

**Technical Document** English

# Using GS1 **Application Identifiers**

#### ADDING APPLICATION IDENTIFIERS BY USING THE BARTENDER<sup>®</sup> APPLICATION IDENTIFIER WIZARD

SUPPORTS: BARTENDER<sup>®</sup> 2016 AND LATER VERSIONS



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### **Overview**

An *Application Identifier* (AI) is a number at the beginning of a data field that identifies how the data that follows should be interpreted. In some cases, it also identifies the length of the data. The GS1 *General Specifications* standard defines numerous AIs, such as serial number or expiration date.

Some Als specify data fields that contain a fixed number of characters, while others specify data fields that contain a variable number of characters. For example, following symbol includes an Al of "01," which specifies that the data that follows is a Global Trade Item Number (GTIN). Depending on the GTIN type, the data field includes exactly 8, 12, 13, or 14 characters and a check digit.



The following symbol represents a serial number, which is a variable-length data field that can contain up to 20 characters. Its AI is "21," and no check digit is required.



Multiple Als and their data fields can be combined into a single barcode, as shown in the following symbol.



(01) 0 0614141 99999 6 (21) 65381468

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 concatenate multiple AIs and their data 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 Als and field separator characters inserted correctly. The wizard is available in the Professional, Automation, and Enterprise editions of BarTender. This technical document provides examples of how to use the wizard. For more information, refer to the <u>GS1 Application Identifier Data Source Wizard</u> topic in the BarTender help system.

## **Example 1: Single Application Identifier**

This example shows how to use the Application Identifier wizard to construct a barcode that has a single AI and its associated data field. The data in the data field is drawn from a database that you connect to. For this example, suppose that a shipping carton requires a barcode label that contains a serial shipping container code (SSCC) number.

To construct this barcode, follow these steps:

- 1. In BarTender, create a new document, and then select and configure the printer stock by using the New Document wizard.
- 2. On the object toolbar, click the  $\frac{100}{123}$  icon to open the Select Barcode dialog.
- 3. In the search bar, enter GS1-128. Click the first barcode that appears, and then click Select.
- 4. Click the location on your template where you want to place the barcode.
- 5. Double-click the barcode object. The Barcode Properties dialog opens.
- 6. In the navigation pane, click Symbology and Size.
- 7. Click GS1 Application Identifier Data Source Wizard to start the Application Identifier wizard.
- 8. On the Welcome page, click Next.
- 9. On the **Application Identifiers** page, use the **Search** field or the scroll bar to locate and select the AI that you want. For this example, use **00 SSCC-18 Serial Shipping Container Code**. Then, click **Next**.

AI	Description
00	SSCC-18 Serial Shipping Container Code
01	Global Trade Item Number (GTIN)
02	Item Number of Goods Contained Within Logistic Unit (GTIN)
10	Batch or Lot Number
11	Production Date (YYMMDD)
12	Due Date (YYMMDD)
13	Packaging Date (YYMMDD)
15	Best By Date (Quality) (YYMMDD)
17	Expiration Date (Safety) (YYMMDD)
20	Product Variant
21	Serial Number
22	HIBC - Quantity, Expiration Date, and Lot Number
rch (A ample	I or Description):

10. On the **Data Source Linking** page, click to select **One data source for all components**, and then click **Next**.

- 11. On the Select Data Source Type page, select a data source from the Type list. The options that are available depend on the AI that you selected. (For example, the **Clock** data source type is not an available option for an SSCC, but it is available for an expiration date.) For this example, select Database Field, and then click Next.
- 12. On the Database Field page, select the field in the Field Name list that will provide the data for the SSCC. You can also change the default data for the field in the Sample Field Data box. Click Next.

A AND A POIL CALL	nsion Digit, GS1 Compa	ny Prefix, Se	rial Number		
Data Format: 1 Nur	meric Character(s) + 7	-11 Numeric C	Characters +	5-9 Numeric	Characters
Select the desired da	tabase field name from	n the list belo	w. (If the Fie	d Name list	is blank, use
the Database Conne	ction Setup button to	specify a data	abase for use	with this Ba	rTender
Also, please type in a	a sample representatio	n of the selec	ted field's da	ata.	
	Carton #				~
Field Name:	Cartori #				
Field Name: Sample Field Data:	9306728020579				
Field Name: Sample Field Data:	9306728020579		Database	Connection	Setup
Field Name: Sample Field Data: Sample	9306728020579		Database	Connection :	Setup
Field Name: Sample Field Data:	9306728020579		Database	Connection :	Setup

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.

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



## **Example 2: Two Concatenated Application Identifiers**

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

The first 12 steps are exactly the same as described in the Example 1 chapter of this technical document. 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.

	A7-11 (01) 194211
You have completed setting up th Application Identifier?	is Application Identifier. Would you like to append another
Nes, I would like to append	another
GNo, I don't need any more	
Data Components SSCC-18 Serial Shipping Cor ✓ AI Code (00) ✓ Extension Digit, GS1 Cor	ntainer Code mpany Prefix, Serial Number
	✓= Complete
Sample	
00000093067280205792	

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

	101101101101
AI	Description
310n	Net Weight (Klograms)
320n	Net Weight (Pounds)
330n	Gross Weight (Kilograms)
340n	Gross Weight (Pounds)
356n	Net Weight (Troy Ounces)
357n	Net Weight (Ounces)
rch (AI	or Description): weight
ample	
000000	930672802057923303123456

- 3. 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**.
- 4. On the **Decimal Point Position** page, select the decimal point position that you want in the list, and then click **Next**. For this example, select option 2, as shown.

ecimal Point Position		
contair rome rosición		110
		(01) 19421
he Decimal Point Position Specifier is ligits should appear after the decimal	a single digit that specifies how point.	many of the next six
Decimal Point Position:	2 (123456 = 1234 56)	~
occandir oner outon.	2 (120400 = 1204.00) Auto	
	0 (123456 = 123456.)	
	1 (123456 = 12345.6)	_
	2(123456 = 1234.56) 3 (123456 = 123.456)	- Lot
	4 (123456 = 12.3456)	
	5(123456 = 1.23456) 6(123456 = 123456)	
	0 (123430 = .123430)	
Sample		
0000009306728020579233021234	56	

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



(00) 0 0009306 728020549 5 (3302) 002146

## **Related Documentation**

#### **Technical Documents**

To view and download technical documents, visit:

https://www.seagullscientific.com/resources/white-papers/

#### **User Guides**

Getting Started with BarTender
 https://support.seagullscientific.com/hc/categories/200267887

#### **BarTender Help System**

- GS1-128 (UCC/EAN-128) and Application Identifier Specification
- GS1 Application Identifier Data Source Wizard
- Barcode Object

#### **Other Resources**

Please visit the BarTender website at https://www.seagullscientific.com.

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

 GS1 https://barcodeguide.seagullscientific.com/Content/GS1.htm

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

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

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