



GS1 Identification Key Series - SSCC (Serial Shipping Container Code)

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1. Definition of a SSCC

'The GS1 Identification Key used to identify a logistic unit. The key is comprised of an Extension digit, GS1 Company Prefix, Serial Reference, and Check Digit.'

The Serial Shipping Container Code (SSCC) is used to identify individual logistic unit. A logistic unit can be any combination of units put together in a case or on a pallet or truck where the specific unit load needs to be managed through the supply chain. The SSCC enables this unit to be tracked individually which brings benefits for order and delivery tracking and automated goods-receiving. As the SSCC provides a unique number for the delivery it can be utilized 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 process.

Typically this means that just one scan at a goods-in bay of the SSCC on a logistic unit can be linked to a pre-received electronic ASN/Despatch Advice of the contents of the logistic unit to facilitate speedy goods-in and put away processes. Alternatively when tracking a unit in transit the SSCC provides all the information required for accurate identification.

An SSCC is different to a traded unit in that it is used when an item or unit load need to be identified specifically when moving from one place to another. It is possible to have a single item identified with both an SSCC and a GTIN (an example would be a pallet of bottled water that needs to be tracked in the supply chain but is also bought and sold). The SSCC can be captured when a specific logistic unit is dispatched, arrives at the destination or at any other intermediary point in the supply chain.

1.1. Key SSCC Attributes

The SSCC will identify any logistic unit uniquely thus ensuring that it is always identified correctly anywhere in the world. Combined with GS1 standards for electronic messaging, this 'license plate' facilitates simple tracking of goods from carton to even trailer load level. In addition it allows reliable look up of complex load detail. In turn this saves having to encode long detailed consignment information on individual logistic unit labels.

The serial reference component of the SSCC provides virtually unlimited number capacity simplifying number allocation and guaranteeing unique identification.

1.2. Benefits of using an SSCC

Is the key for building a business to business tracking system. Facilitates shipping notice processes from raw materials supplier to end user. Key Benefits

- Uniquely identifies logistics units for tracking and identification
- Provides virtually unlimited numbering capacity
- Integrates with all GS1 supply chain processes
- Can be bar coded or EPC tags for simple scanning or reading
- Links bar coded or EPC tag information to electronic communications
- Enables fast look up of transactional data
- Facilitates simple electronic messaging between companies
- Can be used at any stage in the supply chain for tracking
- May specifically identify dispatch, a journey or an arrival either within or between companies
- **PROVIDES ACCURACY, SPEED AND EFFICIENCY FOR YOUR BUSINESS**

1.3. SSCC Structure

The **Application Identifier (00)** indicates that the GS1 Application Identifier data field contains an SSCC. When printed in a bar code the correct symbology is GS1-128. It may also be encoded using an EPC tag.

The SSCC is an 18 digit number that comprises of the following:

	SSCC (Serial Shipping Container Code)																	
Application Identifier	Extension Digit	GS1 Company Prefix →								← Serial Reference							Check Digit	
0 0	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	N ₁₈

The Application Identifier (00) indicates that the data field contains an SSCC.

Extension digit is used to increase the capacity of the Serial Reference within the SSCC. It is assigned by the company that constructs the SSCC. The Extension digit ranges from 0-9.

GS1 Company Prefix A globally unique number assigned to a GS1 member company

Serial Reference The 'serial' part of the number assigned one-by-one by the member company to create a globally unique SSCC.

Check Digit A modulo-10 number calculated across the preceding digits to ensure data integrity.

The GS1 Logistic Label provides a global standard on how GS1-128 and the GS1 Application Identifiers are used on Logistic Units. The only mandatory field on GS1 Logistics Labels is the SSCC. The SSCC is represented by AI (00) and in principle is sufficient for all logistics applications.

In an environment where Electronic Data Interchange (EDI) is used to transmit detailed information about a logistic unit, or where that information is already resident in a database, the SSCC acts as a reference pointer to all information.

However, when EDI is not available at each point in the supply chain certain additional elements of information are also desirable in bar code form and can be represented through the use of AIs and associated with the SSCC.

2. SSCC Applications

An SSCC is used in many industries when items and loads require tracking. It provides an efficient way to facilitate automated dispatch, delivery and good-in processes. For example in advanced Business-to-Business systems it is used to identify the Logistic Unit in electronic message delivery notes.

2.1. SSCC in typical B2B process

- A load for shipment is assembled and assigned an SSCC
 - The SSCC is printed onto a label and attached to the load
 - The SSCC can now be scanned at any point to identify its progress through to delivery
- Detail of load sent electronically to recipient with SSCC as identifier in Advanced Shipping Notice (ASN) or Despatch Advice

- The SSCC provides a link to the full inventory of the load in the message
- Recipient scans SSCC upon arrival and matches consignment with electronic delivery note
 - At any time during the transit the SSCC may be scanned to identify the load
 - Every time that the SSCC is scanned traceability is available

2.2. Other applications

If a logistic unit with a SSCC is travelling through a hub and is broken-down and repacked then a new SSCC will need to be assigned to the new logistic unit.

SSCC can be used for any logistic units that require individual identification such as couriered parcels, beer kegs or even a whole container load.

- The SSCC is also useful for internal pallet or unit identification when the load is put away or moved within a warehouse or business.
-  **Important:** The SSCC is fully compatible with ISO/IEC 15459 – Unique Identifiers for Transport Units. This is often referred to as the *ISO Licence Plate* and is a pre-requisite for tracking and tracing many international shipments.

3. Useful further information

3.1. GS1 Member Organisations

Your local GS1 Member Organisation is the ideal contact for information on the benefits that SSCC can deliver to your business. In addition they will be able to provide you with further information on all of GS1 standards. Full details can be found on: <http://www.gs1.org/contact/worldwide.php>

3.1.1. GS1 Global Office

- Further information on all GS1 standards is available on the GS1 Global site: <http://www.gs1.org/>
- Case study involving SSCC: <http://www.gs1.org/sectors/transportlogistics/>
- GS1 on line training is available via GS1 Learn is the area where you can learn on-line how SSCC and all other areas of the GS1 system work: <http://learn.gs1.org/portal3/index.asp>