GS1 Data Embedded Barcodes – POS Interfacing

Unique Micro Design's (UMD) *Application Briefs* are designed to provide ideas around systems and solutions that UMD can deliver and/or develop, to solve customers' real world problems.

The Challenge for POS

How to leverage the advantage of the *GS1 Data Embedded Barcodes* currently been promoted by GS1 for labelling of fresh produce at the POS.

In particular, loose fresh produce are typically labelled via GS1 DataBar:

The GS1 DataBar may can contain additional attributes, beyond the product ID (GTIN) such as: Weights, Expiry, Batch, Price and many other possible attributes, which are used to assist in data entry and provide traceability.

For products that have larger real-estate to provide additional information, products may include both the GTIN (product barcode) to facilitate POS scanning and a *GS1 Data Embedded Barcode* such as *GS1 DataMatrix* to encode additional attributes listed as above.

The most obvious solution would be to update existing POS software to integrate the reading of GS1 Data Embedded Barcodes, however this may not always be a viable option in many circumstances.

A Solution

UMD have specifically addressed the implementation process without the need to change POS software by using an IoT based hardware solution which can be used to scan either *GS1 DataBar or GS1 Data Embedded Barcodes* at the POS.

Furthermore, additional functionality can also be included to the System without any additional software modifications.

UMD has developed an “agnostic” solution called *Retail Edgware Application Platform* (REAP) which is a cloud based IoT solution specifically configured for retail operations and POS data integration.

The core of this solution is based on the *UMD Model 367 Smart IoT Cable* which has many configuration options.

Following example demonstrates how a single scan of *GS1 Data Embedded Barcode*, such as a *GS1 Datamatrix* can be used to both collect data and enter data to POS system in the format it expects. In the following example, the system is configured to:

a) Extract and enter the GTIN into POS system
b) Extract and enter Application Identifiers data into POS by emulating POS keystrokes
c) Warn Operator/Consumer if produced is expired
d) Collect GTIN and Lot/Batch data in the REAP Cloud Service,
e) Check recall database and provide Operator/Consumer warning.