

# User Manual

## KA.Barcode for .NET WinForms

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## **1. Compatibility & Requirements**

### **1.1. Development Environments**

- Visual studio 2005/2008/2010 installed
- .NET Version is greater than 2.0
- VB.NET, C#.NET, or Borland Delphi

### **1.2. Compatible Project Types**

- Windows Forms Application (design-time and runtime support)
- NET Console Application (runtime support)
- .NET Class Library (runtime support)
- Windows Service (runtime support)

### **1.3. Compatible Operating Systems**

- Windows 7
- Windows Server 2008
- Windows Vista
- Windows Server 2003
- Windows XP
- Windows Server 2000

### **1.4. Test Environment**

- Microsoft Windows XP
- Microsoft Visual Studio 2005
- Visual C#.NET

## 2. Installation

Download and unzip the evaluation, and you will find "[KeepAutomation.Barcode.Windows.dll](#)" in the package.

### 2.1. Add Project Reference

Add "[KeepAutomation.Barcode.Windows.dll](#)" to your Visual Studio Reference.

- Click "[Project](#)" and select "[Add Reference...](#)".
- Click "[Browse](#)" to locate your "[KeepAutomation.Barcode.Windows.dll](#)", and click "[OK](#)".
- Now you'll find "[KeepAutomation.Barcode.Windows](#)" in the References.

### 2.2. Add Control to Toolbox

Add "[KeepAutomation.Barcode Windows.dll](#)" to Visual Studio Toolbox.

- Click "[View](#)" and select "[Toolbox](#)", then right click in Toolbox and select "[Choose Items...](#)".
- Click "[Browse](#)" to locate your unzipped file "[KeepAutomation.Barcode.Windows.dll](#)" and click "[open](#)", then "[OK](#)".
- Now "[BarCodeControl](#)" is in your toolbox, and you can drag it into windows forms to create barcodes.

## 3. How To Use

### 3.1. Generate Barcode on .NET Windows Forms

- Copy "[KeepAutomation.Barcode.Windows.dll](#)" to your WinForms project folder.
- Add "[KeepAutomation.Barcode.Windows.dll](#)" to .NET Visual Studio Toolbox.
- Drag and drop "[BarCodeControl](#)" to the windows form and a Codabar image is generated.
- Change barcode type and adjust barcode parameters in the "[Properties](#)" panel.

### 3.2. Generate Barcode in .NET WinForms Class

- Add "[KeepAutomation.Barcode.Windows.dll](#)" to project reference.
- Use the following C# or VB.NET sample code to string barcode in .NET WinForms.

C# sample code: (using Code 128 as an example)

```
using KeepAutomation.Barcode.Bean;

BarCode barcode= new BarCode();

barcode.Symbology= KeepAutomation.Barcode.Symbology.Code128Auto;

barcode.CodeToEncode = "Code 128";

barcode.generateBarcodeToImageFile("C://barcode-code128-csharp.png");
```

VB.NET sample code: (using Code 128 as an example)

```
Dim barcode As KeepAutomation.Barcode.Bean.BarCode

= New KeepAutomation.Barcode.Bean.BarCode

barcode.Symbology= KeepAutomation.Barcode.Symbology.Code128Auto

barcode.CodeToEncode = "Code 128"

barcode.generateBarcodeToImageFile("C://barcode-code128-vbnet.png")
```

## 4. Barcode Advanced Settings

### 4.1. 1D / 2D Barcode Basic Properties

Below is a table of linear and 2d barcodes basic properties supported by KA.Barcode for .NET WinForms.

#### 4.1.1. Barcode Basic

Class Attribute	HTTP Attribute	Default Value
Symbology	symbology	Code128Auto
Comment: Barcode symbology type		
CodeToEncode	code-to-encode	"128"
Comment: Barcode value to encode.		
ChecksumEnabled	checksum-enabled	false
Comment: Set to true, adding barcode checksum digit.		
ImageFormat	image-format	ImageFormat.Png
Comment: Barcode encoded image format.		

#### 4.1.2. Barcode Size

Class Attribute	HTTP Attribute	Default Value
BarcodeUnit	barcode-unit	BarcodeUnit.Pixel
Comment: Unit of measure for all size related settings. 0: pixel; 1: inch; 2: cm.		
X	x	1
Comment: Barcode module width (narrow bar).		

Class Attribute	HTTP Attribute	Default Value
Y	y	50
Comment: Linear barcode bar height / 2D barcode module height.		
LeftMargin	left-margin	0
Comment: Barcode image left margin.		
RightMargin	right-margin	0
Comment: Barcode image right margin.		
TopMargin	top-margin	0
Comment: Barcode image top margin.		
BottomMargin	bottom-margin	0
Comment: Barcode image bottom margin.		
DPI	dpi	72
Comment: Barcode image resolution in dpi.		
Orientation	orientation	Orientation.Degree0
Comment: Barcode rotation angle.		
BarCodeWidth	barcode-width	0
Comment: Whole barcode width.		
BarCodeHeight	barcode-height	0
Comment: Whole barcode height.		

#### 4.1.3. Barcode Text Style

Class Attribute	HTTP Attribute	Default Value
DisplayText	display-text	true
Comment: Set to true, displaying barcode value text, otherwise do not display.		



Class Attribute	HTTP Attribute	Default Value
DisplayChecksum	displace-checksum	true
Comment: Set to true, displaying barcode checksum digit, otherwise do not display.		
TextFont	text-font	new Font("Arial", 10f, FontStyle.Regular)
Comment: Barcode text font style.		
TextMargin	text-margin	6
Comment: Margin between barcode and text.		

## 4.2. 1D / Linear Barcode Special Properties

### 4.2.1. Codabar

Class Attribute	HTTP Attribute	Default Value
CodabarStartChar	codabar-start-char	CodabarStartStopChar.A
Comment: Barcode Codabar starting char. Options 'A', 'B', 'C', 'D'.		
CodabarStopChar	codabar-stop-char	CodabarStartStopChar.A
Comment: Barcode Codabar stopping char. Options 'A', 'B', 'C', 'D'.		

### 4.2.2. Code 2 of 5

Class Attribute	HTTP Attribute	Default Value
WideNarrowRatio	wide-narrow-ratio	2.0f
Comment: Code 2 of 5 wide bar width vs narrow bar width ratio.		

#### 4.2.3. Code 39

Class Attribute	HTTP Attribute	Default Value
DisplayStarStop	display-start-stop	true
Comment: Set to true, displaying Code 39 Start and Stop character (*).		
I	i	1
Comment: Code 39 inter-characters space. It's a multiple of X.		
WideNarrowRatio	wide-narrow-ratio	2.0f
Comment: Code39 wide bar width vs narrow bar width ratio.		

#### 4.2.4. Code 128 / EAN-128

Class Attribute	HTTP Attribute	Default Value
ApplicationIndicator	application-indicator	0
Comment: Set to specify a Code 128 is a GS1-128 barcode.		
FNC1	fnc1	FNC1.None
Comment: Apply to encode GS1 compatible Code 128.		
TildeEnabled	tilde-enabled	false
Comment: Set to true, specifying special characters in Code 128 / EAN-128 data.		

#### 4.2.5. EAN-8 / EAN-13 / UPC-A / UPC-E / ISBN / ISSN

Class Attribute	HTTP Attribute	Default Value
SupplementCode	supplement-code	-
Comment: EAN, UPC, ISBN, or ISSN supplement barcode value to encode.		

Class Attribute	HTTP Attribute	Default Value
SupplementHeight	supplement-height	0.8
Comment: EAN, UPC, ISBN, or ISSN supplement barcode height.		
SupplementSpace	supplement-space	15
Comment: EAN, UPC, ISBN, or ISSN supplement barcode space.		

#### 4.2.6. ITF-14

Class Attribute	HTTP Attribute	Default Value
BearerBarLeft	bearer-bar-left	1
Comment: ITF-14 left and right bearer bars. It's a multiple of X.		
BearerBarTop	bearer-bar-top	1
Comment: ITF-14 top and bottom bearer bars. It's a multiple of X.		
WideNarrowRatio	wide-narrow-ratio	2.0f
Comment: ITF-14 wide bar width vs narrow bar width ratio.		

#### 4.2.7. Identcode / Leitcode / Interleaved 2 of 5

Class Attribute	HTTP Attribute	Default Value
WideNarrowRatio	wide-narrow-ratio	2.0f
Comment: Identcode, Leitcode, or Interleaved 2 of 5 wide bar width vs narrow bar width ratio.		

#### 4.2.8. PLANET / POSTNET

Class Attribute	HTTP Attribute	Default Value
ShortTallRatio	short-tall-ratio	short-tall-ratio
Comment: POSTNET and PLANET short bar height vs tall bar height ratio.		

### 4.3. 2D / Matrix Barcode Special Properties

Class Attribute	HTTP Attribute	Default Value
GroupEnabled	group-enabled	false
Comment: Set to enable Data Matrix, PDF417, or QR Code group function.		
GroupItemCount	group-item-count	0
Comment: Data Matrix, PDF417, or QR Code group count.		
GroupItemId	group-item-id	0
Comment: Data Matrix, PDF417, or QR Code group item id.		
GroupId	group-item-id	0
Comment: Data Matrix, PDF417, or QR Code group item.		

#### 4.3.1. Data Matrix

Class Attribute	HTTP Attribute	Default Value
ApplicationIndicator	application-indicator	0
Comment: Set to specify a Data Matrix is GS1 compatible.		
DataMatrixDataMode	data-matrix-data-mode	DataMatrixDataMode.Auto
Comment: Set Data Matrix data encoding mode.		
DataMatrixFormatMode	data-matrix-format-mode	DataMatrixFormatMode.FM_12X12
Comment: Set Data Matrix format mode, including 24 square and 6 rectangle formats.		
FNC1	fnc1	FNC1.None
Comment: Apply to encode GS1 compatible Data Matrix.		
TildeEabled	application-indicator	false
Comment: Set to true, specifying special characters in Data Matrix data.		

### 4.3.2. PDF417

Class Attribute	HTTP Attribute	Default Value
PDF417DataMode	pdf417-data-mode	PDF417DataMode.Text
Comment: Set PDF417 data encoding mode.		
PDF417ECL	pdf417-ecl	PDF417ECL.ECL_2
Comment: Set PDF417 error correction level, from L0 to L8.		
PDF417RowCount	pdf417-row-count	3
Comment: Set PDF417 row count, from 3 to 90.		
PDF417ColumnCount	pdf417-column-count	5
Comment: Set PDF417 column count, from 1 to 30.		
PDF417Truncated	pdf417-truncated	false
Comment: Apply to encode Truncated PDF417.		
TildeEnabled	application-indicator	false
Comment: Set to true, specifying special characters in PDF417 data.		

### 4.3.3. QR Code

Class Attribute	HTTP Attribute	Default Value
ApplicationIndicator	application-indicator	0
Comment: Set to specify a QR Code is GS1 compatible.		
FNC1	fnc1	FNC1.None
Comment: Apply to encode GS1 compatible QR Code.		
QRCodeDataMode	qrcode-data-mode	QRCodeDataMode.Auto
Comment: Set QR Code data encoding mode.		

Class Attribute	HTTP Attribute	Default Value
QRCodeECL	qrcode-ecl	QRCodeECL.L
Comment: Set QR Code error correction level, including L, M, Q, H.		
QRCodeVersion	qrcode-version	QRCodeVersion.V1
Comment: Set QR Code version, from V1 to V40.		
QRCodeECI	qrcode-eci	3
Comment: QR Code column Extended Channel Interpretations.		
TildeEabled	tilde-enabled	false
Comment: Set to true, specifying special characters in QR Code data.		

## 5. Barcode Generation Methods

### 5.1. Encode Barcode to C# Objects

```
public void generateBarcodeToGraphics(Graphics graphics);  
public Bitmap generateBarcodeToBitmap();  
public void generateBarcodeToImageFile(string filename);  
public void generateBarcodeToStream(Stream fileStream);
```

### 5.2. Encode Barcode to VB.NET Objects

```
public Sub generateBarcodeToGraphics(ByVal graphics As Graphics)  
public Function generateBarcodeToBitmap() As Bitmap  
public Sub generateBarcodeToImageFile(ByVal filename As String)  
public Sub generateBarcodeToStream(ByVal fileStream As Stream)
```

## Online Guide

[http://www.keepautomation.com/guide/winforms\\_barcode\\_generator.html](http://www.keepautomation.com/guide/winforms_barcode_generator.html)

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