

# The doibanner package

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## Abstract

The `doibanner` package allows to generate a banner for a declared **digital object identifier** (DOI). It provides the `\doibanner` macro, which draws the banner using TikZ and adds a link via `hyperref`, if desired. Its output can be scaled by `adjustbox` and it might look as follows:



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## 1 Introduction

I published several documents on *Zenodo*, a general-purpose open repository. They offer to register a **digital object identifier** (DOI) for an entry and download a banner of it. The latter can be added to contents foreseen for the entry, or e.g. when referring to the entry in a slide deck.

Since I frequently use such banners in  $\text{\LaTeX}$  documents, I decided to create a package that generates a similar banner and includes a link to the corresponding URL. Additionally, this package eliminates the need to manually download the banner and manage a file that might be used across multiple documents.

Due to the motivation, the resulting banner is heavily inspired by the design applied in the banner offered by *Zenodo*. It is drawn using the `tikz` package, a link to its URL can be included with `hyperref`, and it can be scaled using `adjustbox`.

The application of this package is not limited to *Zenodo* depositions, it can be used to create a banner for a DOI that can be included in any  $\text{\LaTeX}$  document.

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\*doibanner v0.3 ([source code](#))

## 2 Usage

Load the package in your document's preamble and specify any of the options described in the next subsection as follows:

```
\usepackage[option(s)]{doibanner}
```

### 2.1 Options

In order to change the default behaviour of this package, declare one or more of the options described in this subsection with your desired value.

- `label=string` (default: DOI) specifies the label (left part) of the DOI banner generated by `\doibanner`. The widths of the left and right part of the banner are fixed and do currently not take the length of the text displayed on top into account. Consequently, only a short expression should be declared as value for the option `label`.
- `urlbase=string` (default: <https://doi.org/>) specifies the base URL to convert a DOI string into its URL, for normal use cases this does not require any adjustment.
- `width=dimen` (default: 3.6cm) specifies the total width of the DOI banner generated by `\doibanner`. The widths of the individual parts of the banner are fixed and can currently not be changed.

### 2.2 Macros

```
\doibanner[dimen]{string}
```

A DOI banner can be created using the command `\doibanner`, which requires a DOI string as argument. Moreover, a [*dimen*] option can be defined. The latter specifies the banner's width. If it is not declared, the value of the `width` package option is taken into account (default: 3.6cm).

- `\doibanner` An execution of `\doibanner{xx.xxxx/yyyyyy.zzzzzzzz}` results in this banner: DOI [xx.xxxx/yyyyyy.zzzzzzzz](https://doi.org/xx.xxxx/yyyyyy.zzzzzzzz). If a banner with a width of let's say 3 cm is desired, it can be achieved by specifying the macro option `width` accordingly (`\doibanner[width=3cm]{xx.xxxx/yyyyyy.zzzzzzzz}`): DOI [xx.xxxx/yyyyyy.zzzzzzzz](https://doi.org/xx.xxxx/yyyyyy.zzzzzzzz).
- `\doibanner*` The starred version of the command leads to the same banner, but it does not contain a link to the DOI's URL: DOI [xx.xxxx/yyyyyy.zzzzzzzz](https://doi.org/xx.xxxx/yyyyyy.zzzzzzzz).

```
\doiurl{string}
```

- `\doiurl` An URL is generated by appending the provided *string* to the string defined as the package option `urlbase`. The resulting link is labelled with the DOI string. A call of `\doiurl{xx.xxxx/yyyyyy.zzzzzzzz}` results in [xx.xxxx/yyyyyy.zzzzzzzz](https://doi.org/xx.xxxx/yyyyyy.zzzzzzzz).
- `\doiurl*` The command is also available as starred version, which prints the full URL instead of the DOI string and does not include a link. Its output for the aforementioned example is as follows: <https://doi.org/xx.xxxx/yyyyyy.zzzzzzzz>.

## 3 Implementation

### 3.1 Dependencies

In order to use `doibanner`, the packages `adjustbox`, `hyperref`, and `tkiz` are required as package dependencies.

```
1 \RequirePackage{adjustbox}
2 \RequirePackage{hyperref}
3 \RequirePackage{tikz}
```

### 3.2 Constants

Definition of colours for the banner areas and labels, custom colour definitions are currently not supported.

```
4 \definecolor{leftcolor}{RGB}{82,82,82}
5 \definecolor{rightcolor}{RGB}{6,119,183}
6 %
7 \definecolor{toptextcolor}{RGB}{235,235,235}
8 \definecolor{bottomtextcolor}{RGB}{59,59,59}
```

Definition of font and colour for the banner's top and bottom text layers.

```
9 \tikzstyle{toptextstyle} = [
10  font=\fontfamily{\sfdefault}\selectfont\bfseries\Large,toptextcolor]
11 \tikzstyle{bottomtextstyle} = [
12  font=\fontfamily{\sfdefault}\selectfont\bfseries\Large,bottomtextcolor]
```

### 3.3 Options

The package options are internally available as `\@doibanner@<option>`.

```
13 \DeclareKeys[@doibanner]{
14  label.store = \@doibanner@label,
15  label.usage = load,
16  urlbase.store = \@doibanner@urlbase,
17  urlbase.usage = load,
18  width.store = \@doibanner@width,
19  width.usage = load,
20 }
```

#### Assignment of default values

```
21 \SetKeys[@doibanner]{
22  label=D0I,
23  urlbase=https://doi.org/,
24  width=3.6cm,
25 }
```

#### Processing of package options

```
26 \ProcessKeyOptions[@doibanner]\relax
```

### 3.4 Macros

`\doiurl` [*<dimen>*]

The *<string>* is appended to the package option `urlbase` to generate the URL.

```

27 \NewDocumentCommand\doiurl{s m}{%
28   \IfBooleanTF#1
29     {\@doibanner@urlbase#2}%
30     {\href{\@doibanner@urlbase#2}{#2}}%
31 }

```

`\@doibanner@draw` [*dimen*]{*string*}

Draw the DOI banner including its label and *string*, provide `width=dimen` to define the banners width as well.

```

32 \NewDocumentCommand\@doibanner@draw{o m}{%
33   \adjustbox{#1}{%
34     \begin{tikzpicture}
35 % left part
36     \fill [leftcolor,draw]
37       (1.5,0) --
38       ++(0,.8) {[rounded corners=5] --
39       ++(-1.5,0) --
40       ++(0,-.8)} --
41       cycle
42     {};
43     \node[bottomtextstyle] at (.75,.35) {\@doibanner@label};
44     \node[toptextstyle] at (.75,.4) {\@doibanner@label};
45 % right part
46     \fill [rightcolor,draw]
47       (1.5,0) {[rounded corners=5] --
48       ++(6.5,0) --
49       ++(0,.8)} --
50       ++(-6.5,0) --
51       cycle
52     {};
53     \node[bottomtextstyle] at (4.75,.35) {#2};
54     \node[toptextstyle] at (4.75,.4) {#2};
55   \end{tikzpicture}}%
56 }%
57 }

```

`\doibanner` [*dimen*]{*string*}

Display the DOI banner with or without (\*) a link to its URL. Specify a [*dimen*], if you want a banner width deviating from the one defined as `width` package option.

```

58 \NewDocumentCommand\doibanner{s O{width=\@doibanner@width} m}{%
59   \IfBooleanTF#1
60     {\@doibanner@draw[#2]{#3}}%
61     {\href{\@doibanner@urlbase#3}{\@doibanner@draw[#2]{#3}}}%
62 }

```

## 4 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

Symbols	D
<code>\@doibanner@draw</code> . . . . . <i>32, 60, 61</i>	<code>\doibanner</code> . . . . . <i>2, <u>58</u></i>
<code>\@doibanner@label</code> . . . . . <i>14, 43, 44</i>	<code>\doibanner*</code> . . . . . <i>2</i>
<code>\@doibanner@urlbase</code> . . . . . <i>16, 29, 30, 61</i>	<code>\doiurl</code> . . . . . <i>2, <u>27</u></i>
<code>\@doibanner@width</code> . . . . . <i>18, 58</i>	<code>\doiurl*</code> . . . . . <i>2</i>

## 5 Change History

The changes listed in this section aim to provide a brief overview of the changes introduced into the package `doibanner`. The [package repository on Codeberg](#) contains a [changelog file](#), consult it to read a detailed description of the changes introduced into this package.

v0.1	v0.3
General: Initial version . . . . . <i>1</i>	General: Add package options
v0.2	<code>width</code> and <code>label</code> , fix mistakes,
General: Initial release, convert into	improve documentation, remove
<code>dtx</code> , add documentation, add	unnecessary dependencies . . . . . <i>1</i>
<code>urlbase</code> package option . . . . . <i>1</i>	<code>\@doibanner@draw</code> : Rename macro,
Remove <code>\doi</code> macro . . . . . <i>3</i>	remove top part . . . . . <i>4</i>
<code>\doibanner</code> : Remove trailing space . <i>4</i>	<code>\doibanner</code> : Add <code>width</code> option . . . . . <i>4</i>
<code>\doiurl</code> : Remove trailing space . . . <i>3</i>	