LaTeX support for Cantarell
Version 3.2

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1 Introduction

Cantarell is a contemporary humanist sans serif, and is used by the GNOME project [1] for its user interface.

Cantarell was originally designed by Dave Crossland [2] as part of his coursework for the MA Typeface Design program at the Department of Typography in the University of Reading, England. After the GNOME project adopted the typeface in November 2010, minor modifications and slight expansions were made to

it over the years, notably by Jakub Steiner [3]. Pooja Saxena [4] initially worked on the typeface as a participant of the GNOME outreach program and later developed her own Devanagari typeface Cambay, which included a redesigned latin version of Cantarell. It was backported to the GNOME branch of Cantarell by Nikolaus Waxweiler, who also performed other janitorial tasks on it.

This font family, delivered under the OFL version 1.1, is available on the GNOME download server [6] as CFF-flavored OpenType files.

This package provides support for Cantarell in LaTeX, including XeLaTeX and LuaLaTeX. It includes the original OpenType fonts, as well as Type 1 versions, converted for this package using cfftot1 [7] for full support with LaTeX and Dvips.

2 Installation

These directions assume that your TeX distribution is TDS-compliant.

Once the `cantarell.tds.zip` archive extracted:

1. Copy `doc/`, `fonts/`, and `tex/` directories to your `texmf/` directory (either your local or global `texmf/` directory)
2. Run `mktexlsr` to refresh the file name database and make TeX aware of the new files
3. Run `updmap-user --enable Map cantarell.map`[1] to make Dvips, dvipdf and TeX aware of the new fonts

Note that this package requires the following packages to work:

- `fontaxes`
- `fontspec` (for XeLaTeX/LuaLaTeX support)
- `ifluatex`
- `ifxetex`
- `xkeyval`

3 Usage

3.1 Calling Cantarell

You can use the Cantarell font in a LaTeX document by adding the command

```
\usepackage{cantarell}
```

to the preamble. The package supplies the `\cantarell` command to switch the current font to Cantarell.

[1] Use the `updmap-sys` command instead for a global installation.

3.2 Options

3.2.1 Cantarell as default (sans-serif) font

You can set LaTeX to use Cantarell as standard font throughout the whole document by passing the `default` option to the package:

```
\usepackage[default]{cantarell}
```

To set Cantarell as default sans-serif only, use the `defaultsans` option:

```
\usepackage[defaultsans]{cantarell}
```

3.2.2 OpenType vs. Type 1

Depending on the LaTeX rendering engine used, the package will automatically use:

- OpenType fonts with XeLaTeX and LuaLaTeX (the `fontspec` package will be therefore loaded)
- Type 1 fonts with all other LaTeX rendering engines (especially pdfLaTeX)

The package was written to provide same features whatever the TeX rendering engine used. Notice that OpenType fonts supply more typographic features like additional ligatures or stylistic alternatives. The table 1 describes all OpenType features supported by the Cantarell font family. Please refer to the `fontspec` package documentation to enable such features in your documents with XeLaTeX or LuaLaTeX.

To force Type 1 fonts with XeLaTeX or LuaLaTeX, use the `type1` option. This may be useful to avoid loading the `fontspec` package.

3.2.3 Font scaling

The font can be up- and downscaled by any factor. This can be used to make Cantarell more friendly when used in company with other type faces, e.g., to adapt the x-height. The package option `scale=`*ratio* (or `scaled=`*ratio*) will scale the font according to *ratio* (1.0 by default), for example:

```
\usepackage[scale=0.95]{cantarell}
```

3.2.4 Figure versions

Cantarell provides two figure styles (see table 2):

- *Lining figures*, designed to match the uppercase letters in size and color
- *Old style figures* (also known as text figures), designed to match lowercase letters

Feature	Description	fontspec option
aalt	Access All Alternates	Unsupported
case	Case-Sensitive Forms	Letters=Uppercase
ccmp	Glyph Composition/Decomposition	Unsupported
dnom	Denominators	VerticalPosition=Denominator
frac	Fractions	Fractions=On
liga	Standard Ligatures	Ligatures=Common
lnum	Lining Figures	Numbers=Uppercase
mark	Mark Positioning	Diacritics=MarkToBase
mkmk	Mark to Mark Positioning	Diacritics=MarkToMark
numr	Numerators	VerticalPosition=Numerator
onum	Oldstyle Figures	Numbers=Lowercase
ordn	Ordinals	VerticalPosition=Ordinal
pnum	Proportional Figures	Numbers=Proportional
salt	Stylistic Alternates	Style=Alternate
sinf	Scientific Inferiors	VerticalPosition=ScientificInferior
ss01	Stylistic Set 1	Alternate=1
subs	Subscript	VerticalPosition=Inferior
sups	Superscript	VerticalPosition=Superior
tnum	Tabular Figures	Numbers=Monospaced
zero	Slashed Zero	Numbers=SlashedZero

Table 1: OpenType font features supported by Cantarell fonts

	Lining figures	Old style figures
Tabular figures	+142 521 458.11 € −21 173.91 €	+142 521 458.11 € −21 173.91 €
Proportional figures	+142 521 458.11 € −21 173.91 €	+142 521 458.11 € −21 173.91 €

Table 2: Figure styles

The `cantarell` package uses lining figures by default (`lining` option). To select old style figures, use the `oldstyle` option.

Two figure widths are also available:

- *Tabular figures*, which each have the same width
- *Proportional figures*, which vary in width according to their shape

The `cantarell` package uses tabular figures by default (`tabular` option). To select proportional figures, use the `proportional` option.

The package also supports and loads the `fontaxes` [8] package. This package supplies macros to individually select figure style and width locally.

3.2.5 Encodings

The following LaTeX encodings are supported:

Latin OT1, T1, TS1 (partial)

Cyrillic T2A, T2B, T2C, X2

To use one or another encoding, give the LaTeX name to the `fontenc` package as usual, as in

```
\usepackage[T1]{fontenc}
\usepackage{cantarell}
```

3.3 Available weights, shapes and variants

Table 3 lists the available font series and shapes with their NFSS classification. Parenthesized combinations are provided via substitutions.

Notice that Cantarell doesn't come with italic shapes. *Fake slanted shapes are provided instead.*

In addition, each font variant combination (figure width/figure style) corresponds to a NFSS family (see table 4).

Samples of the font are available in the `cantarell-samples.pdf` file.

Font	Series	Shape	OpenType font file
Cantarell Thin	el	n	Cantarell-Thin.otf
Cantarell Light	l	n	Cantarell-Light.otf
Cantarell Regular	m	n	Cantarell-Regular.otf
Cantarell Bold	b (bx)	n	Cantarell-Bold.otf
Cantarell Extra Bold	eb	n	Cantarell-ExtraBold.otf

Table 3: Available font styles

	Lining figures	Old style figures
Tabular figures	cantarell-TLF	cantarell-TOsF
Proportional figures	cantarell-LF	cantarell-OsF

Table 4: Available NFSS families

4 Known bugs and improvements

Please send bug reports and suggestions about the Cantarell LaTeX support to Mohamed El Morabity.

4.1 Compatibility with previous versions

4.1.1 Legacy fca family

Previous versions of the package used to provide fca as default NFSS family for Cantarell, and the corresponding \fcafamily switch command. Such family and macro are still available in newer package versions. In particular, the fca family is now an alias for the cantarell-TLF one.

4.1.2 Smallcaps

Since the Cantarell font family doesn't provide yet "real" smallcaps, faked ones were supplied by previous versions of the cantarell package (by scaling down uppercase letters), with a very poor result. Furthermore, there's no convenient way to generate fake smallcaps with XeTeX or LuaTeX engines and native OpenType fonts.

For these reasons, faked small caps are no longer provided, starting with version 3.0 of the cantarell package. Anyway LaTeX should automatically substitute missing smallcap shapes by normal ones.

5 License

This package is released under the LaTeX project public license, either version 1.3c or above [9]. Anyway both OpenType and Type 1 files are delivered under the

Open Font License version 1.1 [5].

References

[1] https://www.gnome.org/

[2] http://understandingfonts.com/who/dave-crossland/

[3] http://jimmac.musichall.cz/

[4] http://www.poojasaxena.in/

[5] http://scripts.sil.org/OFL_web

[6] https://ftp.gnome.org/pub/GNOME/sources/cantarell-fonts/

[7] https://www.lcdf.org/type/cfftot1.1.html

[8] https://www.ctan.org/pkg/fontaxes

[9] http://www.latex-project.org/lppl/lppl-1-3c.html