



## **Using GS1 Application Identifiers**

Adding Application Identifiers by using the  
BarTender Application Identifier Wizard

Supports the following BarTender software versions:  
BarTender 2016, BarTender 2019

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## Overview

An *Application Identifier* is a number at the beginning of a string of data that identifies the intended interpretation of the data that follows. It also identifies the size of the data. The GS1 specifications define numerous Application Identifiers, such as serial number or expiration date.

Some Application Identifiers specify data fields that contain a fixed number of characters, while others specify data fields that contain a variable number of characters. For example, the Global Trade Item Number (GTIN) shown here is a fixed-length field that contains exactly 14 characters. The Application Identifier for a container code is "01". The "6" on the end is a check digit that BarTender generates.



The serial number is a variable-length field that may contain up to 20 characters. Its Application Identifier is "21," and no check digit is required.



Multiple Application Identifiers and their data fields can be combined into a single barcode.



When a variable-length data field is combined with other fields in a barcode, it must be immediately followed by a field separator character (unless it is the last field in the barcode symbol – see the following note). The FNC1 character, "^1", acts as this field separator. It signals that the variable-length data field has ended and that another data field is beginning. (This character is suppressed in the human readable part of the barcode.)



When you are concatenating multiple Application Identifiers and their fields but only one of them is of variable length, we recommend that you place the variable-length field at the end of the symbol, so that you won't have to use a separator character.

The BarTender Application Identifier wizard makes it easy to construct barcodes that have the Application Identifiers and field separator characters inserted correctly. (The wizard is not available in the Basic or UltraLite editions). This white paper shows examples of how to use the wizard.

For more information, refer to the [GS1 Application Identifier Data Source Wizard](#) topic in the BarTender help system.

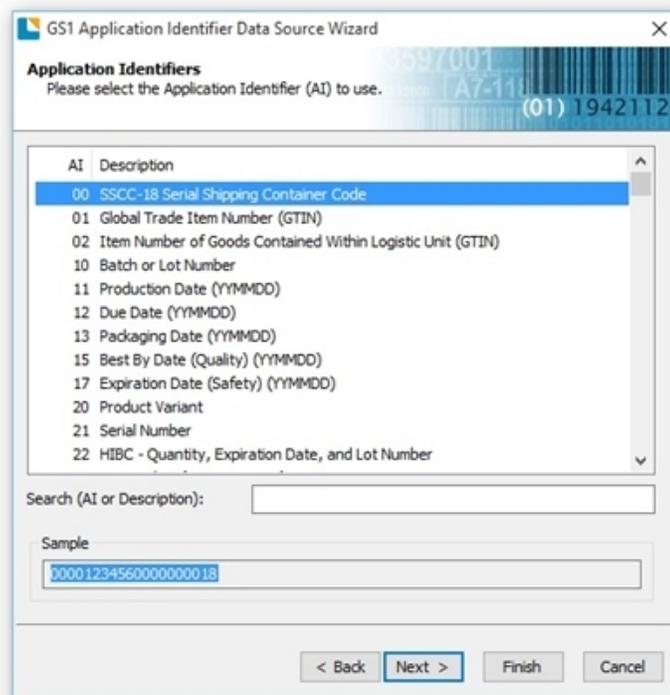
## Example 1: Single Application Identifier

This example shows how to use the Application Identifier wizard to construct a single barcode that has a single Application Identifier and its associated data string.

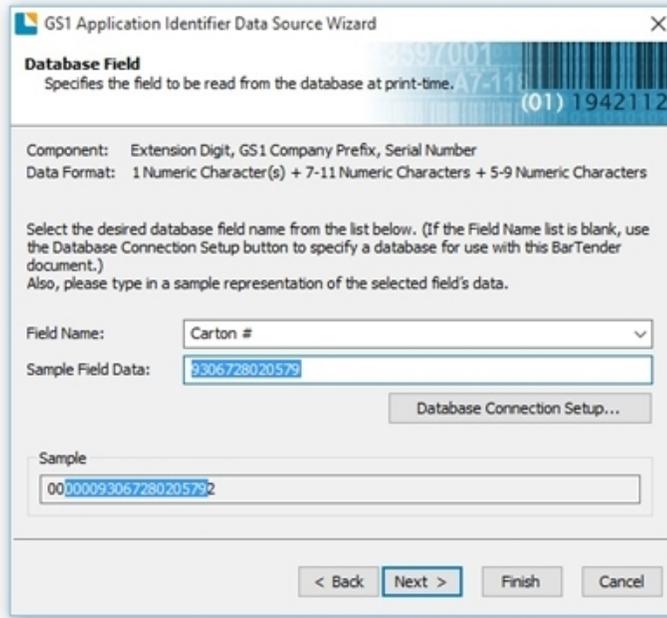
In this scenario, a box must have a simple barcode label that contains the serial shipping container code (SSCC) number.

### To construct this barcode:

1. Open BarTender.
2. Create a new BarTender document. Select and configure the printer stock by using the New Document wizard.
3. On the **object toolbar**, click the  icon to open the **Select Barcode** dialog.
4. In the search bar, enter "GS1-128" (without the quotation marks). Click the first barcode that appears, and then click **Select**.
5. Click anywhere on your template to add the barcode.
6. Double-click the barcode object. The **Barcode Properties** dialog opens.
7. In the navigation pane, click **Symbology and Size**.
8. Click **GS1 Application Identifier Data Source Wizard** to start the Application Identifier wizard.
9. On the **Welcome** page, click **Next**.
10. On the **Application Identifiers** page, use either the Search field or the scroll bars to select the Application Identifier that you want, and then click **Next**. (In this example, use **00 SSCC-18 Serial Shipping Container Code**)



11. On the **Data Source Linking** page, click to select **One data source for all components**, and then click **Next**.
12. On the **Select Data Source Type** page, select a data source from the **Type** list. The options that are available depend on the Application Identifier that you selected. For example, the **Clock** data source type is not an available option for a container code, but it is for an expiration date. In this example, select **Database Field**, and then click **Next**.
13. On the **Database Field** page, select the field in the **Field Name** list that will provide the data for the shipping code. You can also change the default data for the field in the **Sample Field Data** box. Click **Next**.



If the database connection has not already been set up, the **Field Name** list is empty. To create a database connection, click **Database Connection Setup** and then follow the steps in the Database Connection wizard.

14. On the **Append More Data** page, you have the option to concatenate another Application Identifier and data field. For this example, click to select **No, I don't need any more**, and then click **Next**.
15. On the **Finished** page, click **Finish** to close the wizard.
16. In the **Barcode Properties** dialog, click **Close**. You should now have a barcode that looks like the following.

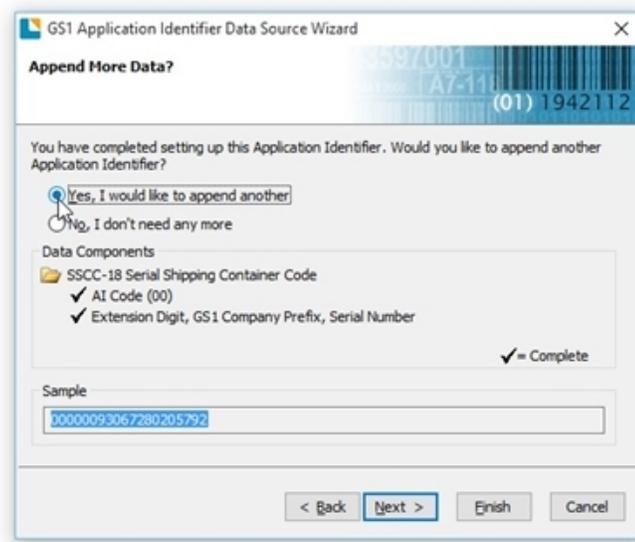


## Example 2: Two Concatenated Application Identifiers

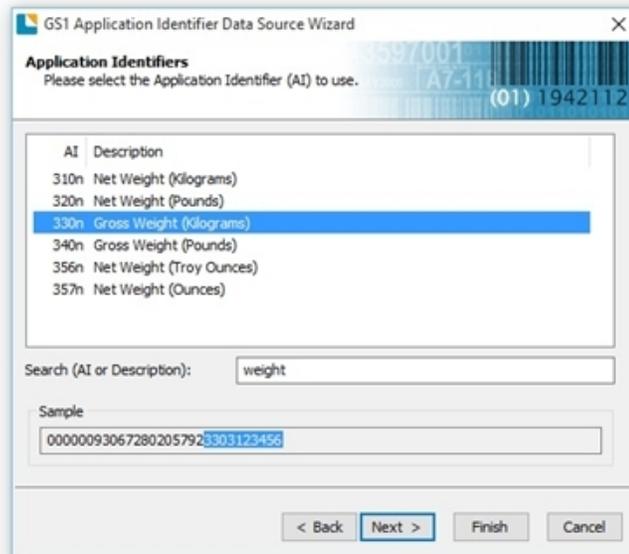
This example shows how to construct a barcode that has two Application Identifiers, each followed by a data field. In this scenario, an outer shipping carton needs a label that has a barcode that contains a serial shipping container code (SSCC) and the weight of the carton.

The first 13 steps are exactly the same as described in the [Example 1](#) chapter of this white paper. Complete those steps, and then continue as follows:

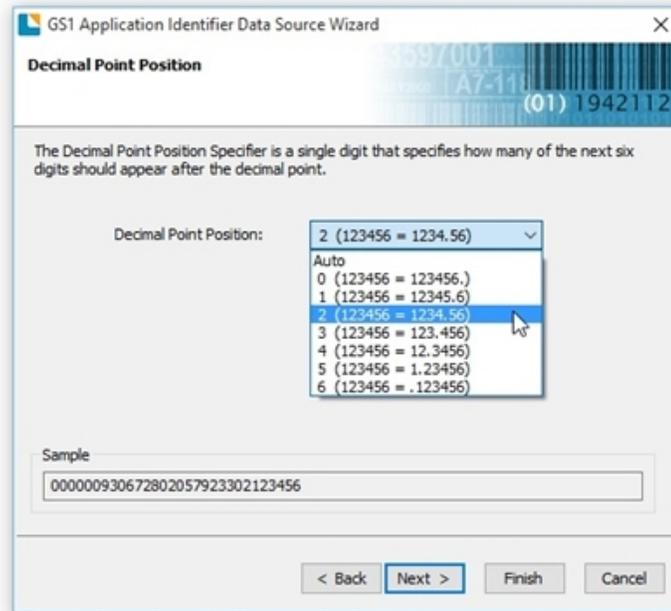
1. On the **Append More Data** page, click to select **Yes, I would like to append another**, and then click **Next**.



2. On the **Application Identifiers** page, enter “weight” in the Search box to filter the available Application Identifiers, and then select **330n Gross Weight (Kilograms)**. Click **Next**.



- On the **Ready to Setup Data Component** page, the arrow shows that the next step is to specify where the decimal point will be. **Click Next.**
- On the **Decimal Point Position** page, select the decimal point position that you want from the list, and then click **Next.** (In this example, select option 2.)



- On the **Ready to Setup Data Component** page, the arrow shows that the last step is to configure the data field itself. **Click Next.**
- On the **Select Data Source Type** page, select **Embedded Data** from the **Type** list, and then click **Next.**
- On the **Embedded Data** page, enter the data for the field. In this example, use 21.46 kg. **Click Next.**
- On the **Append More Data** page, click to select **No, I don't need any more**, and then click **Next.**
- On the **Finished** page, click **Finish** to close the wizard.
- In the **Barcode Properties** dialog, click **Close.** You should now have a barcode that looks like the following.



## Related Documentation

### BarTender Help System

- [Understanding Barcode Symbologies](#)
- [GS1-128 \(UCC/EAN-128\) and Application Identifier Specification](#)
- [GS1 Application Identifier Data Source Wizard](#)
- [Barcode Object](#)

### Other Resources

Please visit the Seagull Scientific Barcode Guide at <https://barcodeguide.seagullscientific.com/Content/gettingStarted.htm>.

- GS1  
<https://barcodeguide.seagullscientific.com/Content/GS1.htm>

To learn more, please visit the GS1 website at <https://www.gs1.org>.

- GS1 Application Identifiers (PDF)  
<https://www.gs1.org/sites/default/files/docs/barcodes/GS1 Application Identifiers.pdf>
- GS1 General Specifications (PDF)  
[https://www.gs1.org/docs/barcodes/GS1\\_General\\_Specifications.pdf](https://www.gs1.org/docs/barcodes/GS1_General_Specifications.pdf)

