



AN INTRODUCTION TO THE GLOBAL SHIPMENT IDENTIFICATION NUMBER (GSIN)



THE GLOBAL LANGUAGE
OF BUSINESS



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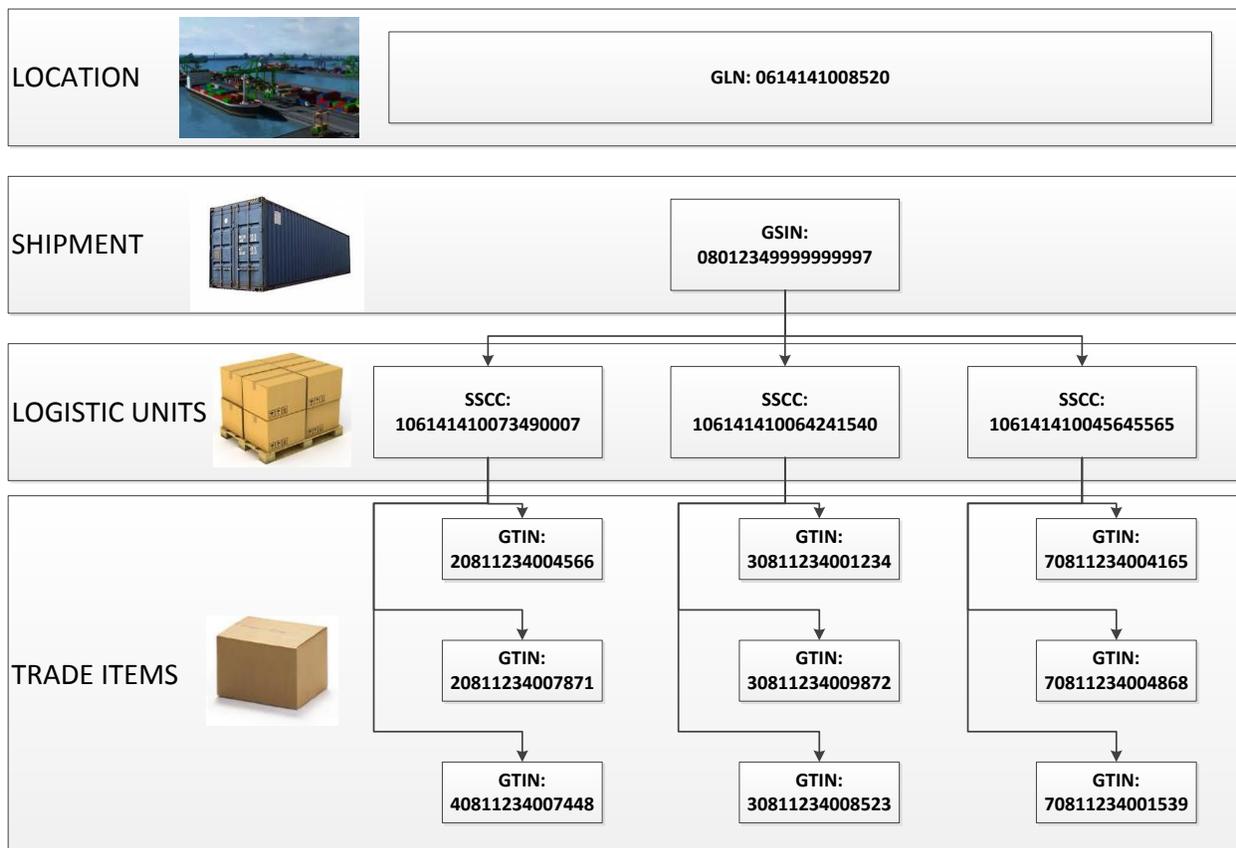
What is a Global Shipment Identification Number?

The Global Shipment Identification Number (GSIN) is the GS1 Identification Key used to identify a logical grouping of logistic units for the purpose of a transport shipment from the seller to the buyer. The unique identifier is comprised of a GS1 Company Prefix, a Shipper Reference, and a Check Digit.

What is a Global Shipment Identification Number Used For?

It identifies the logical grouping of one or several logistic units each identified with an separate SSCC and containing trade items as being part of a specific seller / buyer relationship and that travels under one dispatch advice and/or Bill of Lading.

TYPICAL TRANSPORT GROUP HIERARCHY



Key Attributes of the Global Shipment Identification Number

The GSIN will identify any shipment grouping of logistic units uniquely, ensuring that it is always identified correctly anywhere in the world.

The shipper reference component of the GSIN provides virtually unlimited number capacity, simplifying number allocation and guaranteeing unique identification. A GSIN can be assigned by a GS1 Company Prefix licensee anywhere in the world and can be used throughout the world.

Business Benefits of Using GSINs

There are a number of benefits to using the GSIN for building a business-to-business tracking system, whether for finished goods or for raw materials. The structure of the GSIN and its assignment rules are administered by GS1®, a not-for-profit standards organization that is supported by implementation guidance, business examples, and maintenance. In addition, the GSIN:

- Uniquely identifies groupings of logistics units for tracking and identification
- Provides virtually unlimited numbering capacity based on the length of your GS1 Company Prefix
- Integrates with all GS1 supply chain processes
- Links barcoded information to electronic communications (i.e., a Bill of Lading Number)
- Enables fast lookup of transactional data
- Facilitates simple electronic messaging between companies
- May specifically identify a dispatch, a journey, or an arrival either within or between companies
- Applies to the entire supply chain, from raw materials supplier to manufacturer to distributor/wholesaler to end-user/retailer
- Encompasses a common vendor numbering scheme that uses the GS1 Company Prefix so that the number cannot be duplicated

Note: The GSIN fulfills the requirements of the Unique Consignment Reference (UCR) of the World Customs Organization (WCO), which can be used by Customs authorities to identify shipments subject to import or export processes.

How is the GSIN Formatted?

- **Application Identifier (AI):** AI 402 to indicate a GSIN
- **GS1 Company Prefix:** A globally unique number assigned to a GS1 member company
- **Shipper Reference:** The number allocated to identify the shipment of logistical units
- **Check Digit:** A mod-10 algorithm digit used to check for input errors

The Application Identifier (402) indicates that the GS1 Application Identifier data field contains a GSIN. When encoded within a barcode the available Symbologies are the GS1-128 and the GS1 DataMatrix.

Application Identifier	GS1 Company Prefix									Shipper Reference						Check Digit	
	N ₁	N ₂	N ₃	N ₄	N ₅	N ₆	N ₇	N ₈	N ₉	N ₁₀	N ₁₁	N ₁₂	N ₁₃	N ₁₄	N ₁₅		N ₁₆
402	N ₁	N ₂	N ₃	N ₄	N ₅	N ₆	N ₇	N ₈	N ₉	N ₁₀	N ₁₁	N ₁₂	N ₁₃	N ₁₄	N ₁₅	N ₁₆	N ₁₇

Note: The GSIN is a 17-digit numerical number, including the Check Digit. The combined length of the GS1 Company Prefix and Shipper Reference will always total 16 digits.

THE FOLLOWING STEPS ARE USED TO FORM GSINS:

- 1. USE YOUR GS1 COMPANY PREFIX.** Your GS1 Company Prefix is the globally unique number assigned to your company by GS1 US™ or another GS1 Member Organization. GS1 Company Prefixes are assigned to companies in varying lengths. Some GS1 US members may have a prefix license certificate that shows only a U.P.C. Company Prefix (formerly a UCC Company Prefix). A U.P.C. Company Prefix must be converted to a GS1 Company Prefix for use in the GSIN. This is accomplished by adding a zero to the front of the U.P.C. Company Prefix. The following table illustrates the conversion of a U.P.C. Company Prefix to a GS1 Company Prefix for use with GSINs.

U.P.C. Company Prefix	Converted to a GS1 Company Prefix
801234	0 801234
8400020	0 8400020
81123400	0 81123400

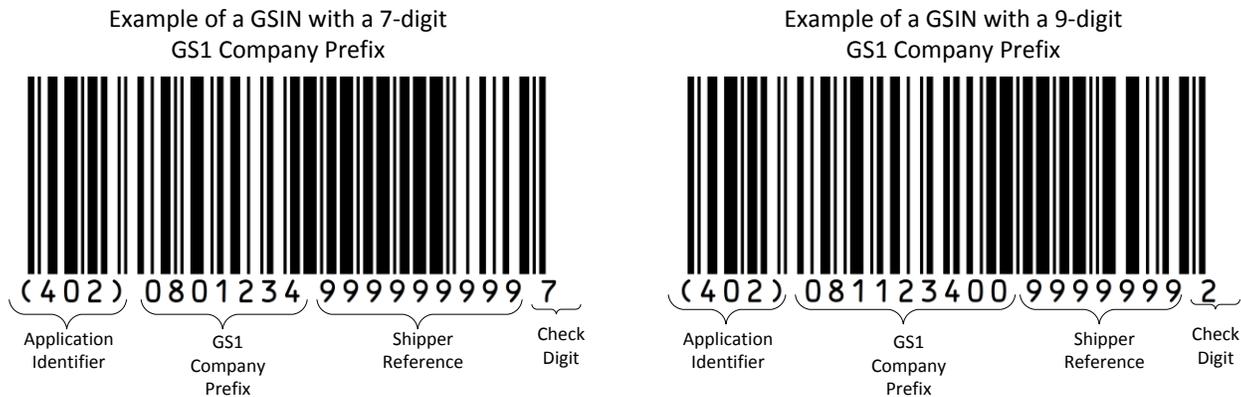
- 2. CREATE THE SHIPPER REFERENCE.** This number is assigned by you, the holder of the GS1 Company Prefix, one-by-one to create a globally unique GSIN. The Shipper Reference length varies as a function of the GS1 Company Prefix length.

Note: The combined length of the GS1 Company Prefix and Shipper Number is always 16 digits.

Hint: Assign your Shipper Reference sequentially, and do not build in any intelligence into the number. The scheme that defines a particular Shipper Reference range as having a set meaning today will mean nothing a short time into the future in the event your company reorganizes, buys or merges with another firm, or when another staff member takes over GSIN assignment duties.

- 3. CALCULATE THE CHECK DIGIT.** The Check Digit is a calculated one-digit number used to ensure data integrity. To understand how this digit is calculated, refer to www.gs1us.org/checkdig.

EXAMPLES OF A GSIN IN A GS1-128 BARCODE



Frequently Asked Questions of the GSIN

Does my company need another GS1 Company Prefix to use GSINs?

No. The GS1 Company Prefix that you already have been assigned is used in the GSIN.

What are some examples of when I should apply a GSIN?

A shipment could be a cargo container of logistical item groupings (one or multiple SSCCs).

Should the GTIN® be included in the GSIN?

No. The GTIN uniquely identifies trade items (products and services). GTIN information is included in the Advance Ship Notice (ASN) that is sent to the receiver of the product prior to shipment. The GSIN provides the logical grouping of one or several logistic units each identified with a separate SSCC.

How is a GSIN different than a SSCC?

GSINs are distinctly different from SSCCs. The GSIN provides identification of the logical grouping of one or several logistic units, where each of those logistic units could be identified by a different SSCC.

Can the GSIN be used at the point of sale?

No. The GSIN is only used in the transportation, distribution or warehouse environment and is not a GTIN.

Do I need to purchase special equipment to scan a GSIN?

The equipment you choose should have software that is compatible with the type of scanner you have selected and should be able to read the GS1-128 barcode symbol.

Can a GSIN be re-used immediately after the shipment has been received by the buyer?

No. An individual Global Shipment Identification Number (GSIN) is a unique number, which remains the same for the life of the grouping of logistics or transport units to which it is assigned. When assigning a GSIN, the rule is that an individual GSIN number must **not be reallocated within ten years** of the shipment date from the seller or sender of the GSIN to a trading partner buyer or recipient to comply with the regulations of the World Customs Organization (WCO). For goods that circulate within one country (domestic transport), the period of re-use is based on either governmental, industry or the discretion of the seller (sender) of the goods.

Tools and Resources

GS1 US offers a number of easily accessible online tools and resources that can help guide you through the GS1 Standards and processes:

- **CHECK DIGIT CALCULATOR:** Helps you correctly calculate the check digit when forming GSINs
- **GS1 US GLOSSARY:** Provides the terminology and language of the GS1 System standards to help you better understand what you are seeing and learning.
- **GS1 US PRODUCT CATALOG:** Includes an order form for printed publications, calibration kits and more. Partner Connections members receive a premium discount.
- **PARTNER CONNECTIONS SOLUTIONS CENTER:** Provides a ready reference to education and online materials to speed your barcode and e-commerce processes.
- **RESOURCE LIBRARY:** Documents, videos, and other information to increase the value of standards for all trading partners in the supply chain.
- **FAQS:** Frequently Asked Questions about GS1 Standards, implementation, and how to get started.

For more information about GS1 US, GSINs, and other GS1 Standards:

- Email info@gs1us.org
- Call 937.435.3870
- Visit www.gs1us.org



GS1 US: Bringing the Global Trading Community Together

For a supply chain to generate maximum value, it must move products from supplier to distributor to customer in a way that minimizes costs, redundancies, and waste and maximizes coordination and collaboration among trading partners. GS1 US makes that process possible by enabling companies to uniquely and globally identify, capture, and share information about products, locations, and more using GS1 Standards.

- **IDENTIFY:** GS1 Identification Numbers uniquely distinguish all companies, products, trade items, logistic units, locations, assets, and service relations in the supply chain—from manufacturer to consumer.
- **CAPTURE:** GS1 System Data Carriers—in the form of barcodes and Electronic Product Codes that are programmed into Radio Frequency Identification tags (known as EPC-enabled RFID tags)—can hold various amounts of data to accommodate different needs, such as batch/lot numbers and expiration dates. This additional data can be very helpful in numerous business processes in the healthcare and fresh foods industries, to name a few examples.
- **SHARE:** GS1-enabled interoperability allows electronic commerce information, including master data, transactional data, and physical event data, to flow through the supply chain between trading partners and to the consumer.

Moving Your Business Forward with GS1 Standards

Every industry has its own needs and challenges. GS1 takes a leadership role by working with industry communities to articulate, identify, resolve, and share industry issues and best practices and by enabling standards-based solutions that help companies run their businesses more successfully. Today, more than 300,000 member companies throughout in the United States employ GS1 Standards to make their supply chain more visible, efficient, secure, and sustainable.

- **VISIBILITY:** To increase availability of accurate data and to accurately answer the what, when, where, and why of a specific product's movement.
- **EFFICIENCY:** To apply standards to business processes and to achieve interoperability between trading partners.
- **SECURITY:** To improve patient safety through pedigree standards for pharmaceuticals and to combat counterfeiting through standardized identification and authentication.
- **SAFETY:** To help industry meet their respective regulatory requirements and to share precise recall information between trading partners.



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