\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 Niko-
laus 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 \TeX, including \XeLaTeX and \LuaLaTeX. It includes the original OpenType fonts, as well as Type 1 versions, converted for this package using cffto1 [7] for full support with \TeX 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\footnote{Use the updmap-sys command instead for a global installation.} 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 \TeX document by adding the command

\usepackage{cantarell}

to the preamble. The package supplies the \cantarell command to switch the current font to Cantarell.
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 default-sans option:

\usepackage[default-sans]{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 \texttt{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 \texttt{scale=ratio} (or \texttt{scaled=ratio}) will scale the font according to \texttt{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):

- \textit{Lining figures}, designed to match the uppercase letters in size and color
- \textit{Old style figures} (also known as text figures), designed to match lowercase letters
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>fontspec option</th>
</tr>
</thead>
<tbody>
<tr>
<td>aalt</td>
<td>Access All Alternates</td>
<td>Unsupported</td>
</tr>
<tr>
<td>case</td>
<td>Case-Sensitive Forms</td>
<td>Letters=Uppercase</td>
</tr>
<tr>
<td>ccmp</td>
<td>Glyph Composition/Decomposition</td>
<td>Unsupported</td>
</tr>
<tr>
<td>dnom</td>
<td>Denominators</td>
<td>VerticalPosition=Denominator</td>
</tr>
<tr>
<td>frac</td>
<td>Fractions</td>
<td>Fractions=On</td>
</tr>
<tr>
<td>liga</td>
<td>Standard Ligatures</td>
<td>Ligatures=Common</td>
</tr>
<tr>
<td>lnum</td>
<td>Lining Figures</td>
<td>Numbers=Uppercase</td>
</tr>
<tr>
<td>mark</td>
<td>Mark Positioning</td>
<td>Diacritics=MarkToBase</td>
</tr>
<tr>
<td>mkmk</td>
<td>Mark to Mark Positioning</td>
<td>Diacritics=MarkToMark</td>
</tr>
<tr>
<td>numr</td>
<td>Numerators</td>
<td>VerticalPosition=Numerator</td>
</tr>
<tr>
<td>onum</td>
<td>Oldstyle Figures</td>
<td>Numbers=Proportional</td>
</tr>
<tr>
<td>ordn</td>
<td>Ordinals</td>
<td>VerticalPosition=Ordinal</td>
</tr>
<tr>
<td>pnum</td>
<td>Proportional Figures</td>
<td>Numbers=Proportional</td>
</tr>
<tr>
<td>salt</td>
<td>Stylistic Alternates</td>
<td>Style=Alternate</td>
</tr>
<tr>
<td>sinf</td>
<td>Scientific Inferiors</td>
<td>VerticalPosition=ScientificInferior</td>
</tr>
<tr>
<td>ss01</td>
<td>Stylistic Set 1</td>
<td>Alternate=1</td>
</tr>
<tr>
<td>subs</td>
<td>Subscript</td>
<td>VerticalPosition=Inferior</td>
</tr>
<tr>
<td>sups</td>
<td>Superscript</td>
<td>VerticalPosition=Superior</td>
</tr>
<tr>
<td>tnum</td>
<td>Tabular Figures</td>
<td>Numbers=Monospace</td>
</tr>
<tr>
<td>zero</td>
<td>Slashed Zero</td>
<td>Numbers=SlashedZero</td>
</tr>
</tbody>
</table>

Table 1: OpenType font features supported by Cantarell fonts
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 \[\text{eight.tf}\] 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

\begin{verbatim}
\usepackage[T1]{fontenc}
\usepackage{cantarell}
\end{verbatim}

### 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.
Table 3: Available font styles

<table>
<thead>
<tr>
<th>Font</th>
<th>Series</th>
<th>Shape</th>
<th>OpenType font file</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cantarell Thin</td>
<td>e</td>
<td>n</td>
<td>Cantarell-Thin.otf</td>
</tr>
<tr>
<td>Cantarell Light</td>
<td>l</td>
<td>n</td>
<td>Cantarell-Light.otf</td>
</tr>
<tr>
<td>Cantarell Regular</td>
<td>m</td>
<td>n</td>
<td>Cantarell-Regular.otf</td>
</tr>
<tr>
<td><strong>Cantarell Bold</strong></td>
<td><strong>b (bx)</strong></td>
<td>n</td>
<td><strong>Cantarell-Bold.otf</strong></td>
</tr>
<tr>
<td><strong>Cantarell Extra Bold</strong></td>
<td><strong>eb</strong></td>
<td>n</td>
<td><strong>Cantarell-ExtraBold.otf</strong></td>
</tr>
</tbody>
</table>

Table 4: Available NFSS families

<table>
<thead>
<tr>
<th></th>
<th>Lining figures</th>
<th>Old style figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tabular figures</td>
<td>cantarell-TLF</td>
<td>cantarell-T0sF</td>
</tr>
<tr>
<td>Proportional figures</td>
<td>cantarell-LF</td>
<td>cantarell-OsF</td>
</tr>
</tbody>
</table>

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 \texttt{fcafamily} switch command. Such family and macro are still available in newer package versions. In particular, the \texttt{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 \TeX 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/
[8] https://www.ctan.org/pkg/fontaxes