

GS1 – the barcode, the GTIN and the numbers behind every item

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What do the numbers in a barcode mean? A walk through the GS1 standards – how a GTIN is built up, how the check digit is calculated, what the prefix actually says about country of origin, the keys beyond GTIN, and the move to 2D codes towards 2027.

MAIN TOPICS

- What GS1 is, and why it exists
- How a GTIN is built up, digit by digit
- The check digit – and how to work it out yourself
- The country myth – what the first digits actually mean
- The GTIN family – 8, 12, 13 and 14 digits
- The keys beyond GTIN – GLN, SSCC and the others
- The symbologies – EAN-13, ITF-14, GS1-128, DataMatrix
- Application Identifiers – what makes the logistics label powerful
- Sunrise 2027 and the move to 2D
- The link to RFID

QUESTIONS THIS EPISODE ANSWERS

- What is GS1, and what does the organisation do?
- What do the numbers in a barcode mean?
- How do you work out the check digit?
- Can you tell which country an item was made in from its barcode?
- What is the difference between GTIN-8, GTIN-12, GTIN-13 and GTIN-14?
- What are GLN and SSCC?
- Which barcode types exist, and where is each used?
- What are Application Identifiers?
- What is Sunrise 2027?
- How do GS1 and RFID fit together?

KEY POINTS

- GS1 allocates the company prefix. The business creates the item numbers itself.
- The check digit is simple arithmetic, and you can work it out in your head.
- The prefix shows where the company is registered, not where the item was made.
- The GTIN is the number. The barcode is only one of several ways to carry it.
- GS1-128 and Application Identifiers are what make a logistics label machine-readable.

- An SSCC identifies the individual pallet, a GLN identifies the place.
- The aim of Sunrise 2027 is for the checkout to be able to read both 1D and 2D.
- The number on an RFID tag is built on the same keys.

SOURCES AND REFERENCES

- GS1 – GS1 General Specifications and the identification key standards
<https://www.gs1.org/standards>
- GS1 – Company Prefix and the prefix list for member organisations
<https://www.gs1.org/standards/id-keys/company-prefix>
- GS1 – 2D barcodes and Sunrise 2027
<https://www.gs1.org/standards/2d-barcodes>

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