



Australia

GS1
Identification
Numbers

GS1net

Industry
Engagement
Program

GS1
Application
Identifiers

GDSN

eCom

Bar Codes

GS1
Services

EPCglobal

Education
& Training

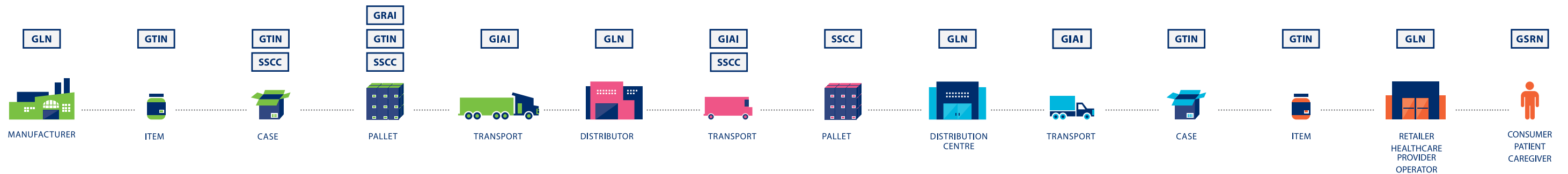
GS1 System

The Global Language of Business

IDENTIFY: GS1 Standards for Identification

GLN Global Location Number GTIN Global Trade Item Number SSCC Serial Shipping Container Code GRAI Global Returnable Asset Identifier GIAI Global Individual Asset Identifier

GSRN Global Service Relation Number



CAPTURE: GS1 Standards for Barcodes & EPC/RFID

GS1 BARCODES

EAN/UPC



GS1-128



ITF-14



GS1 DataBar



GS1 EPC/RFID

GS1 DataMatrix



GS1 QR Code



GS1 Composite Barcode



EPC HF Gen 2

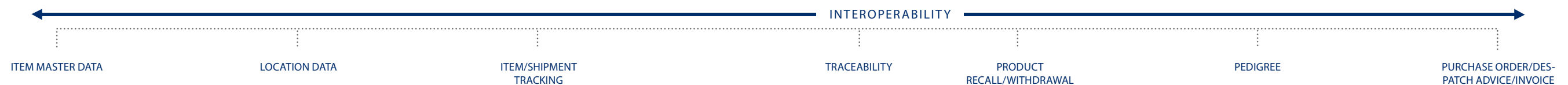


EPC UHF Gen 2



SHARE: GS1 Standards for Data Exchange

MASTER DATA Global Data Synchronisation Network (GDSN) TRANSACTIONAL DATA eCom (EDI) Event Data EPC Information Services (EPCIS)



GS1 Designs and Manages a Global System of Supply Chain Standards

The GS1 standards are built on three main elements:

- Identify
- Capture
- Share

Businesses use standards to identify real world objects such as products, service, assets and more, so that they may be the subject of electronic information that is stored and/or communicated by stakeholders in the supply chain. To identify these entities, businesses use GS1 Identification (ID) Keys.

This data is carried directly on physical objects, bridging the world of physical and electronic information. Capture standards include bar codes and radio frequency identification (RFID).

The sharing of the information that is contained and then captured is made available through numerous standards that provide the foundation for electronic business transactions and the visibility of the physical world and other information applications.

Why businesses use standards

Standards are agreements that structure any activity or any industry. They may be rules or guidelines that everyone applies in the same way. They may be an agreed-upon and uniform way of measuring, describing or classifying products or services.

Well-designed supply chain standards play a very important role in day-to-day business operations because:

- They reduce complexity between and within organisations.
- They make it easier to make the right decisions about purchasing hardware, software and equipment.
- They reduce the costs of implementation, integration and maintenance.
- They facilitate collaboration between trading partners in the supply chain, in a many-to-many relationship, making it quicker and easier to identify items, share information, order and receive parts or ingredients from suppliers, or ship goods to customers.
- They help improve patient safety and reduce medication errors.
- They enable global traceability and authentication.

Well-designed standards are the foundation for clear, understandable exchanges that **keep costs down for everyone by reducing complexity.**

Why businesses choose the GS1 standards

Some companies develop their own proprietary identification, classification and data capture systems. Others use standards that are only functional within a single industry sector, or a single country.

The GS1 System of standards is:

- **Global** – No matter where in the world your business, or its suppliers or customers, are based, the GS1 standards will function perfectly.
- **Robust** – The GS1 standards have been purpose-built by industry to be extremely robust.
- **Multi-sector** – The GS1 standards work within any organisation or business. They have been widely adopted by many industry sectors around the world.
- **User-generated** – All GS1 standards are built and maintained through the GS1 Global Standards Management Process (GSMP), a worldwide collaborative forum. The GSMP is an open and transparent process which brings together volunteers from all industries and from everywhere in the world to identify needs for standards, gather business requirements, document best practices, obtain consensus on solutions, and then develop and implement the resulting supply chain standards.
- **Scalable** – The GS1 standards can be used by small businesses or large multinational companies.

Originally created by manufacturers and retailers to improve the efficiency of the distribution of food and consumer goods to supermarkets, the GS1 standards are used today by more than one million companies in many industry sectors.

Identification and Capture (Numbering and Bar Coding)

GS1 Identification Keys

The GS1 Identification (ID) Keys support the identification of items, services, locations, logistic units, returnable containers, etc. The GS1 Company Prefix assigned to a user company allows that user company to create any of the GS1 Identification Keys.

GTIN – Global Trade Item Number assigned to any item (product or service) that may be priced, or ordered, or invoiced at any point in any supply chain. The GTIN is then used to retrieve predefined information about the item.

GLN – Global Location Number, the GS1 ID Key for locations. The GLN can be used to identify physical locations and parties where there is a need to retrieve predefined information to improve the efficiency of communication within the supply chain.

SSCC – Serial Shipping Container Code, the GS1 Identification Key for an item of any composition established for transport and/or storage (logistic unit) which needs to be managed through the supply chain. The SSCC is assigned for the lifetime of the transport item.

GIAI – Global Individual Asset Identifier, used to identify fixed assets of any value within a company that need to be identified uniquely such as a computer, a desk, a vehicle or a component part. Having a unique identifier for its assets allows a business to identify, track and manage them across their entire life. The GIAI provides a quick way to look up an asset in a database so its use, location or state can be recorded.

GRAI – Global Returnable Asset Identifier, used to identify returnable assets such as re-usable transport equipment like trays, crates, pallets or beer kegs that are used and then returned to be used again. The GRAI can be used simply for asset identification and tracking purposes, or it can be part of a hiring or rental system where two or more companies collaborate, as it allows enterprises to scan assets into and out of their businesses.

GSRN – Global Service Relation Number, used to identify a service relationship between a business and a client, such as club membership, loyalty programs, or a patient in a hospital.

GDTI – Global Document Type Identifier, used to identify a document by type. The term 'document' is applied broadly to cover any official or private papers that infer a right (e.g. proof of ownership) or an obligation (e.g. call for military service) upon the bearer. Other examples of the kinds of documents that could have a GDTI are tax demands, proof of shipment forms, insurance policies, internal invoices, nationalised or standardised exams, and passports. A company or business will issue a GDTI where it is important to maintain a record of the document; the GDTI will provide a link to the database that holds the 'master' copy of the document.

GSIN – Global Shipment Identification Number is a globally unique number that identifies a logical grouping of logistic units for the purpose of a transport shipment that travels under the one bill of lading.

GINC – Global Identification Number for Consignment, identifies a logical grouping of goods (one or more physical entities) that has been consigned to a freight forwarder or carrier and is intended to be transported as a whole. A consignment can comprise one or many logistic units.

Identification and Capture of Trade Items at Point-of-Sale

To identify products and services for Point-of-Sale and/or consumption businesses use:

The Number

GTIN (Global Trade Item Number)

- A GTIN provides a way to uniquely identify a trade item so it can be looked up in a database. For example, to get its price, record its sale, confirm its delivery or identify its order – and this, at any point along the supply chain and from any place in the world.
- Each trade item that is different to another is allocated its own GTIN. A trade item can be a product or service that is priced, ordered or invoiced at any point in the supply chain, whether at the checkout, in a warehouse, in an electronic catalogue or elsewhere.
- GTINs provide **accuracy, speed and efficiencies** to millions of companies around the world, in all areas of modern business.

The GTIN's global uniqueness is guaranteed by its structure:

- GS1 Company Prefix:** Allocated by GS1 Member Organisations to member companies enabling them to allocate GTINs
- Item Reference:** Allocated by the company with each different product receiving a different number
- Check Digit:** Calculated from all other digits to provide extra security

More information of how to form a GTIN can be found at the Tools and Resources section of the GS1 Australia website.

The Bar Code

EAN/UPC Bar Codes

If a company wants to put a bar code on a trade item that can be scanned at any retail Point-of-Sale anywhere in the world, they need an EAN/UPC Bar Code.

The EAN/UPC Bar Codes are the longest-established and most widely used GS1 Data Carriers. They are an indispensable product-marking method that is found on virtually every consumer product in the world. The 'beep' that people associate with the checkout of a supermarket is a scanning device reading the information encoded in an EAN/UPC Bar Code, i.e. the GTIN. These linear or one-dimensional bar code symbols are an optical machine-readable representation of the GTIN.

The most commonly used EAN/UPC Bar Codes are:

- **EAN-8 which encodes a GTIN-8** (for small items only - these are allocated directly by GS1 Australia)
- **EAN-13 which encodes a GTIN-13**
- **UPC-A which encodes a GTIN-12** (for use in North America)

Benefits:

- Omnidirectional scanning – an EAN/UPC Bar Code can be passed in front of a bar code reader at a Point-of-Sale right-side up or upside-down, and it will still 'beep' properly
- It is a quick and efficient data carrier for high-volume scanning situations like supermarkets.

Example of a GTIN-8 represented in an EAN-8 Bar Code



Example of a GTIN-13 represented in an EAN-13 Bar Code



All measurements diagrams are for illustration purposes only and not to scale

GS1 DataBar

GS1 DataBar standards are currently available for bilateral agreement between trading partners with the focus on fresh products scanned at Point-of-Sale. By 2014 GS1 DataBar standards including additional information will be able to be used by all trading partners in an open environment.

GS1 DataBar Symbols can carry more information on smaller items than EAN/UPC Bar Codes and can also be scanned at retail Point-of-Sale.

- GS1 DataBar enables GTIN identification for fresh variable-measure and hard-to-mark products like loose produce, jewellery and cosmetics.
- GS1 DataBar can carry additional information such as serial numbers, batch numbers, and expiration dates, creating solutions to support product authentication and traceability for fresh food products and couponing.

The decision about whether to use GS1 DataBar Symbols or not will be left to the brand owner (the organisation that owns the specifications of the trade item), as it is not obligatory to replace EAN/UPC Bar Codes where they work today. The decision to move to GS1 DataBar should be based purely on business requirements.

Identification and Capture of Trade Items other than at Point-of-Sale

The Number

GTIN (Global Trade Item Number)

Provides a way to uniquely identify a trade item so it can be looked up in a database. For example, to get its price, record its sale, confirm its delivery or identify its purchase – and this, at any point during the supply chain and from any place in the world.

The Bar Code

The GS1-128 Bar Code

GS1-128 cannot be used on items crossing a retail Point-of-Sale.

GS1-128 Bar Codes can carry all GS1 Identification Keys, as well as additional information like serial numbers, expiry dates and variable measure information.

The GS1-128 Bar Code plays an important role in product traceability – a transport label with a GS1-128 Bar Code is the centrepiece of any global standards-based tracking and tracing system.

Attribute data

The GS1-128 allows additional information to be included in a standard format in the bar code symbol through the use of Application Identifiers (AIs).

AIs act as flags to the scanner that a specific type of attribute data will follow. This ensures that the attribute data encoded by one company can also be scanned and interpreted by any other company in the supply chain.

Each AI is a two-, three-, or four-digit prefix that defines the meaning and format of the data that follows.

A complete list of AIs is available on the GS1 Australia website www.gs1au.org

Benefits:

- GS1-128 is adaptable to a wide variety of needs and uses.
- It can be read with a variety of commercially available scanners.
- It is a linear symbol that is more compressed than other linear technologies.

The ITF-14 Bar Code

ITF-14 Bar Codes only encode GTINs. They cannot be used to identify items that will cross a Point-of-Sale and they are usually used for trade items where printing directly onto corrugated cartons is required.

Benefits:

Maximum legibility on corrugated cardboard.

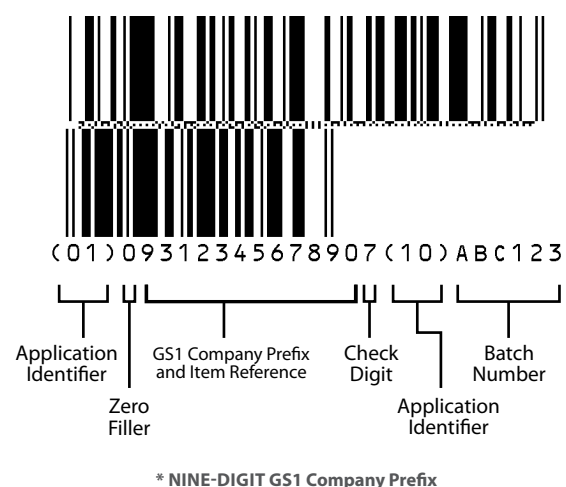
GS1-128 BAR CODE



ITF-14 BAR CODE



GS1 DATABAR EXPANDED STACKED



Two-Dimensional Bar Code System

The GS1 System supports the use of two-dimensional Bar Codes for specific application use as defined by the GS1 standards.

The two available symbols are:

- GS1 DataMatrix
- GS1 QR

Both symbols allow for a lot of information to be encoded in a very compact space.

These symbols are not currently intended to be used in high-volume omnidirectional retail Point-of-Sale environments as they require reading system that use camera based scanners.

GS1 DataMatrix can be used to apply markings directly to objects by etching and laser-engraving directly onto the surface of an item.

GS1 DataMatrix has been identified by the global Healthcare community as its preferred symbol for use in the long term as it can support the use of the Application Identifier (AI) standard thus allowing for batch, serial and

expiry date information to be encoded in a small symbol. This supports its use on medical devices, such as surgical instruments facilitating improved tracking and tracing in hospitals.

Both GS1 QR and GS1 DataMatrix symbols have been identified for use in the identification of a GTIN and URL on a consumer product for consumer scanning.

GS1 QR Code was recently introduced to the GS1 family. It is an alternate 2D barcode specifically for the purpose of capturing a URL for a product, in conjunction with its GTIN. No further use cases have been defined under the standard so we suggest consulting with GS1 Australia before applying this code to any items.

Symbol of a GS1 DataMatrix



(01)09312345678907(21)00001218919

Example of a GS1 QR code symbol



The square form is the most commonly used and enables the encoding of the largest amount of data according to ISO / IEC 16022 Information Technology

Identification and Capture of Logistic Units

SSCC (Serial Shipping Container Code)

- A GS1 ID key used to identify individual logistic units. A logistic unit can be any combination of units put together in a carton, in a case, on a pallet or on a truck, where the specific unit load needs to be managed through the supply chain.
- The SSCC enables a unit to be tracked individually, providing benefits for order and delivery tracking and automated goods receiving.
- The serial reference component of the SSCC provides significant number capacity, simplifying number allocation and guaranteeing unique identification.
- The SSCC can be used as a look-up number to provide not only detailed information regarding the contents of the load, but also as part of an Advanced Shipping Notice (ASN) or Despatch Advice message.
- With an SSCC, a company can reliably look up details about complex loads without the sender having to encode long consignment information on individual logistic unit labels.

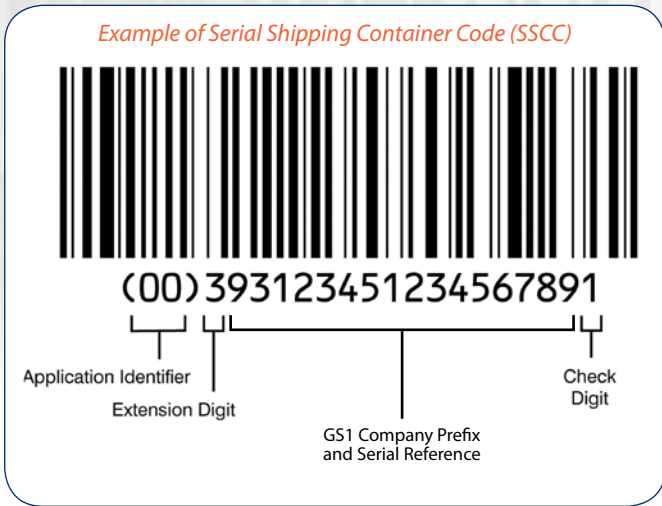
The SSCC links bar code or GS1 EPC/RFID tag information to electronic communications about a logistic unit. Its structure is:

- a. Extension Digit:** Allocated by the user to increase capacity
- b. GS1 Company Prefix:** Allocated by GS1 Member Organisations to member companies enabling them to allocate SSCCs
- c. Serial Reference:** Allocated by the creator of the logistic unit with each logistic unit receiving a different number
- d. Check Digit:** Calculated from all other digits to provide extra security

The Application Identifier (AI) 00 is always used in front of an SSCC but is not part of it. Its function is to alert the scanner software that the data that follows is an SSCC.

An SSCC is represented in a GS1-128 Bar Code. Other information beyond the SSCC can also be encoded on a logistics label. This should be in a separate GS1-128 Bar Code on the same logistics label.

Each individual logistic unit is allocated a unique number which remains the same for the life of the logistic unit. When assigning an SSCC, the rule is that an individual SSCC must not be reallocated within one year of the shipment date from the SSCC assignor to a trading partner. However, prevailing regulatory or industry organisation specific requirements may extend this period.



GSIN (Global Shipment Identification Number)

The GSIN is a number assigned by a consignor (seller) of the goods (it can be referenced on the despatch advice and/or bill of lading). It identifies a logical grouping of logistic units each identified with its own SSCC. It may be used by all parties in the transport chain as a communication reference, e.g. in EDI messages where it can be used as a shipment reference and/or a consignor's lading list.

An individual GSIN must not be reallocated within 10 years of the shipment date from the seller (sender) of the GSIN to a buyer (recipient) to comply with the regulations of the World Customs Organisation. For goods that circulate within one country (domestic transport) the period of re-use is based on either governmental or industry guidelines or the discretion of the seller (sender) of the goods.

GINC (Global Identification Number for Consignment)

The GINC identifies a logical grouping of logistic units that has been consigned to a freight forwarder and is intended to be transported as a whole. The GINC is assigned by the freight forwarder (or carrier acting on behalf of a freight forwarder or a consignor, but only if the prior agreement of the freight forwarder is given).

An individual GINC must not be reallocated within one year of the shipment date from the freight forwarder assigning the GINC to a transport. Prevailing regulatory or industry organisation specific requirements may extend this period.

Identification of Locations

GLN (Global Location Number)

A GLN provides a unique and unambiguous identification of physical locations and parties used in the supply chain or participating in a business process.

A physical location is a site (an area, a structure or group of structures) or an area within the site where something was, is, or will be located.

A party is any legal entity or organisation (including regulatory or other public bodies), business function, group or individual actor, a participant in one or more business processes.

A party may have an address associated with it whereas a physical location always has a geographical address.

Using a GLN rather than a proprietary internal numbering system for locations provides a standardised way to uniquely identify locations important to the supply chain.

The GLN is an ISO-compliant identifier whose global uniqueness is guaranteed by its structure:

- a. GS1 Company Prefix:** Allocated by GS1 Member Organisations to member companies enabling them to allocate GLNs
- b. Location Reference:** Allocated by the location owner with each different location receiving a different number
- c. Check Digit:** Calculated from all other digits to provide extra security



Identification of Assets, Services and Documents

Assets

The object of asset identification is to identify a physical entity as an inventory item. Each company holding a GS1 Company Prefix may assign asset identifiers to the assets supplied to their customers.

Asset identifiers may be used for simple applications, such as location and use of a given fixed asset (e.g. a personal computer), or for complex applications, such as recording the characteristics of a returnable asset (e.g. a reusable beer keg), its movements, its life-cycle history, and any relevant data for accounting purposes.

GRAI – Global Returnable Asset Identifier

A returnable asset is a reusable package or transport equipment of a certain value. The GRAI enables tracking as well as recording of all relevant data.

GIAI – Global Individual Asset Identifier

The GIAI is used for the unique identification of individual assets to provide a means to store relevant data. The exact method used to allocate the GIAI is left to the discretion of the issuing organisation. However, each GIAI must be unique for each individual asset being identified.

Services

Examples of services relationships that can be identified are:

- Membership in a frequent flyer program
- Membership in a loyalty scheme
- Membership in a club
- Identifying patients in hospitals

GSRN – Global Service Relation Number

The GSRN is used to identify the recipient of services in the context of a service relationship.

Documents

Examples of documents that could be identified are:

- Land registration papers
- Tax demands
- Proof of shipment / receipt forms
- Customs clearance forms
- Insurance policies
- Internal invoices
- National press documents
- Educational papers
- Transport company documents

GDTI – Global Document Type Identifier

The GDTI is used to identify a document type with an optional serial number.

Radio Frequency Identification

GS1 EPC/RFID

This is a global standards system that combines RFID (Radio Frequency Identification) technology, existing communications network infrastructure and the EPC (Electronic Product Code). EPC is a number for uniquely identifying an item to enable immediate and automatic identification and tracking through the whole supply chain globally, resulting in improved efficiency and visibility of the supply chain.

RFID standards make trading a better experience for everybody

GS1 EPC/RFID tags use Radio Frequency Identification technology to encode GS1 ID Keys in the GS1 EPC. They also enable the GS1 EPCIS Communication Standard.

RFID tags consist of a microchip (tag chip) connected to an antenna. The tag chip uses the antenna to receive commands from an RF reader (or interrogator) and then sends back a response. In addition the tag chip can store relevant product data (including the EPC) and that data is sent back to a reader antenna by means of electromagnetic waves. Since these waves can pass through most non-conductive solid materials, the chips may be shielded by adhesive film or integrated directly inside the packaging or product.

Benefits:

- GS1 EPC/RFID tags encoding the GS1 Identification Keys offer significant time-savings.
- Since readers are usually fixed when the GS1 EPC/RFID tags are read, their location at that instant of time is known, resulting in optimised time-management.





Four Steps to Obtaining and Applying a GS1 Bar Code

Step One

Retail Items (also referred to as POS and Consumer Items)

List your retail item/s and create a retail bar code number GTIN (Global Trade Item Number). Retail items commonly use a GTIN-13.

ITEM	PACKAGING	GTIN-13
Coloured Hair Conditioner	Bottle of 250ml	9312345670000

931234567 000

GS1 COMPANY PREFIX AND ITEM REFERENCE

0

CHECK DIGIT

Checks the validity of the entire number by using the Check Digit Calculator

Bar code your retail item/s with an EAN-13 Bar Code representing the GTIN-13.

EAN-13 BAR CODE

9 312345 670000

GTIN-13

Check Digit Calculator

Before printing your bar code, make sure the Check Digit has been correctly calculated. The Check Digit, the last number of the bar code, is calculated by following a simple formula and exists as a 'security check' for the scanner. Without the correct Check Digit the scanner will not accept the bar code.

To assist you with the Check Digit Calculator please call our Help Desk on 1300 BARCODE (1300 227 263) or visit www.gs1au.org

Check Digit calculator

GS1 Identification Numbers

Global Trade Item Number

To print labels more than one calculation and need to save or transfer many identification numbers, download the Check Digit calculator spreadsheet.

Item Format	GTIN-12 (12 digits)	GTIN-13 (13 digits)	GTIN-14 (14 digits)
12/13	09312345678901	093123456789010	0931234567890100
12/13	09312345678901	093123456789010	0931234567890100
12/13	09312345678901	093123456789010	0931234567890100
12/13	09312345678901	093123456789010	0931234567890100

Serial Shipping Container Code (SSCC)

Item Format	SSCC (18 digits)
18/18	0001234567890123456789

Non-Retail Items (Inners and Cartons)

List your inners and/or cartons and create a GTIN (bar code number). Non-retail items can use a GTIN-14 or a GTIN-13.

ITEM	PACKAGING	GTIN-14
Coloured Hair Conditioner	Box of 24 Bottles of 250ml	19312345670007

1 931234567 000 7

INDICATOR

Choose a digit between 1 and 8

GS1 COMPANY PREFIX AND ITEM REFERENCE

CHECK DIGIT

Checks the validity of the entire number

ITEM	PACKAGING	GTIN-13
Coloured Hair Conditioner	Box of 24 Bottles of 250ml or box containing mixed products	9312345670017

931234567 001 7

GS1 COMPANY PREFIX AND ITEM REFERENCE

CHECK DIGIT

Checks the validity of the entire number

Bar code your items with either ITF-14 or GS1-128 Bar Codes, representing the GTIN. For additional information, such as use-by dates and batch numbers, a GS1-128 Bar Code needs to be used. When encoding a GTIN-13 in an ITF-14 or GS1-128 Bar Code, a filler zero must be added in the first position.

ITF-14 BAR CODE

09312345678907

GS1-128 BAR CODE

(01)09312345678907(17)060215(10)123456

APPLICATION IDENTIFIER (AI)

GTIN

AI

USE-BY DATE

AI

BATCH/LOT NUMBER

Pallet Loads (Logistic Units)

If you or your trading partners need to identify at pallet level then create a unique Serial Shipping Container Code (SSCC) for each pallet.

0 931234567 0000000 0

EXTENSION DIGIT

A number between 0 and 9. Increases capacity of the SSCC

GS1 COMPANY PREFIX AND SERIAL REFERENCE

CHECK DIGIT

Checks the validity of the entire number by using the Check Digit Calculator

Pallet loads (and any other unit used as a logistic unit) should be bar coded with a GS1-128 Bar Code, displayed on a GS1 Logistics Label.

GS1 BEAN FACTORY

SSCC

393123450000000037

ITEM NO.

09312345000005

QUANTITY

20 Cases

USE BY (ddmmyy)

22/01/06

BATCH

2468

(02)09312345000005(17)060122(10)2468(37)20

(00)393123450000000037



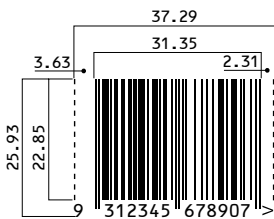
Step Two

Bar Code Specifications

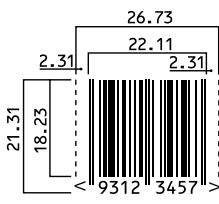
Physical requirements such as size, height, colour and location are very important. Bar codes that do not comply cause inefficiency in the supply chain as they do not scan reliably.

Size

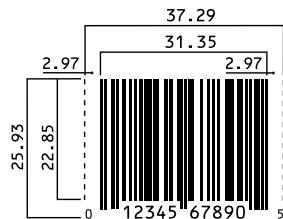
There are specific ranges for all bar codes. If the bar code is not the right size, the scanner simply cannot read the bars and register the number. Make sure your bar codes fit the size requirements for its magnification before placing it on your product.



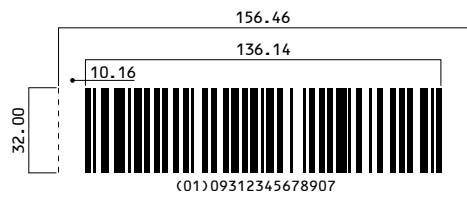
Example of a nominal size
(100%) **EAN-13** Bar Code Symbol



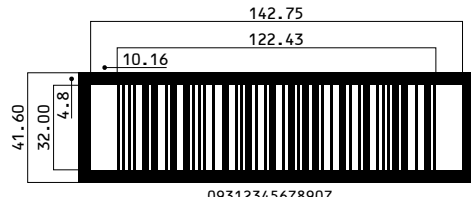
Example of a nominal size
(100%) **EAN-8** Bar Code Symbol



Example of a nominal size
(100%) **UPC-A** Bar Code Symbol



Example of a 100%
GS1-128 Bar Code Symbol



Example of a 100%
ITF-14 Bar Code Symbol

All measurements diagrams are for illustration purposes only and not to scale.

Height

Cutting the bar code height to fit in with package design is not recommended due to the scanning problems it causes.



Colour

It is vital that the colour of the bar code and its background are recognisable by a scanner. A dark bar code on a light background is essential for scannability.



Location

The location of the bar code on your product must be taken into consideration in your overall product design. GS1 Australia has a set of recommendations. However, the product must be considered in its final form before the bar code can be applied. Seams, seals, additional labels, corners, overlapping materials etc. can infringe on a bar code and make it illegible to the scanner. Pallets (and any other logistic units) also have location requirements. For more information refer to the GS1 Australia User Manuals.



Quiet Zones

To read a bar code correctly, a scanner must be able to clearly read where the bar code starts and finishes. Areas to the left and right of the bar code must be kept clear of obstructions that may cause scanning difficulties.



Step Three

Printing the Bar Code

Once your bar code has the correct size, height, colour and location, it is then just as important to ensure the bar code is not smudged or blurred. The bar code must show crisp, clear, well-defined bars. Imperfections in the bar code will confuse the scanner and will make your bar codes illegible.

Lists of companies able to print bar codes for you or that can supply the equipment or software to print bar codes are shown in the Solution Providers Directory on the GS1 Australia website at www.gs1au.org



Step Four

Bar Code Quality Testing

Many major retailers will require you to show evidence of a GS1 Bar Code Verification Report for your bar codes. Without evidence of a successful test your product may be rejected or you may be required to re-label it before acceptance. Whichever sector you supply, a verification test is a wise precaution to ensure that your customers will not be disappointed with your product when they receive it.

Customer Help Desk

To assist you through the process and to answer any of your questions, the GS1 Australia Help Desk is available between 8:30am and 5:30pm AEST Monday – Friday (excluding public holidays) on 1300 BARCODE (1300 227 263). Alternatively, visit our website www.gs1au.org



GS1 Australia Bar Code Testing Service

GS1 Australia's Bar Code Testing Service reports on the likely scanning performance of bar codes and how closely they conform to specifications.

- Businesses submit products for bar code testing to save time, save money and build stronger, more profitable relationships with trading partners.
- Many retailers make it a mandatory requirement for all items to be submitted to GS1 Australia for testing before they will range them.
- Bar codes that don't scan properly result in all the time and money invested in scanning and supply chain systems being wasted. They can also prove very expensive in terms of packaging re-design and rejected product.
- Products submitted for testing should be presented in their 'final retail form' or as loose labels or unformed packaging.
- The bar code is tested for compliance to the GS1 standards and verified through a testing process based on the ISO/IEC 15416 method for the quality analysis of bar codes (Print-quality Standard).
- The bar code is also checked to ensure the right GS1 number and a correctly calculated Check Digit have been applied.
- A GS1 Australia Bar Code Verification Report is issued at the completion of testing. This indicates the compliance of a bar code to the GS1 and ISO standards and, if necessary, suggests where the supplier may need to make changes to meet GS1 and industry specifications.

For further information on a GS1 Australia Bar Code Verification Report please contact the GS1 Australia Testing Service on **1300 BARCODE (1300 227 263)** or email technical@gs1au.org



GS1 Australia's Logistics Label Assessment Service

GS1 Australia's Logistics Label Assessment Service advises suppliers and manufacturers on the correct way to label pallets.

Australian retailers require logistics labels with unique Serial Shipping Container Code (SSCC) numbers to be applied to pallets delivered to their distribution centres so they can be scanned on receipt. When logistics labels don't scan, data has to be keyed manually and internal labels applied, delaying the unloading of the truck, as well as opening the way for data errors. Products end up sitting in the loading bay instead of on the supermarket shelf.

The issues retailers cite include:

- No label has been applied.
- The label is in the wrong location.
- Information on the label does not match what is on the pallet itself.
- Multiple labels with different SSCCs have been applied.
- Logistics label will not scan.
- Stretch-wrap has been applied over the logistics label so it doesn't scan.

GS1 Australia offers an onsite assessment service for suppliers to assess logistics (pallet) label quality and adherence to Australian industry requirements. Our team will ensure your labels meet the technical specifications and assess the business process involved. They will record and assess:

- What type and model printer is being used, including online printer/applicator versus desktop
- If there is a service log or cleaning and maintenance procedure in place
- How the labels are applied, whether by hand or automated application
- That they are applied in the correct location as per industry requirements
- That any part of the label is scanned before despatch to the customer

GS1 Australia will also provide an ISO grade and scan rate of all labels assessed and assist businesses to improve their processes.

For more information contact the Industry Engagement Team at GS1 Australia on **1300 BARCODE (1300 227 263)** or sales@gs1au.org



Share

GS1 Communication Standards enable trading partners to securely share data in the supply chain anywhere in the world, no matter what language they speak or what IT systems they have.

Data synchronisation

The GDSN (GS1 Global Data Synchronisation Network) is a powerful environment for secure and continuous synchronisation of accurate item and price data between trading partners using the GS1 standards.

- Trading partners around the world can always have the same information in their systems and any changes made to one company's database are automatically sent to all of the companies who do business with them.
- Within the GDSN network, trade items are identified using a unique combination of the GS1 Identification Keys – GTINs (Global Trade Item Numbers), GLNs (Global Location Numbers) – and linked to a GPC (Global Product Classification).
- The GDSN connects over 20 global data pools through its global registry (the GS1 Global Registry). Millions of items are listed in the GS1 Global Registry, which is growing by 20 per cent every year.
- In Australia and New Zealand businesses use the GS1net data pool to exchange standardised and synchronised supply chain data with their trading partners.

Benefits

- When a supplier and a customer know they are looking at the same accurate and up-to-date data, it is smoother, quicker and less expensive for them to do business together.
- Synchronising accurate, properly classified item and price data also results in:
 - › Improved accuracy of orders
 - › Fewer forms to fill out
 - › Fewer duplicate systems and processes
 - › Driving unnecessary costs out of the supply chain.

More information on GS1net and data synchronisation is available at www.gs1au.org

eMessaging

- Every day in companies around the world, hundreds of millions of business transactions take place: orders, order responses, despatches, payments and more. With increasing regularity, these transactions are being handled electronically.
- eCom standards are the language used by computers to send and interpret business messages such as:
 - › Invoices
 - › Purchase orders
 - › Despatch advice
 - › Receiving advice
- Automating these processes eliminates the need for paper, cuts out any duplication of work, and means fewer mistakes due to human error.
- GS1 administers standards for EDI (Electronic Data Interchange) using the standard messaging formats of GS1 EANCOM and GS1 XML.

Community Management Tool (CMT)

The CMT is a web based tool for testing compliance with industry and proprietary message Implementation guidelines (MIGs). Further information can be obtained by calling GS1 Australia Customer Service on **1300 BARCODE (1300 227 263)** or email cmt@gs1au.org

Using the GS1 Standards in Your Business

Getting started with bar coding and numbering, data synchronisation and eMessaging can seem overwhelming but as a GS1 Australia member you have access to experts who can train you and lend a helping hand with implementation.

Education and Training

Four different training modes make GS1 learning convenient even for the busiest of schedules. Members can select from the following:

- Traditional classroom training sessions offer the opportunity to learn from expert instructors. Classes run throughout the day and allow new and existing members to gain better insight and understanding of the GS1 standards.
- For members who find it difficult to travel to a classroom, GS1 Australia has an online training tool. Members can take a series of courses on essential supply chain concepts, study anywhere and at their own pace, 24 hours per day, seven days a week.
- New and existing members can take advantage of GS1's web-based training videos or webinars for an introduction to the GS1 standards and all the information and tools needed to print bar codes on their products. The introductory multimedia presentation connects participants with a GS1 expert live via a telephone conference call, while following the presentation on the web page or allows members to watch a series of self-paced training videos online.

What you will learn

Subjects covered by our Training Services include:

- The key principles of the GS1 standards
- How to identify your retail and non-retail trade items using the Global Trade Item Number (GTIN)
- How to create GTINs for retail and non-retail items
- How to produce logistic labels in compliance with the GS1 recommendations
- Which GS1 Bar Codes to use depending on the nature of your products
- The technical requirements for bar coding
- What eCommerce is and how to use it with your trading partners
- Data Synchronisation using GS1net

GS1 Australia Consulting

GS1 Australia's experts can help you to implement the GS1 standards within your business to make your business more cost-effective.

Our team can provide:

- Impartial advice and recommendations
- Guidance and support in implementing the GS1 standards
- Project management resources
- A thorough audit of your current company data, technology and processes
- Recommendations and an easy-to-follow roadmap for implementation
- GS1 Australia's Consulting team can provide a helping hand or, if you prefer, project manage the whole implementation so you can get on with business

For information call **1300 BARCODE (1300 227 263)** or email sales@gs1au.org

Customer Services

Assistance and implementation support are available to GS1 Australia members and industries actively involved in implementing the GS1 standards.

Our dedicated Customer Service Team provides a variety of membership services including:

- Expert advice on the steps required for implementing the GS1 standards
- Assistance on how to apply bar codes and numbers
- Provide support and assistance on all member enquiries.

For more information contact GS1 Australia's Customer Service team on **1300 BARCODE (1300 227 263)** or email customer.service@gs1au.org



Head Office
Axxess Corporate Park
Unit 100/45 Gilby Rd
Mt Waverley VIC 3149
Locked Bag 2
Mt Waverley VIC 3149
T +61 3 9558 9559
F +61 3 9558 9551

Sydney Office
Lakes Business Park
Building 4B, 2-4 Lord St
Botany NSW 2019
Locked Bag 7002
Botany NSW 1455rs
T +61 2 9700 0933
F +61 2 9700 0820

758_0813

National Number: 1300 BARCODE
1300 227 263
ABN: 67 005 529 920

www.gs1au.org