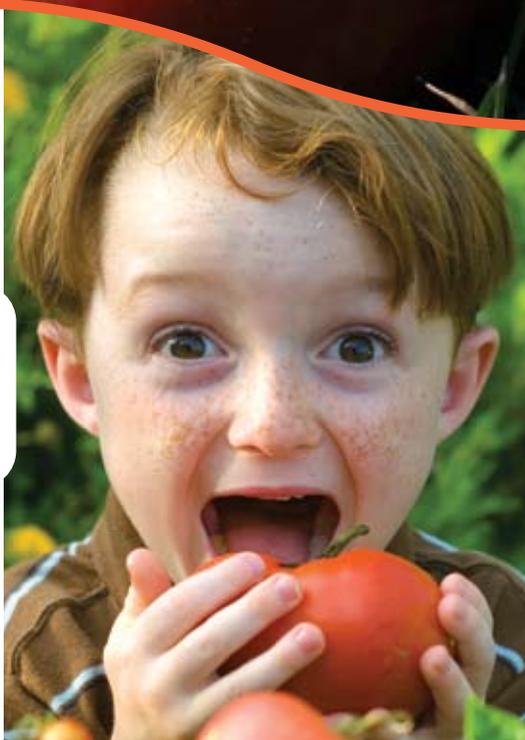GS1

FUJI
NEW ZEALAND
4131

"R"evolution at the Point-of-Sale
More Data… Less Space

GS1 BarCodes

> "As a retailer, we always look at ways to improve the shopping experience for customers. Building on the last 25 years of the GS1 System this new bar code, the GS1 DataBar will enable us to extend customer service in a range of activities that is currently limited by existing bar codes types, especially with small products and capturing additional information at POS. In effect, the GS1 DataBar is like a 'High Performance Bar code.'"
>
> **Daniel Kochanowicz**
> **Woolworths**

What is GS1 DataBar?

GS1 DataBar (formerly Reduced Space Symbols or RSS) is a new point-of-sale bar code joining EAN/UPC family of barcode to allow more product marking. GS1 DataBar enables GTIN (Global Trade Item Number) identification for small hard-to-mark consumer product goods like fresh foods, jewelry and do-it-yourself hardware products, and can carry additional information such as weight, expiration date, and lot numbers.

GS1 DataBar not only increases the percentage of products that can be automatically identified at point-of-sale, it creates new options to solve today's business problems such as product authentication and traceability, product quality and effectiveness, variable measure product identification, and couponing.

In 2006, the GS1 Board and General Assembly set January1, 2010 as a global implementation target (Sunrise Date) for GS1 DataBar (bar code) for use at retail Point-of-Sale. This bar code allows for marking small products and carrying data beyond basic product identification. Based on these features, GS1 DataBar opens up new possibilities to manage fresh foods products using the identification tools used for Fast Moving Consumer Good products since the 1970s. With around 40 different approaches to fresh food identification, adoption of technology was not enough so the Board instructed GS1 to organize a Work Group to study how to deploy the new bar code and the additional data it could carry. Recommendations for these applications are bring developed by the GS1 Fresh Foods Work Group and will be available shortly.

The business case for GS1 DataBar is simple, ***more data and less space.***

More Data:

1. Traceability

2. Product management through the supply chain, including Point-of-Sale

3. Shrink control

4. Supplier identification & category management in fresh foods

Less Space:

1. Gain valuable space on their products

2. Provide more consumer information on package

3. Bar code hard-to-mark consumer product goods

For additional information: **www.gs1.org/databar**

Looking to the Future

1. GS1 DataBar joins EAN/UPC as the 2nd barcode in history to work while the cashier interacts with the customer

2. GS1 DataBar is backward compatible with EAN/UPC for existing applications as it will be left to the brand owner (the party responsible for specifying package design) to decide

EAN/UPC

1. Enables cashiers to interact with customers while scanning

2. Has defined size requirements

3. Encodes the GTIN only

GS1 DataBar

1. Needs less space than EAN/UPC

2. Encodes GTIN and additional information

3. Used on hard-to-mark product types (e.g., loose produce)

Implementation and Pilot Activity

Fresh Food Products

A global solution (GTIN) is already in place for fixed measure products and should remain.

GS1 DataBar is being implemented by retailers on loose produce using GS1 DataBar Stacked Omnidirectional (below). Retailers now scan loose produce versus key entry, providing 100% accuracy and achieving shrink control by differentiating conventional versus organic.

Example of GS1 DataBar Stacked Omnidirectional with GTIN only

Pilots are taking place on fresh variable measure products using GS1 DataBar Expanded. These bar codes can encode additional information such as best-before-date, country-of-origin, lot number and weight.

Example of GS1 DataBar Expanded Stacked and data encoded

(01)00614141000015 (3202)000105 (3922)001049 (15)030320 (10)7887300

| GTIN | Net Weight (lb) | Extended Price | Best Before Date | Lot Number |

> "One key benefit for manufacturers will be the ability to increase consumer communication on pack by reducing the amount of space currently occupied by existing bar codes. This is a notable opportunity to better reach consumers at the moment of truth when they are making their purchase decisions"
>
> **Terry Mochar, Reckitt-Benckiser**

GS1 DataBar Business Benefits

GS1 DataBar enable many benefits for retailers and suppliers. Below are examples of these benefits:

1. Globally Unique Product Identification for fresh foods replacing today's generic information

2. Increased accuracy of product identification of loose produce by scanning versus key entering PLU codes

3. Shrink control

4. Traceability (i.e. Lot Number, Country of Origin)

5. Improved product replenishment / Out-of-Stock anticipation

6. Category Management in sectors not covered today

7. Helps facilitate Data Synchronization

8. End of 4-digit price limitations (can code more than $99.99)

9. Sell by / expiration date management

10. Product weight management

11. Improved scan rates on very small, low performing EAN / UPC symbols

12. Enabler of ECR (Efficient Consumer Response)

13. Improved consumer shopping experience with more efficient bar codes

14. Ability to capture markdown pricing

15. Country of Origin information

16. Ability to stop the sale of out dated or recalled product

17. Increased customer satisfaction at self-checkouts

Reminder: As retailers become GS1 DataBar ready they can start as long as it is done internally or specified for use in bilateral agreements between trading partners (private label).

GS1 DataBar Family of bar codes

Point-of-Sale Symbols

GS1 DataBar Stacked Omnidirectional

Fresh Produce, small consumer product goods (GTIN only)

GS1 DataBar Omnidirectional

Small consumer product goods (GTIN only)

GS1 DataBar Expanded

Variable Measure Products (GTIN + More data)

GS1 DataBar Expanded Stacked

Variable Measure Products (GTIN+More data)

> **"GS1 DataBar provides the industry the capability to transform the fresh foods supply chain by leveraging standardized product identification at the point of sale."**
>
> Pat Walsh, Food Marketing Institute

Industry sectors – Current uses of GS1 DataBar

Today in Fresh Foods there are:

1. More than **40 different systems** across the globe for Fresh Product Identification

2. No global application standards to identify variable measure products sold at the point-of-sale, such as:

- Produce
- Meat
- Seafood
- Deli
- Dairy
- Bakery

3. GS1 DataBar can help:

- Shrink reduction and category management
- Allows suppliers to identify once, ship to all
- Allows the industry to have compatible systems across borders

4. Currently, GS1 and its industry members are preparing proposed solutions

For more information on fresh food solutions, contact your local Member Organization or see the GS1 DataBar Business Case at http://www.gs1.org/contact/worldwide.php

Industry sectors – Current uses of GS1 DataBar

Small and Hard-to-Mark Consumer Product Goods

"Some of our health and beauty care products have very small packaging, and strict regulatory requirements mean we have to put a certain amount of text on the boxes, no matter how small they are – and that means less panel space for communication with our customers. We're looking forward to GS1 DataBar symbols to help us solve this dilemma."

Bud Babcock, Procter & Gamble

1. Cosmetics
2. Jewelry
3. Hardware
4. Pharmaceutical

Manufacturers will have the ability to communicate additional attributes about the product.

GS1 DataBar can improve scan performance, providing a better shopping experience for customers by moving them through the check-out more efficiently.

Coupons

A new "North American Application Guideline using GS1 DataBar Expanded Symbols" for coupons is now available. For additional information:
www.gs1us.org/databar

"In the US, coupons are a significant business. Unfortunately, it has been limited by constraints around old coupon guidelines and bar code structures. GS1 DataBar will revitalize and provide the potential to greatly improve the coupon industry."

Doug Naal
Kraft

Are your scanners ready?

When purchasing new equipment, ensure your purchase contracts specify GS1 DataBar standards compliance in addition to the other GS1 bar codes.

For your existing scanning equipment, contact your equipment provider or go to **http://www.gs1.org/ productssolutions/barcodes/databar/implement.html** for a list of GS1 DataBar Ready Scanners by brand and model.

Note: this list may not include all brands of scanning equipment but will be continually updated as equipment companies provide us with information.

"GS1 DataBar is the next step in the evolution of bar codes."

Kevin Koehler, Loblaws

How Global Trade Item Numbers (GTIN) work in GS1 DataBar

In the following illustrations, it is important to note, GS1 DataBar holds a 14-digit number. In order to create a 14-digit number, one or two leading zeros are added to the GTIN-13 or GTIN-12.

GTIN-13

1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	CP	CP	CP	CP	CP	CP	CP/IR	CP/IR	CP/IR	CP/IR	CP/IR	IR	CD
0	8	2	5	6	7	0	9	1	2	3	4	5	4

GTIN-12

1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	0	CP	CP	CP	CP	CP	CP	CP/IR	CP/IR	CP/IR	IR	IR	CD
0	0	8	2	5	6	7	0	1	2	3	4	5	9

CP = Company Prefix (assigned by a GS1 Member Organization)

IR = Item Reference Number (assigned by your company)

CD = Check Digit (calculated by using the GS1 check digit calculator) URL below
 www.gs1.org/productssolutions/barcodes/support/check_digit_calculator.html#gtin

GS1 DataBar impact on your Database

GS1 DataBar symbols targeted for point-of-sale encode 14-digits so as retail point-of-sale is limited to use of 13-digits, a leading zero for GTIN-13 or two leading zeros for GTIN-12 is used. For point-of-sale systems and applications, retailers with 14-digit retail systems can decide whether to store and process 14-digits or to drop the lead zeros and store only the GTIN-13 or GTIN-12.

GS1 DataBar Expanded or Expanded Stacked symbols are used in applications where information beyond GTIN (e.g., weight, extended price, dates) is required to identify variable measure products.

GS1 acknowledges that point-of-sale systems and applications vary by company and industry.

Steps to launching GS1 DataBar

1. Identify a GS1 DataBar Program Leader within your company

2. Contact your GS1 Member Organization's Program Leader at http://www.gs1.org/contact/worldwide. php

3. Communicate the business benefits of GS1 DataBar internally to your category, buying and merchandising managers.

4. Contact your point-of-sale scanning and/or scale labeling supplier to determine the status of your equipment to support GS1 DataBar.

5. Set targets dates with your IT department teams to test your systems and scanners once the appropriate changes have been made.

For Additional Tools to assist in your GS1 DataBar readiness, please go to the following link:
http://www.gs1.org/productssolutions/barcodes/ databar/implement.html

Reminder:

You do not have to wait until 2010 to start reaping the benefits of GS1 DataBar!

As retailers become GS1 DataBar ready they can start as long as it is done internally or specified between trading partners.

GS1 Test Card

To test scanners for GS1 DataBar compliance, Scanner Test Cards have been created. Retailers can use these cards to see if GS1 DataBar functionality in their scanners has been activated or not. Please contact your GS1 Member Organisation to obtain GS1 DataBar Test Cards.

For more information on GS1 DataBar Readiness go to:

http://www.gs1.org/productssolutions/barcodes/databar/readiness/index.html

GS1 DataBar 2010 Test Card

GS1 BarCodes

Symbol 1 - EAN-13

Data Output: **9501101420014**

Symbol 2 - GS1 DataBar Omnidirectional

Data Output: 01**09501101420021**

Symbol 3 - GS1 DataBar Stacked Omnidirectional

Data Output: 01**09501101420038**

Symbol 4 - (POS and General Distribution) GS1 DataBar Omnidirectional

Data Output: 01**09501101420045**

Symbol 5 - GS1 DataBar Expanded

Data Output: 01**09501101420052**21**12345678**

Symbol 6 - GS1 DataBar Expanded Stacked

Data Output:
01**09501101420069**3922**995**<GS>3202**000100171001**01422123<GS>21**12345678**

Note: Data Contained
GTIN + Price + Weight + Expiration Date + Country of Origin + Serial Number

Symbols 7 through 9 are intended for Hand Held and Presentation Scanning
- Not intended for Omnidirectional Checkout Scanning -

Symbol 7 - GS1 DataBar Truncated

Data Output: 01**09501101420076**

Symbol 8 - GS1 DataBar Limited

Data Output: 01**09501101420083**

Symbol 9 - GS1 DataBar Stacked

Data Output: 01**09501101420090**