card issuers work with both Blackhawk and InComm.
- Digimarc works with the gift card networks as a vendor as well as a partner to help drive increased adoption of its Secure Gift Card solution.

Ecosystem Overview – Program Managers

Gift card program managers design, implement, and oversee gift card programs on behalf of brands who choose to outsource this function.

- Program managers act as an outsourced hub for card production, compliance, marketing, and fraud prevention, providing brands with potential economies of scale due to bulk purchases as well as outsourced expertise.
- Key responsibilities include of gift card program managers include:
  - **Strategic Planning and Growth:** Developing program strategy, identifying growth opportunities, defining KPIs, and creating product roadmap across various channels.
  - **Operations Management:** Managing the daily operations, including card production and fulfillment, inventory tracking, and troubleshooting any issues.
  - **Vendor and Partner Management:** Establishing and maintaining relationships with key players in the value chain.
  - **Financial and Data Analysis:** Monitoring performance using analytics and reporting tools to track sales trends, transaction volumes, customer acquisition costs, and redemption rates.
  - **Risk and Compliance:** Ensuring the program complies with all regulations and implementing robust fraud prevention strategies such as Digimarc’s Secure Gift Card solution.
  - **Marketing and Customer Experience:** Collaborating with marketing teams on promotional campaigns and loyalty programs, managing cardholder customer support and user experience.
- Digimarc works with program managers as a vendor as well as a partner to influence brand decisions on security features.

Ecosystem Overview – Scanner Hardware Manufacturers

Scanner manufacturers are responsible for providing, maintaining, and innovating the hardware and software used to scan products, manage inventory, and process transactions in retail stores.

- Scanner hardware providers develop robust, high-speed units that can withstand constant, heavy usage while still delivering value-add features across both hardware (e.g. 360-degree scanning) and firmware (e.g. AI-enabled imaging and incorporation of Digimarc SDK).
- The scanner hardware market is highly consolidated, with Zebra and Datalogic dominating flat-bed scanners and Zebra, Datalogic, and Honeywell together comprising the majority of the market for handheld retail scanning devices. NCR rebrands models from all three primary OEMs.
- Approximately 10% - 20% of flatbed scanner and handheld scanner capacity gets replaced each year.
- Prior versions of Digimarc's SDKs are already embedded in almost all installed scanners shipped in the last ten years.
- The latest versions of Digimarc's SDKs can be propagated two ways:
  - Firmware refresh of existing installed scanners; or
  - Added by default to new scanner hardware.
- **Digimarc's extensive global scanner footprint is a valuable asset that should drive low-friction demand for future products in retail loss prevention (see slide 56).**

Ecosystem Overview – Printing Equipment Manufacturers

Gift card printer equipment manufacturers specialize in designing and manufacturing automated, high-speed machinery used by printers to produce, personalize, and package gift cards.

- These companies focus on end-to-end solutions that transform blank card stock into finished, activated products in a single process, offering high-volume, secure technology that ensures data integrity.
- Key printing processes that the printer equipment manufacturers' offerings address include:
  - **Card Personalization**: High-speed printing, encoding, laser marking and scratch-off applications
  - **High-speed Packaging and Fulfillment**: Card affixing to carrier forms, secure packaging in tamper-evident ways and automated bundling of finished cards into packs
- Key printer equipment technologies and features include:
  - **Modular Design**: Systems are built using modules (feeders, encoders, printers, inspectors), allowing manufacturers to customize the machine for specific, evolving needs.
  - **Real-Time Vision Verification**: High-speed camera systems check every card for correct personalization, ensuring that the printed name matches the encoded chip, and that scratch-off labels are properly placed.
  - **Data Integrity & Security**: Ensuring 0%-defect manufacturing and managing secure data.
  - **High Output Speeds**: Some systems can handle up to 24,000–35,000 products per hour.
- Digimarc works with printer equipment manufacturers to incorporate its Gift Card Embedder and Quality Control SDKs into their relevant components.

Ecosystem Overview – Label Providers

Gift card label providers specialize in creating, manufacturing, and selling specialized adhesive labels and security seals for gift cards.

- Label providers engineer labels that protect the PIN or activation code on the back of gift cards. These labels are designed to break, leave a "void" pattern, or destruct upon tampering, alerting consumers and retailers to potential theft.
- These labels and seals act as a critical link in the secure packaging and activation process of cards, protecting them against fraud while ensuring they function properly in retail systems.
- Superior Tape & Label ("STL") is the largest provider of scratch-off labels to the gift card industry.
- Digimarc conducts significant R&D with STL to benefit from STL's cutting-edge material science expertise to constantly improve the security of the Digimarc Secure Gift Card solution specification (spec).

Ecosystem Overview – Gift Card Processors

Gift card processors manage the entire financial-related lifecycle of physical and digital gift cards for retailers.

- Gift card processors enable secure, real-time activation, redemption, balance inquiries, and reloading at the POS or online.
- Key functions include:
  - **Transaction Processing:** Authorize, redeem, and void transactions in real-time, securely updating card balances.
  - **Security and Fraud Prevention:** Use encryption to prevent unauthorized, fraudulent use and protect card data.
  - **Reporting and Analytics:** Provide detailed insights into sales, redemption rates, and customer spending patterns.
  - **Omnichannel Support:** Integrate with in-store POS, web, and mobile app platforms.
- Digimarc's secure gift card solution does not currently require changes to the activation process and therefore there has not yet been a need to collaborate with the gift card processors. However, they could be future partners based on Digimarc's product roadmap.

Table of Contents

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Gift Card Economics: Per Card Cost Drivers

For a brand, pricing per card is influenced by several factors, including the types of security features and personalization embedded, materials used, production complexity and order volumes.

- Gift card pricing is influenced by several factors:
  - **Security Features:** The greatest differentiator. Holograms, destructible materials, secure NFC chips, and tamper-evident packaging substantially increase cost.
  - **Materials & Form Factor:** More elaborate carriers or larger packaging formats raise print and assembly costs.
  - **Production Complexity:** Multi-step assembly lines (e.g., affixing cards to carriers, adding pull-tabs, applying cold glue) increase labor and run-time requirements.
  - **Personalization Requirements:** Variable printing (e.g., PIN windows, label placement, encoded data) creates additional production steps.
  - **Volumes & Seasonality:** Holiday buying cycles and order aggregation influence pricing power and printer capacity.

Gift Card Economics: Form Factors and Costs

The three most common gift card form factors include "M6", "Card on Carrier" and "Secure Pack."

- **M6 (basic card)**: The most common and least expensive configuration. M6 cards are attached to a single card carrier with perforations separating the carrier and the gift card. These cards feature de minimus security features, often just a scratch-off label concealing the PIN. Typical scaled cost: $0.08 - $0.11 per card.

- **Card on Carrier (or Card-Affixed)**: Unlike M6 cards where the gift card is a part of the carrier, card on carrier form factors feature a separate gift card that is glued onto the carrier. While visually appealing, card on carrier provides minimal incremental security beyond the scratch-off label. Typical scaled cost: $0.10 - $0.13 per card.

- **Secure Pack**: A card fully enclosed within cardboard packaging featuring tamper-evident components such as confetti-cuts, cold glue, specialty inks, holograms, and pull-tabs. These features are designed to make unauthorized access to sensitive redemption data more detectable. Secure pack configurations are typically adopted by brands with higher fraud exposure and/or to be compliant with certain state laws. Typical scaled cost: $0.21 - $0.50 per card.

Gift Card Economics: Digital Security Features

Digital gift card security features such as secure NFC or Digimarc's Secure Gift Card solution also add to the cost of a gift card.

- There are two newer digital security technologies that can be added to any of the gift card form factors, augmenting or replacing analog security elements: Secure NFC chips and Digimarc's Secure Gift Card solution.
- Secure NFC utilizes encrypted wireless communications protocols to either move activated funds to secure digital wallets or to enable a secure redemption transaction (akin to the tap-to-pay process for credit cards).
- While the technology is highly secure, the lack of NFC reader ubiquity and high per-unit costs (up to $1.75 per card) have been significant barriers to adoption and will likely remain so in the foreseeable future.
- Digimarc Secure Gift Card and Secure NFC are addressed in greater detail in the section titled "Current Solutions to Address Gift Card Fraud."

Table of Contents

Gift Card Fraud: Scope

Gift card security features have thus far failed to prevent fraud from occurring.

- Gift card fraud can occur in many ways, including:
  - Physical gift card tampering
  - Magnetic stripe skimming
  - Buying gift cards with stolen credit cards
  - Hacking into a gift card company’s database
  - Social engineering and phishing
  - Phony in-store refunds where stolen goods are returned back to a store to receive store credit in the form of a gift card
- Notably, traditional activation barcodes are easy to read and reproduce, plus the protective scratch-off labels covering redemption codes and PINs can be easily removed and replaced, granting a bad actor access to all the information needed to compromise a gift card.
- Organized crime rings exploit vulnerabilities in gift card systems, such as stealing or hacking card data, using stolen credit cards to purchase gift cards, digitally draining balances and selling stolen or tampered gift cards online.

Gift Card Fraud: Scope

Gift card fraud can occur at the point of activation and at the point of redemption.

- Gift card fraud encompasses two distinct events: activation fraud and redemption fraud.
  - **Activation fraud** occurs when a scammer manipulates a card before it is purchased to gain access to sensitive codes and PIN numbers, enabling them to drain the funds shortly after the card is activated but before the purchaser can utilize those funds.
  - **Redemption fraud**, also known as social engineering fraud, involves bad actors tricking gift card holders into proactively sharing the sensitive codes and PIN numbers after card purchase, via text scams, bogus customer service inquiries, etc.
- Today, Digimarc addresses activation fraud. A physical gift card is vulnerable to activation fraud at any point along the supply chain. The most vulnerable attack surface in the supply chain is in-store, including cards that are purchased online and delivered from stores.
- The vast majority of physical cards are purchased from -- or fulfilled through -- brick-and-mortar stores.

How Gift Card Tampering Works

1. Remove Cards from Store

Criminals first take unactivated gift cards directly from store displays.

2. Steal Card Information

They defeat the packaging to record the card number and PIN.

3. Return Card to Shelf

The compromised card is placed back in the store for someone to buy.

4. Consumer Buys & Activates Card

An unsuspecting customer purchases the card and loads it with funds.

5. Scammer Spends the Funds

Using the stolen info, the criminal drains the card's value.

Gift Card Fraud: Impact of Fraud

Estimated gift card fraud-related losses are ~$5 billion per year, or 2% - 3% of industry sales.

- Retailers, gift card networks, and brands share the liability of covering losses incurred by consumers. This includes the direct cost of refunds ("appeasements"), as well as the financial costs of resolving the issue which run multiples of the direct appeasement amount.
- Brands and retailers also face reputational damage and erosion of consumer trust due to the prevalence of fraud. Once a gift card giver or recipient realizes they purchased/received a tampered card, their propensity to purchase a gift card in the future is significantly undermined.
- A 2022 AARP survey found that over 1 in 3 adults have experienced some form of gift card fraud.[1]
- Total gift card fraud reported by the FTC for the first nine months of 2025 was $199 million, up 25% over the comparable period in 2024 ($158 million). However, less than 5% of mass market consumer fraud events are reported by consumers to government agencies or the BBB.[2] This amount includes all types of gift card fraud, not just activation fraud.
- Extrapolating these figures would imply that the actual consumer losses due to gift card fraud are close to $5 billion per year, equal to 2% - 3% of industry gift card sales.
- Retailers, brands and payment networks have faced numerous lawsuits due to these losses.

Source:
(1) AARP, "AARP Survey: 1 in 3 Adults Hit by Gift Card Payment Scams", April 2022
(2) Keith Anderson Research Paper, "To Whom Do Victims of Mass-Market Consumer Fraud Complain?", May 2021

Gift Card Fraud: Regulatory Landscape

In 2025, 22 states introduced legislation targeting gift card fraud – up from just 8 in 2024.

- States are starting to play a growing role in addressing gift card fraud. Regulations vary widely by state but generally fall into five categories:
  - More secure packaging and concealment of sensitive data such as numeric codes used for activation or redemption (such as CVV, PIN or activation codes)
  - Store signage/visible warnings in gift card aisles and at checkout
  - Stronger employee training to detect fraudulent gift cards
  - Making it a crime to steal unactivated gift cards
  - Cashback requirements that require retailers to give cash for low-value balances (typically less than $15).
- Partly in response, the industry has formalized a Government Relations Task Force and created the Gift Card Fraud Prevention Alliance in 2025 to take a more proactive and collaborative stance with the regulators and the gift card ecosystem.

Gift Card Fraud: Regulatory Landscape

Maryland and New Jersey have enacted secure gift card packaging laws that went into effect in 2025. New York could be the third state to pass such a law.

- Maryland was the first US state to pass a law requiring secure packaging for in-store gift cards and retailer training to detect fraud. The law passed in 2024 and went into effect in Summer 2025, requiring more secure packaging for open-loop gift cards starting in July 2025 and closed-loop gift cards starting in October 2025.
- New Jersey also passed a similar law in 2025 which became enforceable in February 2026.
- New York and Hawaii are two other states that are currently debating the implementation of secure packaging laws with high probability of success.
- 2026 is expected to be a contentious year for the gift card industry given that it is an election year for states with 30+ governors and several Attorneys General up for re-election. State governments are likely to look for headlines and consumer protection is a hot topic right now.
- To comply with new gift card packaging regulations, brands are increasingly having to move to secure pack form factor.
- Digimarc-enabled gift cards also fully comply with new secure packaging regulations while being priced at a discount to secure pack.
- As more states inevitably adopt similar legislation, this will directly drive sales of Digimarc’s solution.

Table of Contents

Current Solutions to Address Gift Card Fraud

The prevailing methods to protect against activation fraud, such as scratch-off labels, cold glue, holograms, pull-tabs, and confetti-cuts are entirely physical and can be easily defeated by thieves.

- When adopting a gift card fraud prevention/reduction solution, a decision maker (brand or program manager) will evaluate the following characteristics to better understand the total cost of ownership and ROI:
  - **Difficulty to compromise:** Buyers will pay more for a more secure solution
  - **Changes required to existing systems and processes:** Cross-functional collaboration requirements and operational downtime requirements - buyers want to minimize implementation time and complexity
  - **Cost to implement:** Capex vs. opex decision, expected payback period, quantifiable ROI
  - **Consumer friction:** Buyers want to ensure limited-to-no impact on customer experience and customer support
- Many gift card issuers will layer on multiple physical solutions (e.g., secure pack form factor) to make it more difficult for fraudsters but unfortunately these efforts are not proving successful.
- These analog solutions often depend on cashiers or store employees spotting tampered cards, making human vigilance the only true line of defense.

Current Solutions to Address Gift Card Fraud

Digimarc's Secure Gift Card solution has modest upfront set up costs for printers and retailers but delivers significantly improved protection against activation fraud and a lower total cost per card for brands who move from secure pack to card on carrier or M6.

Overview of Gift Card Fraud Prevention Solutions

Technology / Solution	Difficulty to Compromise	Changes Required to Existing Systems or Processes	Cost per Card	Consumer Friction	Comments
Physical Solutions					
Scratch-Off Labels	Low	Low	Low	Low	Easy to retrieve sensitive info. and repackage; requires manual detection
Holograms	Low	Low	Medium	Low	Easy to copy
Specialty Inks	Low	Low	Medium	Low	Easy to retrieve sensitive info. and repackage; requires manual detection
Cold Glue	Low	Low	Low	Medium	Easy to retrieve sensitive info. and repackage; requires manual detection
Confetti-Cuts	Low	Low	Low	Medium	Easy to retrieve sensitive info. and repackage; requires manual detection
Pull-Tabs	Low	Medium	Medium	Medium	Easy to retrieve sensitive info. and repackage; requires manual detection
Secure Pack (Sum of the above)	Low	Low	High	Medium	Easy to retrieve sensitive info. and repackage; requires manual detection
Backend Security and Infrastructure					
Geofencing	Low	High	High	Low	High incremental cost per card
Balance Inquiry Checks	Low	Medium	Low	Low	Fraudsters can circumvent these checks by understanding historical activation and redemption patterns by brand; results in extra gift card waste
PIN on Demand	High	High	High	High	Requires additional manual step by cashier; adds 8-10 seconds to each transaction
Digital Solutions - End-to-End Security Layer					
Digital Watermarking	**High**	**Medium**	**Medium**	**Low**	**Modest upfront setup cost for printers but lower cost per card to buyers**
Secure NFC	High	High	High	Low	Offers high card security but at very high cost per card Requires significant reworking of supply chain

Current Solutions to Address Gift Card Fraud

Pricing and security feature comparison of Digimarc Secure Gift Card solution alternatives.

- **M6:** These cards feature minimal security features, often just a scratch-off label concealing the PIN.
- **Card on Carrier:** Feature a separate gift card that is glued onto the carrier. While visually appealing, card on carrier provides minimal incremental security beyond the scratch-off label.
- **Secure Pack:** A card fully enclosed within cardboard packaging featuring tamper-evident components such as scratch-off labels, holograms, specialty inks, cold glue, confetti-cuts, and pull-tabs.
- **Secure NFC:** Able to be applied to any form factor, Secure NFC cards contain a near-field communication ("NFC") chip encoded with security features.

Gift Card Fraud Prevention Solutions by Cost

	Cost			Security Feature Examples						
Gift Card Form Factor	Low	High	Median	Scratch-Off Labels	Holograms	Specialty Inks	Cold Glue	Confetti-Cuts	Pull-Tabs	Secure NFC
M6	$0.08	$0.11	$0.09	x						
Card on Carrier	$0.10	$0.13	$0.11	x						
Secure Pack	$0.21	$0.50	$0.27	x	x	x	x	x	x	
Secure NFC	$0.60	$1.75	$1.00							x

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Table of Contents

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Product Vision & Design Principles

Industry Collaboration
Solution for the entire ecosystem, developed with the entire ecosystem

Automate Tamper Evidence
Fraud detection part of activation step

Avoid POS Changes
No complex changes for retailers

Improve CX
Streamline end-to-end experience

Low Printer Impact
Avoid significant disruption to existing manufacturing workflows

Phased Approach
Start simple, evolve as solution matures

"More secure than secure pack, with all the marketing and merchandising benefits of card-affixed, at the same price or less than the price of secure pack today…let alone the price of secure pack tomorrow"

Digimarc Solution: Technology Overview

Digimarc's Secure Gift Card solution represents a significant improvement over existing solutions.

- The Digimarc Secure Gift Card solution combats fraud by replacing traditional activation barcodes with encrypted, tamper-evident digital watermarks that are printed directly onto cards and labels covering the sensitive redemption data.
- During the checkout process, existing front-of-store scanners that are enabled with Digimarc's scanner SDK read these digital watermarks and deliver the contained information to the retailer's POS software to activate the card.
- The watermarks are designed to be tamper-evident – any attempt to access the sensitive redemption information protected by the digital watermark breaks the signal, which in turn renders the tampered gift card unable to be activated at POS. Untampered cards read flawlessly.
- By covering the sensitive redemption information with an encrypted, tamper-evident activation code, the Digimarc solution automates the detection of tampering and removes the current requirement that cashiers or consumers visually inspect and notice that a card has been compromised prior to activation.

Digimarc Solution: Watermark Replaces Barcode 128

Digimarc's Secure Gift Card solution replaces traditional activation barcodes on gift cards, enabling gift card activation only if the watermarked area is remains untampered.

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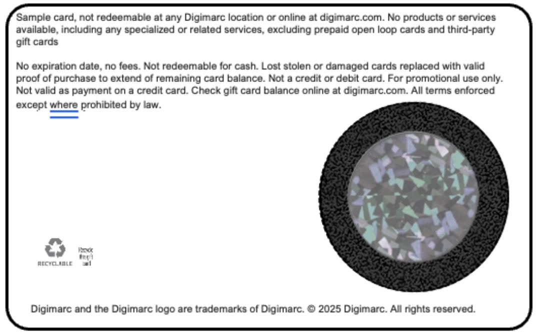
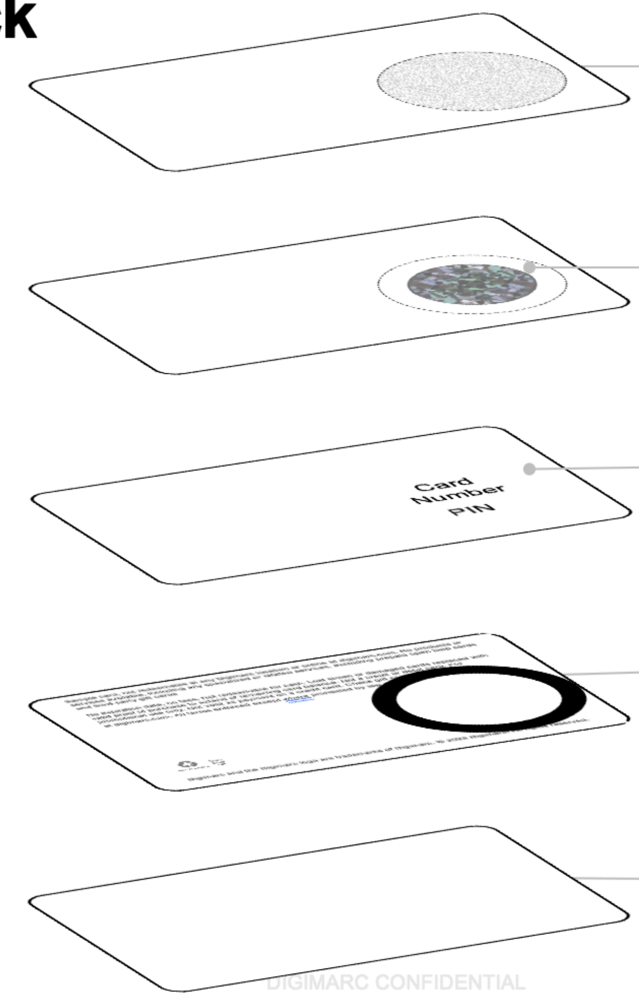
Digimarc Solution: Security Card Stack

Digimarc's Secure Gift Card solution contains four layers of information placed on the card stock.

Security Card Stack





Tamper Evident Watermark
Printed during personalization step over the sticker and surrounding card stock. Barcode scanner authentication and activation by scanning sticker and surrounding area – replacing code 128.

Tamper Evident Sticker
Label to cover the CVV/Pin. Removal or tampering of Sticker results in unreadable Watermark

Account # & Pin Cover
Below the sticker is the human readable Pin and PAN for mobile/online redemption & balance check. The cover can't be removed without damaging the tamper evident sticker.

Static Artwork content
Intentionally placed to prevent barcode swapping and deter copying.

Card Stock

Digimarc Solution: Product Development

Digimarc continues to improve on its Secure Gift Card solution.

- Since introducing its initial gift card product (“V1.0”) in Summer 2025, Digimarc has continued iterating to make the gift card solution more secure and flexible to industry needs.
- Key product feature enhancements between V1.0 and its latest offering include:
  - Introduced “ScratchSense”, an AI-trained model that looks at the gift card scratch-off label to determine if it has been tampered with. Provides a complementary layer of security to the tamper-evident watermarks.
  - Added flexibility on size of watermarked area in response to customer requests to accommodate more font sizes, longer PINs, and more locations where PIN can be placed under scratch-off label.
  - Introduced functionality to support cards that have a magstripe by printing the activation code across both the packaging and the card. Renders the card unable to be activated if it has been disturbed/moved within the packaging as is often the case when bad actors attempt to skim the magstripe.

Digimarc Solution: Proven Effectiveness in Preventing Fraud

Digimarc's Secure Gift Card is >3x more secure than secure pack.

- In partnership with the gift card ecosystem, Digimarc has conducted thorough threat vector analyses across tens of thousands of cards in-lab.
- Detailed testing showed Digimarc-protected cards drastically increased effort required to effectively tamper with the card.
- As it relates to threat vectors, risks were assessed against all (but not limited to) the following:
  - Direct Tamper Attacks (Peel up label, scratch off label, replace with 128, etc.)
  - Barcode Swapping
  - Photocopy Attacks
  - Watermark Replication
- **Results: The risk score decreased from 72 to 20**

Traditional Card Design
Risk Score: 72

Digimarc Secure Card Design
Risk Score: 20

Digimarc Solution: Product Roadmap

Digimarc is collaborating closely with many ecosystem participants to inform its product roadmap and remain several steps ahead of fraudsters.

Near-term Strategy

- Digimarc advances both the on-card security layer as well as the functionality of its scanner SDK depending on how best to thwart each specific attack vector.
- Digimarc aims to update the scanner SDK as infrequently as possible and make its solution backwards compatible, so retailers are able to update their point-of-sale firmware on their own timelines without being subject to Digimarc's product release schedule.

Future Product Focus

- **Gift card merchandising.** A covert version of the Digimarc digital watermark can be placed on the gift card or the gift card carrier to speed up merchandisers' workflows, including performing real-time inventory checks, validating item prices, and identifying product locations.
- **Gift card redemption.** Digimarc's technology can also address gift card redemption by removing open-source redemption barcodes as well as human-readable numbers and replacing them with a covert version of its digital watermark. Requires changes to the existing redemption framework.
- **Digital wallet connection.** Digimarc technology can also be used to verify and authenticate the loading of gift card balances onto digital wallets.

Digimarc Solution: Schnucks Pilot Overview

In summer 2025, Schnucks became the first retailer to pilot Digimarc's Secured Gift Card solution.

DIGIMARC | CASE STUDY

Digimarc-protected gift cards *prevent fraud* at Schnucks checkout

Gift card fraud is more pervasive than ever, eroding consumer trust and costing retailers, brands, and consumers hundreds of millions of dollars annually. Why? Because bad actors are able to quickly defeat new physical safeguards — often as soon as they are introduced. That's why Schnucks Markets decided to implement Digimarc's technology-enabled gift card security solution.

Challenge

Schnucks Markets, a regional grocery retailer, faced rising incidents of gift card fraud. Not only were the direct and indirect financial costs adding up, but customers were also losing brand trust. It was clear to management that traditional physical security layers built into card packaging weren't deterring bad actors—and manual card inspections by cashiers couldn't reliably detect tampered cards.

Digimarc Solution

Digimarc partnered with Schnucks, Blackhawk Network, Westrock, STL Labels, Zebra Technologies, and four major brands to implement its new security solution: replacing gift card activation barcodes with Digimarc's tamper-evident solution. Tampered cards wouldn't activate, automatically stopping fraud at point of activation, whereas untampered cards activated instantly upon scanning. No changes to merchandising, network activation, or POS systems were required.

Results

Over a 10-week period across 10 St. Louis Schnucks stores:

- There were **no reports of fraud** on Digimarc-secured cards—a significant improvement compared to 1) incidents of fraud on cards not secured by Digimarc over this same period and 2) incidents of fraud on participating brands' cards over a comparable period prior to adopting Digimarc.
- 100% of Digimarc-protected gift cards activated successfully.
- 87% of cashiers said cards protected by the Digimarc solution activated as fast or faster than traditional gift cards, resulting in faster checkout.
- Cashiers no longer needed to open complex packaging or examine gift cards for fraud, which further streamlined checkout.
- No training was needed for customers at self-service checkout.

"We are confident the watermarked gift cards developed by the Digimarc team will significantly mitigate the persistent gift card fraud prevalent within the retail sector. From the initial planning and discovery phases through the completion of the pilot program, the Digimarc team consistently prioritized and addressed our concerns while maintaining a seamless experience for both our customers and our checkers." — Dianna Kaiser, *Schnucks Store Auditor and Compliance Officer*

www.digimarc.com/resources/guides-papers/digimarc-gift-card-risk-intelligence

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Digimarc Solution: Ecosystem Benefits

The benefits of adopting Digimarc's watermarks accrue to several members of the gift card ecosystem, including brands, retailers, printers and gift card networks.

- **Brands:** Reduce fraud, lower costs (gift card bill of materials, customer service, and appeasement), improve marketing, gain regulatory compliance, remove excess packaging, increase retailer partner satisfaction

- **Retailers:** Reduce fraud, lower costs (customer service and appeasement), improve checkout speeds, improve merchandising, gain regulatory compliance, avoid future capex

- **Printers:** Increase market share, lower operational and inventory complexity, gain higher line utilization rate, increase production speeds, avoid future capex

- **Gift Card Networks:** Reduce fraud, increase gift card program sales, gain market leadership, protect industry growth and profitability

Digimarc Solution: Implementation Requirements

Digimarc's solution implementation requires modest changes to the card manufacturer supply chain as well as updates to retailers' scanner firmware.

Gift Card Ecosystem Activation Steps for Digimarc

Ecosystem Participant	Implementation Requirements	Implementation Partner(s)	Complexity	Completion Time Low	Completion Time High
Printer Equipment Manufacturers	Update quality control (QC) software to add Digimarc SDK	Digimarc	Low	0 Days	2 Weeks
Card Printers	Ensure print line readiness (purchase printer heads if necessary, update embedder and QC software)	Printer equipment mfrs.	Low/Medium	Weeks	Months
	Purchase supplies necessary to print to Digimarc spec (e.g. holographic scratch-off label, white ink)	STL, consumable suppliers	Low	Days	1 Month
	Get certified by Digimarc	Digimarc	Medium	2 Weeks	1 Month
Label Providers	Print or manufacture holographic scratch-off label	In-house	Low	1 Day	3 Weeks
Gift Card Networks	Enter new SKUs into retailer system	Retailers	Low	1 Day	1 Day
Brands / Program Managers	Redesign gift card	In-house / program manager	Low/Medium	Days	Months
	Ensure requisite printer readiness	Printer	Low/Medium	0 Days	Wks/Mths
	Place gift card orders	Printer	Low	Weeks	3 Months
Scanner Hardware Manufacturers	Update firmware with Digimarc SDK	Digimarc	Low		
	Deliver firmware back to Digimarc to sign off	Digimarc	Low		
	Quality assurance (QA)	In-house	Medium/High		
	Cybersecurity testing	In-house	Medium		
	Ship to retailers	Retailers	Low		
				3 Months	4 Months
Retailers (Distribution Partner)	Conduct in-lab testing of firmware	In-house / systems integrators	Low/Medium	1 Week	2 Weeks
	Rollout firmware according to normal firmware rollout procedures	In-house / systems integrators	Low/Medium	2 Weeks	3 Months
	Merchandise cards	In-house / merchandising partner	Low	1 Week	1 Month

Table of Contents

Gift Card Opportunity: Serviceable Addressable Market

Digimarc's US Serviceable Addressable Market opportunity is 3 billion to 5 billion gift cards.

Card Volume Opportunity

- Digimarc is initially focused on penetrating the US closed-loop and open-loop gift card markets.
- Digimarc expects other geographic regions to fast follow should its solution be adopted by US brands and retailers.

Pricing Strategy – Three Stages

- **Stage 1:** Today, the solution is competitively priced below the cost differential of secure pack and card on carrier in order to subsidize start-up costs and early adopters.
- **Stage 2:** As market adoption increases, that price differential should shrink to parity, delivering significantly increased fraud protection at the same cost as secure pack.
- **Stage 3:** Ultimately pricing should capture a share of quantified fraud reduction in addition to new capabilities and features.

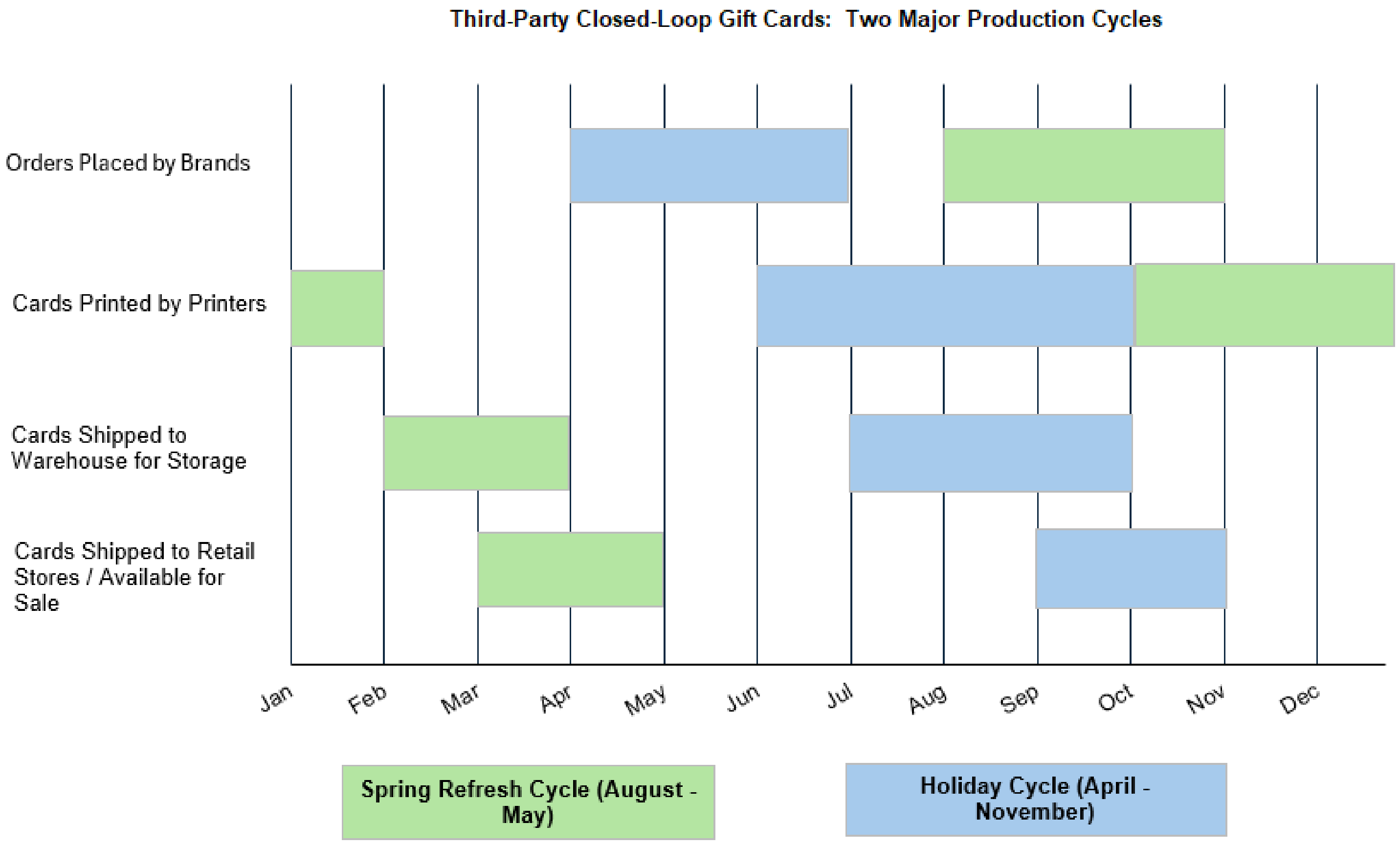
Serviceable Addressable Market (SAM)

(Millions of Cards)	US		Global		Comments
	Low	High	Low	High	
Total Gift Cards Sold	3,571	4,537	8,929	15,879	Low = Bottom-up analysis, High: Top-down analysis
% Physical	60%	75%	60%	75%	Global est. = 2.5x - 3.5x US volumes
Physical Cards Sold	2,143	3,403	5,357	11,909	
(+) Physical Cards Wasted	857	1,361	2,143	4,764	
(=) Physical Cards Produced	**3,000**	**4,764**	**7,500**	**16,673**	

Gift Card Opportunity: Production Seasonality

Third-party closed-loop gift card issuers tend to purchase the bulk of their gift cards in two distinct buying cycles: Holiday (April – November) and Spring Refresh (August – May).

- **Third-party open-loop** gift card issuers experience relatively consistent ordering patterns with printers throughout the year.
- **First-party** gift card issuers tend to experience more variability in their purchasing cadence and often take advantage of better pricing from printers during seasonally slow periods.
- **Third-party closed-loop** gift card issuers tend to purchase the bulk of their gift cards in two distinct buying cycles: Holiday (April – November) and Spring Refresh (August – May).



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Gift Card Opportunity: Summary

Digimarc is working closely with all gift card ecosystem participants to monetize its Secure Gift Card solution and capture a 3 billion to 5 billion card licensing opportunity.

- The gift card industry represents a large and growing global market. It serves as a material driver of revenue and profits for brands and retailers as well as the interdependent ecosystem of gift card networks, suppliers and partners that support them.
- Gift card fraud continues to grow, impacting brands' and retailers' reputations, threatening industry growth and profitability, and bringing increased regulatory pressure. In response, the gift card industry is increasingly collaborating to find solutions.
- Existing security measures, primarily relying on physical packaging and analog tamper-evident features, are increasingly ineffective against organized fraud networks.
- Digimarc's Secure Gift Card solution is highly differentiated and cost-effective vs. existing solutions.
- Results to date demonstrate the power of Digimarc's solution -- strong fraud-reduction, improved checkout experience, and high scalability across printers, brands, and retailers, all without any adverse impact on sales.
- The US serviceable addressable market (SAM) for Digimarc's solution is an estimated 3 billion to 5 billion cards annually. The global SAM is 7.5 billion to 17 billion cards annually.
- Key workstreams to enable large gift card printers are largely complete, and the focus for 2026 is commencing large-scale rollouts of Digimarc-enabled firmware across retailers' front-of-store scanners and catalyzing significant adoption of its solution by the gift card brands that are sold through those stores.

Gift Card Opportunity: Beyond Gift Cards

Digimarc's Secure Gift Card solution will drive cross-sell opportunities for other Digimarc Retail Loss Prevention solutions.

- Digimarc has 10+ years of established relationships with the major scanner hardware manufacturers and 5+ years of its scanner software being run at scale at major retailers in the US and Europe.
- Most of the existing scanner hardware installed base can read Digimarc watermarks with just simple activation; however, a firmware refresh is needed to activate Digimarc's Secure Gift Card solution as it requires the most recent versions of Digimarc's SDK.
- Retailers that adopt Digimarc's Secure Gift Card solution deliver two critical foundations for Digimarc's delivery of additional Retail Loss Prevention solutions:
  - Fully Digimarc-enabled Front of Store scanners
  - Champions in both Operations and Loss Prevention, two functions whose objectives often compete
- Digimarc is already in market with its Product Swap Prevention solution (video) and expects to continue collaborating with stakeholders across Ops and Loss Prevention to roll-out additional solutions.
- Digimarc's vision in Retail Loss Prevention is to be a high ROI solutions provider to retailers, helping them significantly cut shrink, improve operations, increase customer trust and loyalty, and expand profitability.

Table of Contents

Appendices – Helpful Resources

- Gift Card Industry
  - Blackhawk Gift Card Essentials eBook – January 2026
  - Capital One Shopping Gift Card Statistics – November 2025
- Digimarc Gift Card Product Information
  - Digimarc Risk Intelligence for Gift Cards
  - Digimarc Gift Card Solution – Printer FAQs
- Scanner Hardware Readiness
  - Honeywell – November 2025
  - Zebra – December 2025
  - Datalogic – January 2026
- Schnucks Pilot
  - Schnucks Pilot Press Release – December 2025
  - Schnucks Pilot Case Study – December 2025

Thank You

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