

Serial Shipping Container Code (SSCC)

Fact Sheet

A logistic unit is an item of any composition established for transport and/or storage which needs to be managed throughout the supply chain. Daily, many logistic units are stored, shipped, and received by multiple stakeholders in the supply chain. Information about the logistic unit is shared on transport documents, Electronic Data Interchange (EDI) messages etc. To make sure that all stakeholders are talking about the same logistic unit, it is important to identify logistic units uniquely. Identifying a logistic unit uniquely also allows it to be tracked and traced throughout the supply chain.

What is a Serial Shipping Container Code (SSCC)?

The SSCC is a GS1 identification key used to uniquely identify logistic units, much like a number plate for vehicles.

The SSCC can be used to record all physical movements of the logistic unit. Information about the logistic unit can be associated with the SSCC. For example, the weight and height of a logistic unit. Information about what is inside the logistic unit can also be associated with (e.g., GTIN, trade item description, count, etc.). This information can be shared between partners within EDI messages.

Using the SSCC to identify individual logistic units provides the opportunity to implement a wide range of applications such as cross docking, shipment routing, and automated receiving.

An SSCC can be applied to a single item, or a grouping of several items made up to facilitate the operation of handling, storing, and shipping. This can be:

- A carton
- A pallet
- A group of shrink-wrapped units
- A tray
- A container
- Any other similar type of packaging created for the purpose of handling, storing or shipping

Who assigns the SSCC?

The physical builder of the logistic unit or the brand owner of the logistic unit is responsible for the allocation of the SSCC.

Assigning a Serial Shipping Container Code (SSCC)

The SSCC is a unique, non-significant, eighteen-digit number which is assigned by the GTIN-allocator or physical builder of the logistic unit. It remains the same for the life of the logistic unit. The SSCC is encoded in a GS1-128 barcode and is represented by the Application Identifier AI (00).

GS1 Application Identifier	SSCC (Serial Shipping Container Code)																		
	Extension digit	GS1 Company Prefix →										Serial 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	N ₁₇	
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	

Table 1: Structure of the SSCC



An individual SSCC must not be reassigned 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.

How you assign an SSCC depends on the length of your allocated GS1 Company Prefix. Currently, GS1 Australia allocates GS1 Company Prefixes that vary in lengths to its membership, so it is important that you know the length of your GS1 Company Prefix when assigning SSCCs. Please note that other GS1 Member Organisations may allocate GS1 Company Prefixes of different lengths.

	AI	Ext. Digit	GS1 Company Prefix	Serial Reference	Check Digit
Seven-digit GS1 Company Prefix	00	0-9	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
Eight-digit GS1 Company Prefix	00	0-9	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
Nine-digit GS1 Company Prefix	00	0-9	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
Ten-digit GS1 Company Prefix	00	0-9	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

Table 2: Structure of the SSCC with varying GS1 Company Prefix lengths.

The Application Identifier (AI) is used to indicate that the data following is an 18-digit SSCC.

The 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 GS1 Company Prefix used should belong to the GTIN-allocator or physical builder of the logistic unit. It makes the SSCC unique worldwide but does not identify the origin of the unit.

The Serial Reference is structured at the discretion of the company responsible for its assignment to uniquely identify each logistic unit. The method used to assign the Serial Reference is at the discretion of the company assigning the SSCC.

The Check Digit is mathematically calculated to ensure that the whole number is correct. Correct calculation is essential for successful scanning of the barcode:

- A Check Digit Calculator Program which will automatically calculate the Check Digit can be obtained from the GS1 Australia website at <https://www.gs1au.org/resources/check-digit-calculator/> (Please remember to select SSCC button if you download the check digit calculator application) For manual calculation of the Check Digit refer to the [Manual Check Digit Calculation Fact Sheet](#).

Note: The AI (00) is not part of the Check Digit calculation.

Useful resources

- [GS1 Logistic Label fact sheet](#)