

GS1 DIY Self-Learning Materials

How to assign GS1 barcode numbers

GS1 Malaysia Berhad
8th Edition



Preface

- This DIY Self Learning Material will provide you with details on:
 - The **Types** of GS1 Identification Keys
 - **Generating** GS1 identifiers
 - **Assigning** GS1 identifiers

Active GS1 Membership License

Standard License

Small Block License

Additional License

GLN License

GTIN-8 Single Issuance

UPC (GTIN-12) License

GS1 Identifiers

GTIN-13

GTIN-14

GLN

GTIN-8

GTIN-12 / UPC

Requisite for

Member & Product Data

Member Product Databank

Event & Production Data

2D Repository Platform

Entity, Location or Asset Data

GLN Registry

Global Repository



China Customs (GAC)



Market Access

Consumer Experience

VbG & GACSS

Connect Identity to Data

Regulatory Demands

Trusted Identification

There are many types of GS1 Barcodes and GS1 Symbols...



The Process of Identifying, Encoding & Verifying



How a GS1 GTIN-13 Barcode Number is put together

955 123456 000 C

GS1 Prefix

- It is always **3 digits**
- It **identifies** which **GS1 MO** issued this GS1 barcode number

GS1 Company Prefix

- Can be **4, 6 or 8 digits**
- **Uniquely identifies** a GS1 Member.

Running Number

- Running number **digits** is determined by **Company Prefix**
- Starts from **0**

Check Digit

- It is always **1 digit**
- Generated by **Modulo-10 algorithm** of preceding digits

GS1 Global Company Prefix (GCP)

Enables global recognition of GS1 Member

Retail Unit: Products, Kits, Dispensers

- Item that appears on a retail shelf, is sold individually to a consumer or is used on a patient.
- Different barcode numbers for different **models**, **variants**, **sizes**, **weights**, **contents**, **designs**, etc.
- Assigned GTINs **cannot be reused!**

GTIN-13:

13-digit number to identify products

955 123456 000 C



EAN-13:

Commonly used to label product-level items



How a GS1 GTIN-14 Barcode Number is put together

1 955 123456 000 C

Carton Identifier

- It is always **1 digit**, between **1 to 8**
- It **identifies** the **carton level**

GS1 Prefix

- It is always **3 digits**
- It **identifies** which **GS1 MO** issued this GS1 barcode number

GS1 Company Prefix

- Can be **4, 6** or **8 digits**
- **Uniquely identifies** a GS1 Member.

Running Number

- Running number **digits** is determined by **Company Prefix**
- Starts from **0**

Check Digit

- It is always **1 digit**
- Generated by **Modulo-10 algorithm** of preceding digits

GS1 Global Company Prefix (GCP)

Enables global recognition of GS1 Member

Non-Retail Unit: Cartons, Pallets & Containers

- Trade item that carries **several product-level items within them.**
- Created to facilitate operations of **handling, storing, shipping etc. of product units,** usually in **large quantities** or **batches.**
- Usually scanned in a **warehouse** or **stockroom environment,** to record & manage **product inventory.**

GTIN-14:
14-digit number to
identify cartons & pallets

1 955 123456 000 C



ITF-14:
Commonly used to label
carton-level items



Problems Generating your GTINs?

GS1 Malaysia's barcode number generation service can help you generate your barcode numbers for a modest fee:

GTIN-13 (Product-level / SKU)

RM 100.00 for **10** GS1 barcode numbers (**Small Block Only**)

RM 375.00 for **250** GS1 barcode numbers

RM 500.00 for **1,000** GS1 barcode numbers

GTIN-14 (Carton / Non-retail level)*

RM 100.00 for **80** GS1 barcode numbers

Note: This service generates numbers only from your allocated GS1 licenses!

** To use this service, you must provide GS1 with **GTIN-13 barcode numbers** to serve as the **base barcode number** for the GTIN-14 generation.*

How to assign your Barcode Numbers

When do I need to allocate a new barcode?



New Product or New Variant Introduction



New Formulation or Functionality



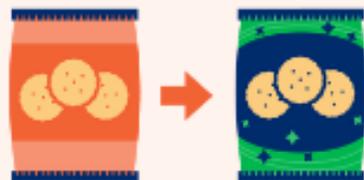
New or Changed Net Content



Add or Remove Certification Mark



Different or New Brand



Product is time-critical or is a promotional variant



Dimension or Weight Change



Change in the contents of a kit or bundle sold as a single product

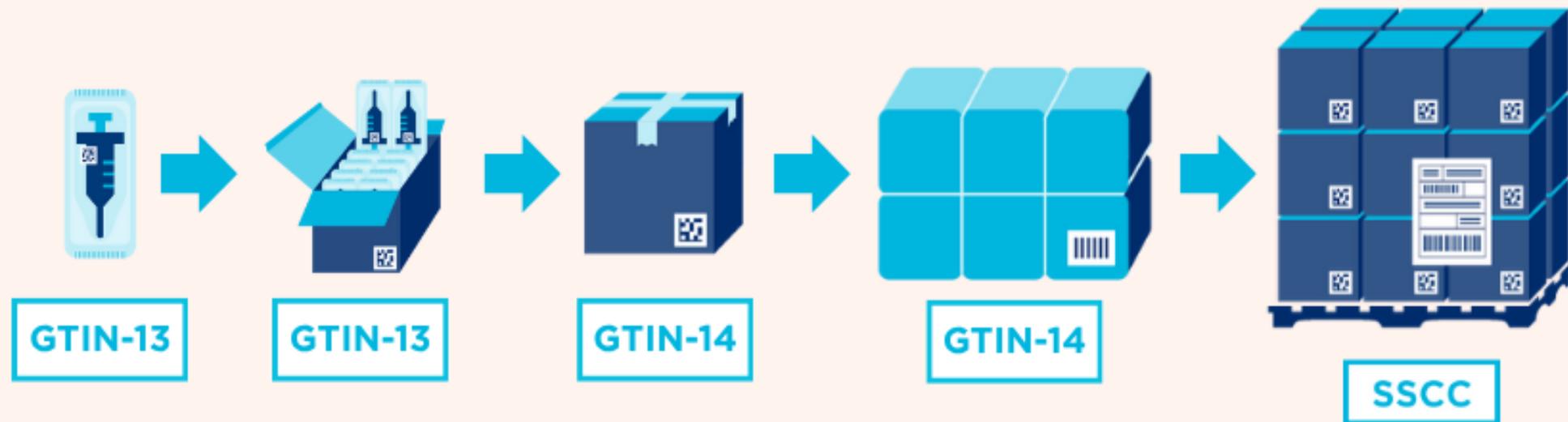


Add or remove a price on pack



Different Pack or Case Quantity

How to allocate GS1 Barcodes



955 123456 000 C

GTIN-13 A

1 955 123456 000 C

GTIN-14 A

2 955 123456 000 C

GTIN-14 AA

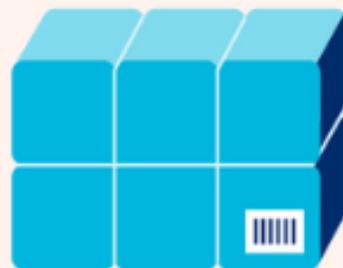
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Aggregation

is a hierarchical relationship between a parent and contained objects.

*Use the contained product's GTIN-13 barcode to generate its GTIN-14 carton barcode!
(Carton must contain only 1 product variant or model)*

How to allocate GS1 Barcodes: Packing Type



GTIN-13

A

GTIN-13

B

GTIN-14

BB

GTIN-14

BBB



GTIN-13 A

GTIN-14 A

GTIN-14 AA

GTIN-14 AAA

Nested Doll Principle

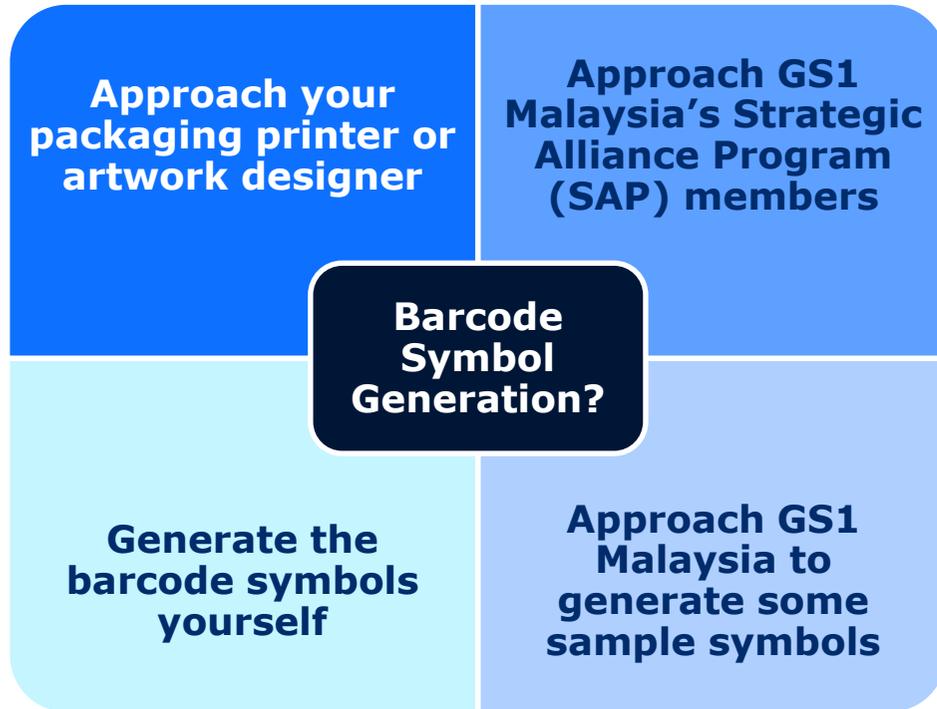
Smaller object sits inside a container which itself is put into a bigger container

Quantity Principle

Product-level object increases in quantity requiring a bigger container

How to generate your Barcode Symbols

How to get GS1 barcode symbols?



Note: Kindly refer to the GS1 barcode symbol specifications here when you generate your barcode symbols:

https://gs1my.org/sites/default/files/Topic%208%20-%20GS1%20DIY%20Self-Learning%20-%20GS1%20Barcode%20Specifications_2.pdf



Official GS1 Communications Channels

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