

DataBar is Replacing EAN/UPC Retail Bar Codes:

The top 5 questions asked and answered by
worried retail suppliers

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Executive Summary

We've all heard about the RSS (Reduced Space Symbology) bar code in the past, as well as announcements that it will replace EAN-13 and UPC, but in late 2008, GS1 has announced that the now rebranded **DataBar** code is here and it's here to stay.

This white paper focuses on the basic information needed by retail producers and suppliers in order to get acquainted with the DataBar and what it means for their business. There is an abundance of technical data available, but few published sources deal with the basic What, How, When, and Why.

The paper will address the following questions:

- What is the DataBar bar code standard?
- Why will DataBar replace EAN/UPC?
- When will it be implemented?
- Can I avoid or ignore it?
- How can I implement DataBar in my current system?

a broad variety of other information, such as weight, price per weight unit, expiration dates, and similar.

UPC codes have already compromised the lack of information provided by the standard, with add-on codes, but this has led to an increasing deterioration of code reading reliability, and great concerns about how to proceed when this data capacity is exhausted as well.

Why will DataBar replace EAN/UPC?

DataBar is the answer to the growing globalization of business and the capacity roof of the EAN/UPC codes. While it's hard to even imagine the profound system shock of a comprehensive upgrade of the most commonly used retail bar codes, the initial period when DataBar is expected to simply supplement the old standards is bound to be transitional.

There are sources in the industry that cite plans for a cohabitation of the standards rather than a full replacement, but the mere fact of infrastructure redundancy and the costs involved with double bar coding will inevitably push the new and flexible standard into the forefront.

Technicalities aside, the reason for DataBar's implementation are mostly found in the interests of the retailer. The **key benefits the retailers are looking forward to** include:

- being able to distinctly label every item including variable measure goods (fruit, vegetables etc)
- being able to label the smallest items, making it much easier for general stores to handle cosmetics and similar items
- being able to track expiration dates and exclude unsuitable items at POS
- being able to comprehensively track and analyze sales of all items
- being able to digitally track shelf stock, making sure all items are in stock, while keeping down overstocking to a minimum
- being able to fully track coupon issuers, as well as use more than the current maximum of 100 combinations defining specific purchase requirements and discounts

There are additional issues which concern the retailers on a smaller scale, such as removing the need for add-on codes attached to the usual EAN/UPC codes.

The above points are the main reason most large retailers are already doing pilot projects and tests of the new standard. While they are obliged to be able to scan DataBar codes by 2010, they will certainly pressure their suppliers to adopt the standard so that they may benefit from the additional data that it offers.

While it may not be immediately apparent, there are **clear benefits for the manufacturer** involved as well:

- GS1 DataBar demands less space for the same amount of information
 - o More advertising space available on packaging
 - o More information added on the label using the same packaging space

- DataBar offers higher scanning efficiency over truncated EAN/UPC codes, keeping retailer partners happy

When will it be implemented?

The GS1 board announced the sunrise date of January 2010 for DataBar.

Retailers are expected to be able to scan GS1 DataBar codes at points of sale, as well as capture application identifiers.

Equipment providers are expected to offer devices that are able to scan, decode, print, and apply the new standard.

Manufacturers are expected to be ready to print and apply DataBar bar codes to their products.

Note: since the initial announcement, this item has been hotly debated. The current consensus is that manufacturers will not be pushed to fully upgrade their bar codes by the 2010 deadline, but retailer pressure will surely mean that the industry leaders will at least supplement their coding with DataBar, if not upgrade completely.

Can I avoid or ignore it?

As with all bar code labeling standards, there's wiggle room. It's quite possible to avoid being the first one to implement a new standard, but that's about as far as the options go in this case.

With both the GS1 and retailers on the bandwagon, the manufacturers, who are going to carry the brunt of the implementation issues, have few choices but to comply. Most will do it after January 2010 when their product packaging is updated or changed for whatever reason, but avoiding it in the long term isn't a realistic option.

This is mostly due to the fact that retailers have several manufacturers of substitute products to choose from, and that some of these will provide a bar code which carries direct benefits for the retailer. We all know that the customer is always right, and in this relationship, the retailer is the customer and they will want to see DataBar in action as soon as possible.

How can I implement DataBar in my current system?

From our experience, retailers either handle their label printing independently, or they employ a solution provider for the task.

GS1 suggests that DataBar compliance and compatibility be evaluated in current systems, and that solution providers should be "informed of GS1 DataBar momentum". To be perfectly honest, if the client needs to inform their solution provider of this issue, it would be wise to change the provider.

Focusing on the solution itself, the transition is quite simple. The 14-digit GTIN used by the DataBar is backwards compatible, and initially, the existing GTINs will only gain a leading zero prefix. That means a GTIN-12 will start with two additional 0

characters, and a GTIN-13 will start with one additional zero before it. These leading zeroes can, for most intents and purposes, be dropped by the database.

In the case of DataBar Expanded or DataBar Expanded Stacked, the GTIN is followed by other identifiers, such as weight, country of origin, expiry date, etc.

Migrating from current retail barcodes to DataBar

1. Data

GS1 suggests the following considerations before deciding on whether you simply wish to be compliant, or whether you wish to use all of the benefits of the new symbology:

- a. Create a work group composed of representatives from marketing, sales and other key departments
- b. Interact with the operational staff at your Retailers, to get their input
- c. Determine what information you'd like to have to better know your market and how your product moves through the supply chain
- d. Consider the specific needs of "case-ready" versus "process in store" items
- e. Discuss needs for new enterprise applications to manage the new data

2. Production and labeling

The production process will be affected primarily at the weighing and labeling level. Scales should be adapted to forward the weight data to the newly compliant labeling system. If there are weighing systems currently in place, such a change is generally a straight-forward update of the IT data management processes.

3. Label printing

Label printing on flexible dedicated systems should not represent a challenge. Professional software is, in most cases, already capable of printing DataBar codes, and newer printers will feature native support for the symbology as well. Older printers should still be capable of managing the switch, but are likely to perform slower than before, as the bar code data transfer will assume a graphical format.

Conclusion

DataBar is coming into everyone's home, and while this has been rumored since the early days of RSS codes, there's every indication to believe that this time, it's the real deal. Sure, it's not going to come overnight, but it's not reasonable to expect retailers around the world maintaining the redundancy of two separate retail bar code standards for very long.

However, once the transition is done, retail bar coding will have undergone its greatest transformation since the 70s of the last century. Bar codes will assist the retailers to track and analyze their stocks and traffic, better identify the purchasing habits of the consumer, and provide them with a better service. In the end, this is what the whole retail chain is trying to do all along, keep the consumer happy and spending.

Almost every piece of bar code hardware, both printers and scanners, sold in the last 7 years, are either capable of handling DataBar or upgradeable to do so, leaving the software technology which controls the processes as the final consideration. Many legacy ERPs, custom software solutions, and old versions of label printing software may be in need of an upgrade in the quest for DataBar compliance.

Considering the author of this white paper, a product plug is to be expected, and we wouldn't want to let the reader down. Therefore, if you wish to look into one of the world's leading flexible integrated label printing software solutions, you would do well to visit <http://www.nicelabel.com>, where DataBar has been supported since 2004. We know nobody likes surprises, which is why we're looking out for future bar code developments, so you don't have to.

Appendix

Additional Resources

Additional documentation is available, detailing individual NiceLabel products and industry solutions. As any detailed documentation of these processes also depends on the individual solution, the examples and workflows in specific documentation are based on NiceLabel products and the NiceLabel methodology of enterprise-level label printing performance and automation. The documents are available at <http://www.nicelabel.com/Learning-center>.

White Papers:

- White Paper: Managing the Hidden Costs of Enterprise Printing
- White Paper: Understanding the Essentials of Label Printing Performance
- White Paper: The Concerns and Benefits of Label Printing Integration

General NiceLabel resources

- [NiceLabel Web site Learning Center](#)
 - [NiceLabel Tutorials](#)
 - [NiceLabel Technical FAQ](#)
 - [NiceLabel Technical Support site](#)
 - [NiceLabel forums](#)
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