



## Digimarc Supports Serialization for Supply Chain, Personalized Campaigns Using Variable Data Printing

The Digimarc Platform enables packaging manufacturers to offer variable data printing and serialized identities for brands using high-speed industrial inkjet printing systems in combination with traditional package printing methods.



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## OVERVIEW

Consumer and retailer expectations, insurance mandates and regulatory requirements necessitate that consumer goods companies including food and beverage brands can communicate exactly when and where products were produced – and connect those products featuring variable, serialized identities to the industrial Internet of Things (IoT) for traceability, brand protection, sustainability improvements and efficiency gains across the global supply chain. These serialized identities also provide a means of enabling personalized consumer engagement options spanning promotions, transparency and customer care.

Traditional UPC/EAN barcodes and two-dimensional alternatives such as DataMatrix and QR codes are highly visible and require dedicated design space, generally limiting their use to just one instance per package. By comparison, the low contrast of Digimarc Barcode often makes it imperceptible to consumers. This allows for repeating the code many times across a package or corrugated box, and also enables variable, serialized identities to be included in graphics where there is limited space for QR codes or DataMatrix alternatives. Digimarc makes use of more of the package, label or shipping box, making scanning faster, easier and meaning that even when the substrate is damaged, curved, multi-sided or distorted the distributed Digimarc Barcode continues to scan.

Digimarc supports the batch-, lot- and item-level traceability required of businesses today by applying serialized or custom identifiers and additional data to product packaging with variable data printing (VDP). Remarkably, Digimarc delivers this data granularity in a rapid and cost-effective way right at the point of production or manufacturing by leveraging industrial inkjet printing systems. Print suppliers, and the brands they support, can now produce serialized packaging with speed, efficiency and affordability.

Even better, Digimarc does so while using less ink for a significant cost savings. In the same space required for a common QR code, Digimarc uses only about a third of the ink. Digimarc adds substantially more data coverage across the entire package for improved scanning performance through faster scan speeds and higher first pass read rates. Whether you use automated (passive via fixed position machine vision) or manual scanning environments, Digimarc can improve the productivity of your operations. Affordable and versatile inkjet systems can help farm fresh produce suppliers and makers of other fresh foods and beverages to meet sustainability and Agriculture 4.0 traceability goals. Digimarc serialization can also be applied via digital presses or laser etching systems.

Digimarc's serialized identities also provide overt and covert opportunities for detecting counterfeit goods and products being diverted. Digimarc has the option of being imperceptible or highly visible to the untrained eye making it a flexible option for your brand protection needs. When coupled with a brand protection platform, Digimarc offers associate, inspector and consumer based counterfeit detection options.

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**“By digitizing each item as it is made in third-party production locations, brands achieve real-time visibility into manufacturing operations and the ability to execute track and trace initiatives at scale. Serialized Digimarc Barcode combined with the EVERYTHING Product Cloud™, creates better control of supply chain integrity, and provides the data intelligence needed to operate with more efficiency and agility”**

— Niall Murphy, CEO and Co-founder, EVERYTHING

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Digimarc also enables marketers to directly reach customer's mobile devices with one-to-one promotional campaigns that target individuals/entities. Whether it is B2B or B2C engagements, Digimarc provides a creative means of providing a variable, connected experience. When paired with a traceability solution, the provenance information can be shared and tailored by user. Further, creative associations between customer and serialized product can be made to improve support and care related items to the customer.

Regardless of whether they use inkjet systems, digital printing or laser ablation techniques, when consumer brands need to know when, where and how their products were produced, they can use the Digimarc Platform. Digimarc enables item-level certainty in an elegant and affordable way.

Less ink. Reduced costs. Fewer misreads. Faster scanning. Digimarc delivers high-quality serialization solutions with unrivaled reliability and efficiency.

## BENEFITS

### Deliver Certainty

- Digimarc enables consumer brands including producers of fresh foods and beverages and similar companies to cost-effectively provide unique, serialized identities on product packaging that communicate information at the batch, lot and item level. Know exactly when and where products were produced and distributed.

### Mitigate Risk

- In combination with EVERYTHING and Sperantus, Digimarc allows customers to pinpoint the progress of products through the supply chain and distribution process. Digimarc-powered traceability helps communicate when and where products were produced and distributed, and limit legal and economic exposure during product recalls. Likewise, Digimarc along with EVERYTHING enables brand protection reducing the financial and social impact on your brand.

### Improve Scanning

- Because of repetition and massive error correction — unlike DataMatrix and QR codes — Digimarc delivers data that is redundantly applied across the entire product package or label, dramatically increasing scanning speed and success rates where other codes might be misprinted, damaged or otherwise unreadable. And, studies show Digimarc can be scanned 34% faster than QR codes for time savings at every step in the supply chain.

### Circumvent Damaged Labels

- Corrugated cartons, case packs and trays are often damaged during shipping and handling in busy distribution centers and similar settings. Applying Digimarc identities to these containers via inkjet printers provides both data redundancy and a larger scannable area for detection. Overcome damaged cases and improve detection with Digimarc.

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**“A good solution should include robust software, innovative hardware and technology, and a deep market expertise. What we are building together with Digimarc guarantees a new level of usefulness for agriculture traceability solutions.”**

— Claudio Arriola, President, Sperantus, a traceability software provider

**“Our customers print and mail millions of documents daily using various barcodes on a regular basis. Digimarc Barcode, due to its impressive robustness and imperceptibility, will replace the use of many standard barcodes and, more importantly, will open exciting new markets for our clients.”**

— Tom Crooks, President, Jet Letter Corp.

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## Reduce Costs

- Compared with traditional UPC/EAN barcodes, DataMatrix or QR codes, Digimarc requires significantly less ink to deliver the same — in some cases even more — data on product labels. The substantial reduction in ink usage, by as much as 69 percent over DataMatrix, delivers meaningful savings on ink costs when producing millions of labels annually.

## Engage Directly

- Digimarc enables product marketers to engage consumers with tailored content and promotional campaigns that unlock a one-to-one dialogue and enables highly targeted outreach efforts that support brand loyalty and repeat business.

## Enjoy Versatility

- Industrial inkjet devices offer ease of use and versatility. Packaging or label printers can add them inline during production to serialize labels and packaging, while consumer brands can use the same inkjet systems during product fulfillment to carry specific serialized data beyond human readable codes and existing 1D or 2D symbols.

# SOLUTION DETAILS

## The Digimarc Platform for variable data printing and traceability provides:

**Printing** - Digimarc serialized or custom identifiers and additional data can be applied via digital presses, laser etching systems or several leading industrial inkjet printers, providing customers with multiple approaches to variable data printing at various scales and budgets.

**Traceability** - There are three main software components of the Digimarc traceability solution:

- **Variable Data Printing** - Digimarc has partnered with Jet Letter enabling Page Builder Pro software to support the variable generation of Digimarc Barcode at scale. Page Builder Pro is a highly flexible and scalable variable print solution for a variety of applications. Digimarc is an authorized value-added reseller of Jet Letter's PSL software, simplifying the integration and sales processes.
- **Barcode Detection** - Digimarc Discover software is integrated in a variety of handheld and industrial barcode scanners, an ideal set of scanning devices for industrial applications. In addition, Digimarc licenses its Digimarc Mobile SDK for mobile applications (iOS/Android) supporting a wide variety of use cases. Together, these technologies support a diverse ecosystem of detection mechanisms to meet our clients' needs.
- **Management Platform** - Digimarc detection capabilities have been integrated into Internet of Things (IoT) traceability platforms from EVERYTHING and Sperantus that track and trace provenance data and the status of Digimarc-enhanced products throughout the supply chain. This information is collected via Digimarc Discover detection software and enables revealing the location and status of Digimarc-powered product packaging, labels and shipping cases. Other management platforms may require integration effort, and interested organizations are encouraged to contact Digimarc for assistance.

# GET STARTED

Visit [digimarc.com/traceability](https://digimarc.com/traceability) to learn more about the Digimarc Platform for serializing consumer goods product packaging, and get started by contacting **1-800-DIGIMARC** or [sales@digimarc.com](mailto:sales@digimarc.com).

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Digimarc Corporation (NASDAQ: DMRC) is a pioneer in the automatic identification of media, including packaging, other commercial print, digital images, audio and video. The Digimarc Platform provides innovative and comprehensive automatic identification software and services to simplify search, and transform information discovery through unparalleled reliability, efficiency and security. The Digimarc Platform enables applications that benefit retailers and consumer brands, national and state government agencies, media and entertainment industries, and others. Digimarc is based in Beaverton, Oregon with a growing supplier network around the world. Visit [digimarc.com](http://digimarc.com) and follow us @digimarc to learn more about The Barcode of Everything®.