

# Coupon Clearing Solutions



## WHITE PAPER

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## GS1 DataBar: What Does it Mean for Retailers?

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GS1 DataBar is a new barcode standard that is replacing the UPC and extended UPC barcodes on coupons and many categories of consumer products. Compared to UPC barcodes, GS1 DataBar carries more information and provides a smaller footprint. For coupons, GS1 DataBar enables a larger number of manufacturer ID codes and provides for more flexibility in values and multiple-product offers. Some manufacturers will begin distributing coupons without the UPC barcode as early as January 1, 2011, so retailers should be actively preparing to accept GS1 DataBar coupons at their stores.

This white paper will give you an overview and background on the new GS1 DataBar and explain the structure of the new barcode compared to the existing UPC version. It will also cover the transition timeline for GS1 DataBar and suggest best practices for how retailers should adopt the new technology.

### GS1 DataBar Background and Overview

For coupons, the new GS1 DataBar barcode standard delivers several key benefits. Most importantly, it provides a larger data field to accommodate more Manufacturer Identification Numbers (MINs). Today's UPC standard allows for only a five-digit MIN, and all of the possible MIN codes have already been used. Manufacturers are now re-using MIN codes, which creates a high likelihood of errors during the redemption process. The GS1 DataBar standard includes a variable field of up to 7-10 digits for the manufacturer code, which allows for a much higher number of unique manufacturer identifiers.

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In addition, the new GS1 DataBar standard enables manufacturers to encode much more data in the barcode. It will enable more complex offers along with the flexibility to offer discounts of any value, instead of the fixed value codes used in the UPC barcode standard. Furthermore, it will enable retailers to check a coupon's expiration date as it is scanned.

In order to take advantage of the new features of the GS1 DataBar barcode, retailers must upgrade their scanners and point-of-sale (POS) system software. The scanners must be able to capture the more complex stacked barcode image, and the software needs to interpret the data from the barcode and validate the offer on the coupon to the items in the basket.

Today, most retailers only validate the MIN number and family code as the coupon is scanned at the point-of-sale. If the items in the basket match the MIN number and family code on the coupons, the coupons are accepted. With GS1 DataBar, retailers have the ability to validate much more information from the coupon, including the expiration date, multiple product purchase requirements, and the offer code. Retailers should work with their POS vendors to determine which fields they will validate on the GS1 DataBar barcode.

### UPC Coupon Barcode Structure

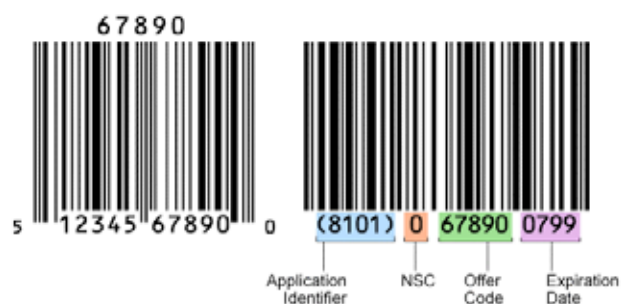
Figure 1 shows the structure of the basic UPC coupon barcode, which has been used since the mid-1980s. The first digit ("5" in the example) identifies the coupon as a manufacturer's coupon. The next five digits are the manufacturer ID number, or MIN code. The following three digits are the family code, which identifies the specific product or family of products in the coupon offer. The next two digits are the value code, which corresponds to a table of discrete discounts that can be used on coupons. For example, value code 76 corresponds to \$1.00 off and value code 77 corresponds to \$1.10 off.

In the 1990's, the Joint Industry Coupon Committee (JICC) approved an extension to the UPC coupon barcode called EAN-128 or GS1-128, which added additional fields of information. The structure of this extended UPC barcode is shown in Figure 2. The application identifier indicates which fields are included in the extended barcode. The NSC (Number System Character) corresponds to the manufacturer, and the five-digit offer code is a unique identifier for the coupon. The next field is a four-digit expiration date, which can be followed by an optional eight-digit field for household ID (used for direct mail coupons). Most retailers read and validate only the MIN number and family code on the original UPC coupon barcode. Although the extended fields are available for the retailers to scan and interpret, they are rarely used in practice.



**Figure 1: UPC Coupon Barcode**

(Source: GS1 US Coupons and e-Com, "An Introduction to Coupons")



**Figure 2: Extended UPC Coupon Barcode**

(Source: GS1 US Coupons and e-Com, "An Introduction to Coupons")

## GS1 DataBar Barcode Structure

The new GS1 DataBar coupon barcode has a completely different structure than the earlier UPC formats and provides the following improvements:

- The manufacturer codes can have a variable length of up to 7-10 digits, which allows for a much larger number of unique manufacturer codes.
- The offer can combine up to three different products from different manufacturers in specified quantities. The manufacturer codes, family codes and quantity requirements for each product are included in the barcode.
- The coupon value can be any amount up to \$999.99 or be a "% off" discount. The value is no longer restricted to a two-digit code corresponding to a discrete value code table.
- The new barcode contains fewer human-readable elements, which should reduce the potential for coupon fraud and misredemption. As shown in Figure 3, the only digits displayed correspond to the primary manufacturer code and the offer code.
- The expiration date is a standard field of the barcode as opposed to an add-on field in the extended UPC version, which should make it easier for retailers to validate the expiration date at the point of sale. The expiration date can be detailed to a specific date (day, month, year).
- The new standard provides a single unified barcode instead of the two versions in use today (UPC and extended UPC). The GS1 DataBar "footprint" also takes up less real estate on the coupon.



**Figure 3: GS1 DataBar Coupon Barcode**

(Source: GS1 US Coupons and e-Com, "An Introduction to Coupons")

## THE COMPLETE LIST OF GS1 DATABAR FIELDS IS SHOWN BELOW

REQUIRED FIELDS	OPTIONAL FIELDS
Primary manufacturer code	Second manufacturer code, family code & purchase requirement
Primary family code	Third manufacturer code, family code & purchase requirement
Primary purchase requirement (quantity)	Coupon start date & expiration date
Offer code	Serial number
Value	Qualifiers
	Retailer

(Source: Association of Coupon Professionals, "GS1 DataBar for Coupons")

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### Transition Planning for GS1 DataBar

The coupon industry is in the midst of a multi-year transition from the UPC and extended UPC barcodes to the GS1 DataBar barcodes. Most manufacturers are now printing coupons with the "interim" barcode that includes both the UPC barcode and the GS1 DataBar barcode (see example in Figure 4).

Retailers can scan either the UPC portion or the GS1 DataBar portion of this barcode to identify the coupon's information. However, beginning in January 2011, manufacturers will begin dropping the UPC portion of the barcode from coupons and printing coupons with only the GS1 DataBar barcode. At this time, retailers must be able to scan GS1 DataBar barcodes with their POS systems, or the cashier will be forced to manually key in the discounts and verify that the consumer purchased the proper items corresponding to the coupons. This manual approach will slow down checkout lines and increase the propensity for errors in the coupon redemption and clearing process.



**Figure 4:** Interim GS1 DataBar coupon barcode  
(Source: Association of Coupon Professionals, "GS1 DataBar for Coupons")

### Progress on the Transition

Several industry associations, particularly the Joint Industry Coupon Committee (JICC) and the National Grocers Association (NGA) have been surveying retailers to track their readiness for coupons printed with only the GS1 Databar barcode.

The JICC presented an update on the GS1 DataBar transition at the Industry Coupon Conference in April 2010. The organization reported that the January 1, 2011 sunrise date is locked in and will not be re-evaluated. On that date, some manufacturers will begin distributing coupons with only the GS1 DataBar barcode, while others may continue to use the interim GS1 DataBar barcode for some period of time. The JICC will be distributing a survey to retailers during the summer of 2010 that will measure the retailers' awareness of and readiness for GS1 DataBar, along with their expectation of which fields that they intend to validate.

The NGA represents small supermarket chains and independents, and recently published the results of a survey it conducted to determine the readiness of its members for the GS1 DataBar transition. Over 85% of the NGA members were aware of the GS1 DataBar barcode transition and timetable, but only about 50% were ready to begin accepting GS1 DataBar coupons. Only 16% had POS scanners and software that were capable of scanning GS1 DataBar coupons and only 7% had POS transaction logs and downstream applications ready to process GS1 DataBar data.



Looking ahead, 38% of the respondents indicated that they would be ready to scan GS1 DataBar coupons by January 1, 2011. Another 25% expect to be able to scan GS1 DataBar coupons sometime during 2011.<sup>1</sup>

### **How Retailers Should Plan for GS1 DataBar Coupons**

Retailers should be planning their transition strategies now in order to be prepared for GS1 DataBar coupons. The first key area of planning is to ensure that your POS hardware and software are capable of processing GS1 DataBar coupons. The scanner hardware may need to be upgraded to support the imaging structure used in the GS1 DataBar barcode, and a new version of the software will be required to interpret the GS1 DataBar fields.

All of the major POS system vendors offer GS1 DataBar-capable products today and can help you plan a transition for your systems. If your systems are not fully upgraded by the January 1, 2011 sunrise date, you may not be able to scan some coupons and your cashiers will have to process them manually.

Furthermore, retailers need to consider which fields they will validate on the GS1 DataBar barcode. On today's UPC coupon barcode, most retailers validate only the MIN number and family code. If these codes match items in the consumer's basket, the coupon is accepted. With only these

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<sup>1</sup> NGA Member Update, April 28, 2010

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two fields being validated, expired and counterfeit coupons can be accepted at the point of sale and cause problems later in the clearing process.

GS1 DataBar offers many more fields for validation, but retailers must upgrade their POS systems to actually perform the validation. Additional validation at the point of sale will enable retailers to block invalid coupons, which will prevent problems with reimbursement from manufacturers later in the process.

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# GS1 DataBar gives retailers the ability for more validation and control at the point of sale.

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For example, a retailer's POS system could compare the coupon expiration date in the GS1 DataBar barcode with the current date as the coupon is being scanned. If the coupon is expired, the system will reject the coupon at the point of sale, saving the retailer from the difficulty of seeking reimbursement from a manufacturer for an expired coupon. Expired coupons are one of the major reasons for manufacturer coupon reimbursement denials.

Another opportunity for retailers to block counterfeit coupons is by comparing the offer code field in the GS1 DataBar barcode to a table of offer codes for known counterfeit coupons. The offer code is a unique coupon identifier, and the industry maintains a list of offer codes for known counterfeit coupons. At the point of sale, a retailer's POS system could compare each coupon's offer code to the list of offer codes for known counterfeit coupons. If a match occurred, the POS system could reject the coupon, saving the retailer from the difficulty of seeking reimbursement from a manufacturer for a known counterfeit coupon. Counterfeit coupons are another major reason for manufacturer coupon reimbursement denials.





### Summary

The transition to GS1 DataBar enables the coupon industry to modernize the barcode standard that has been in place for decades. The new barcode standard fixes the shortcomings of the UPC standard and provides for more validation and control at the point of sale. Retailers should be actively preparing to accept the new barcode in their stores, as some manufacturers are planning to distribute coupons with only the GS1 DataBar barcode beginning on January 1, 2011. Retailers with POS systems that are not GS1 DataBar-capable will have to process some coupons manually after that date.

Furthermore, GS1 DataBar gives retailers the ability for more validation and control at the point of sale. Retailers that validate fields such as the expiration date and offer code can block invalid coupons at the point of sale, saving them the problem of seeking reimbursements for expired and counterfeit coupons from manufacturers during the clearing process.

# Coupon Clearing Solutions



## About ProLogic Redemption Solutions

ProLogic provides solutions for retailers, wholesalers, pharmacies and restaurants to manage their receivables. For retailers and wholesalers, ProLogic provides fast and accurate processing and clearing of both paper and digital coupons. Comprehensive reconciliation services are available for pharmacy receivables management. ProLogic also provides detailed reporting and validation of certificate programs for restaurant chains.

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To discuss in more detail how you can plan for GS1 DataBar coupons, contact us at [comments@prologicredemption.com](mailto:comments@prologicredemption.com) or call **812.339.1813**.

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