

Serial Shipping Container Code (SSCC) Implementation Guide

Executive Summary

There are many reasons to use the Serial Shipping Container Code (SSCC) but the most compelling would be the primary benefit of speeding your products through the process of shipping and receiving.

With the prevalence of e-business, there is an increasing need to exchange information electronically as well as track the movement and location of logistics units. A logistic unit is defined as any composition established for transport and/or storage, which needs to be tracked through the supply chain (cartons or pallets). Data exchange and tracking of logistics units is an application of the EAN.UCC System. This can be accomplished through the use of the Serial Shipping Container Code (SSCC).

When used as the “license plate” to identify specific information about cartons, pallets or even trailer loads of products, the SSCC will help accomplish the task of moving products from one trading partner to another quickly and efficiently. More importantly, the costs associated with moving and receiving products will be greatly reduced.

Key Benefits

The benefits of the SSCC are:

- Logistics Units are identified with a number that is unique worldwide.
- Provides a link with bar coded information on a logistics unit and the information that is communicated between trading partners via electronic business transactions.
- Voluntary standards are established for the EAN.UCC logistics label of which the SSCC is mandatory.
- Standards are global.
- Standards apply through the entire supply chain, from raw materials supplier to manufacturer to distributor/wholesaler to end user/retailer.
- The SSCC can be used for both inter and intra-company transactions.
- The SSCC encompasses a common vendor numbering scheme that uses the EAN.UCC Company Prefix so that the number cannot be duplicated.
- All numeric structure leads to faster data processing.

These guidelines are provided to help you understand what the SSCC can provide, when you should use it, and how it should be used.

Why Standards

Open, global standards:

- Allow system-to-system interaction
- Speed processes by enabling end-to-end automation
- Lower costs, reduce errors
- Reduces the risk of system incompatibility
- Protects technology investments
- Enables the optimization of supply chain management practices
- Eliminate supply chain roadblocks and bottlenecks

In today's competitive global marketplace, speed and efficiency is critical to success and survival. Producing a good product is no longer enough to keep a company competitive. Managing the physical flow of product with the electronic flow of business data is a major challenge in today's intensely competitive environment. The same time, attention, and detail that go into designing and producing a quality product must also be evident in the transmission of that product's business data through the supply chain. A system, built with standardized processes and a common business language, is needed to monitor and manage the movement of product and information through every component along the supply chain.

Definition

The unique identification of logistics units is achieved in the EAN.UCC System by the use of the SSCC (Serial Shipping Container Code). The SSCC is an 18-digit numeric data structure. The uniqueness of the data structure is ensured through the use of the EAN.UCC Company Prefix, which is supplied by the UCC or another EAN Member Organization. This Company Prefix, when combined with the serial number that is assigned by the member company, acts as an identifier or "license plate" and provides access to information stored in computer files, which are transferred through electronic business transactions.

Business Use

The SSCC is used in electronic messages such as the Advanced Ship Notice (ASN). When used in conjunction with electronic business transactions, information about the products that are contained in a particular carton, pallet or truck are linked to the SSCC and then scanned by the receiving party to speed trade items through the supply chain.

Examples of logistics units that need to be tracked through the supply chain with a unique number are pallets, cases, or cartons that may be assigned to a specific

customer, delivery, or purchase order. Logistics units that are marked with an SSCC often include multiples of the same trade item or a mixture of different trade items. In addition, the SSCC can be used to identify and track an entire trailer or truckload of products through the supply chain.

How the SSCC Works

A typical example using the SSCC in conjunction with an electronic transaction is described in the following steps:

1. A Buyer sends a Purchase Order to a Supplier.
2. The supplier begins to pick the order. As the order is picked, the supplier maintains a record of which products are picked and placed into a particular carton or pallet. GTINs[®] (Global Trade Item Numbers[®]) identifying the picked products and the quantity of each is information that would be collected during the picking process.
3. When the carton is closed, the supplier assigns an SSCC to that carton/pallet. The SSCC is cross-referenced in the database of the supplier with the contents of that particular carton/pallet.
4. The SSCC (or license plate) is encoded in a UCC/EAN-128 bar code on the shipping label and placed on the carton/pallet.
5. The supplier creates and transmits an electronic message known as the Advanced Ship Notice (the ASN or 856) to the buyer or receiving party. The ASN contains all the information concerning the order and each carton/pallet within the order that the buyer needs to know (quantity of GTINs, P.O. #, etc.) It is the responsibility of the supplier to ensure that the buyer receives the electronic transmission prior to the physical receipt of the product.
6. The buyer receives and processes the ASN and stores the information in their system.
7. The buyer, upon receipt of the electronic message (ASN) containing the serial number, can choose to use the information to schedule appointments for carriers to deliver the products and to schedule labor and equipment needed to unload and process the shipments.
8. The shipment is delivered to the receiving location.
9. The receiver scans the SSCC located on the carton/pallet.

10. The receiver's application retrieves the information that relates to the SSCC that was just scanned.
11. Using the SSCC as the search key, the system finds all the details for that carton/pallet.
12. The receiver is now able to process the carton/pallet without having to open the carton and manually account for the contents. It should be noted that this assumes that sufficient audits of prior shipments have been conducted to ensure the accuracy of the shipper. This process can account for significant cost savings while reducing the time to get the product to the destination (a specific department, reseller, customer, etc.)
13. The carton/pallet may now move directly to location in the receiving/distribution facility to be stocked for future orders, or cross-docked for shipment to a distribution center or customer.

Special Note

The SSCC can be used in a non-electronic environment as well. One application would be to have the SSCC that is affixed to the pallet act as a license plate for the supplier to internally track inventory while the pallet is still in the supplier's warehouse. Since the SSCC is only serving as an internal tracking number, the receiver of the marked pallet would not be able to match it to an ASN to determine its contents. However, the receiver could use the SSCC to manage the carton/pallet from the receiving dock to the put-away location if it is not disassembled.

SSCC Data Structure

Extension digit	EAN.UCC 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	N ₁₈

Extension digit, has no defined logic, and is available to the member company to increase the capacity of the Serial Reference.

EAN.UCC Company Prefix – the number assigned to your company by either an EAN Member Organization or by the UCC. The inclusion of the EAN.UCC Company Prefix ensures uniqueness throughout the world. The EAN.UCC Company Prefix is assigned to companies in varying lengths. Note: A UCC Company Prefix is converted to an EAN.UCC Company Prefix by adding a leading zero. Examples: the UCC Company Prefix 614141 will be 0614141 and the UCC Company Prefix 81123456 will be 081123456.

Serial Reference – the number assigned by the holder of the EAN.UCC Company Prefix to uniquely identify the logistic unit. The Serial Reference varies in length as a function of the EAN.UCC Company Prefix length. Note: The combined length of the EAN.UCC Company Prefix and Serial Reference is always 16 digits.

Check Digit – a calculated one-digit number used to ensure data integrity. To understand how this digit is calculated; visit the UCC at www.ucc-council.org/checkdig.htm.



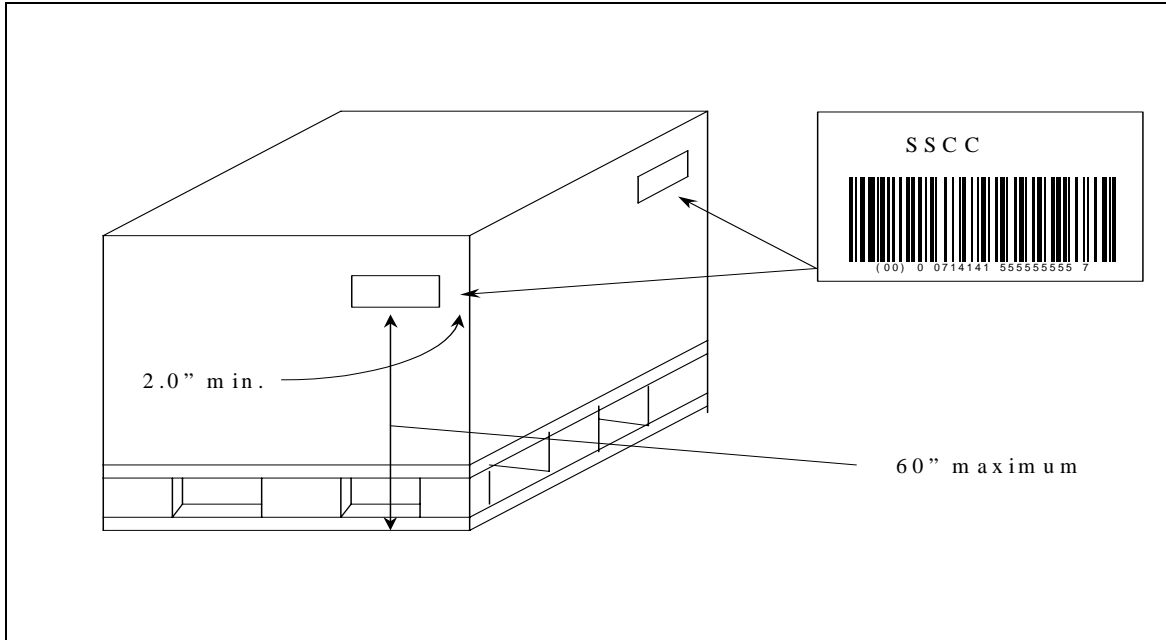
Example of an SSCC with a 6-digit UCC Company Prefix

Example of an SSCC with an 8-digit UCC Company Prefix

Example of an SSCC on a pallet

Each pallet should have at least one bar code. It is recommended, however, that a pallet should contain an additional bar code on the adjacent side. This is especially helpful when the pallet is turned sideways in the truck or on the rack in the warehouse.

The SSCC should appear on the upper right half side of the pallet. Labels with bar codes should appear on the side of the pallet, from 14” to 28” above the surface on which the pallet stands.



Buyer and Receiver Issues for Scanning

As with all scanning applications, it is important to refer to the following best practices:

1. Scanners and related firmware and software

It is important to note that scanning products at the warehouse level or back door of a retail store is different than scanning at the point of sale. For this reason, be sure that the equipment that you choose can read EAN/UPC, ITF-14 and UCC/EAN-128 symbols. Your equipment provider can supply you with the necessary information.

2. Tracking Issues

Allow for some type of quality control process that will allow you to quickly identify a trading partner whose cartons or items are not scanning correctly.

All EAN.UCC Identification Numbers

EAN.UCC identification numbers, or keys, identify:

- **Trade items:** Products and services upon which there is a need to retrieve pre-defined information at any point in the supply chain (Global Trade Item Number/**GTIN**).
- **Logistic units:** Physical units established for transport and storage of goods of any kind that need to be tracked and traced individually in a supply chain (Serial Shipping Container Code/**SSCC**).

- **Assets:** Fixed or returnable assets (Global Individual Asset Identifier/**GIAI**, Global Returnable Asset Identifier/**GRAI**).
- **Locations:** Physical locations, functional entities, or legal entities requiring a permanent identification, such as a company, department, or warehouse (Global Location Number/**GLN**).
- **Service Relations:** Public or private service provider to track any entity's service requirements and needs over a continuing relationship (Global Service Relation Number/**GSRN**).

Frequently Asked Questions

1. Does my company need another UCC Company Prefix to use SSCCs?

No. The UCC Company Prefix that you already have been assigned is used in the SSCC.

2. What are some examples of when I should apply an SSCC?

A shipping container could be a case, carton, pallet, or air cargo container of trade items.

3. Should the GTIN be included in the SSCC?

No. GTIN information is included in the ASN (Advanced Ship Notice) that is sent to the receiver of the product prior to shipment. The SSCC acts as a license plate number. That number is linked to the ASN and provides access to the GTIN information.

4. How is an SSCC different than a GTIN?

An SSCC acts as a license plate that is used to track a shipment of logistics units through the supply chain. The GTIN uniquely identifies trade items (products and services).

5. Can the SSCC be used at the point of sale?

No. The SSCC is only used at the distribution or warehouse environment and is not a GTIN.

6. What is an Extension digit?

The Extension digit is available to the member company to increase the capacity of the number. It has no defined logic.

7. Do I need to purchase special equipment to scan an SSCC?

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

8. How many SSCCs can I create?

With a 6-digit UCC Company Prefix, one can assign 10 billion SSCCs (1 digit Extension digit times a 9 digit Serial Reference). With an 8-digit UCC Company Prefix, one can assigned 100 million SSCCs (1 digit Extension digit times a 7 digit Serial Reference).

9. Do I need to put more than one SSCC label on a carton or pallet?

Each logistics unit should have at least one bar code. It is recommended that a pallet should contain an additional bar code on the adjacent side.

Standard Reference

The UCC Solutions Center[®] - your one-stop source for EAN.UCC System tools to help you **improve supply chain management and conduct business more productively**. You will find the essential education and implementation resources you need to:

- Integrate and utilize the standards of the EAN.UCC System in your business
- Guide you through the bar coding process
- Improve the efficiency of your electronic commerce activities
- Uniquely identify your company's products, assets, locations, and logistics units throughout the global supply chain

Specifically, *Bar Codes for Different Uses* will guide you through the implementation process, giving you specific solutions and guidelines to properly mark products and logistics units for use within the EAN.UCC System. This easy-to-follow system will guide you through the essentials of the bar coding process to help you:

- Assess where you will use the bar code
- Determine the specific information to include in the bar code
- Prepare bar code specifications for those responsible for printing your bar codes

A preview can be seen at www.uc-council.org/solutionscenter.

Glossary

<http://usnet03.uc-council.org/glossary>

Further Help

E-mail: <mailto:info@uc-council.org>

Phone: 1.937.435.3870

Web site: <http://www.uc-council.org/>