

Using Chivo fonts with LaTeX*

Arash Esbati

2022/11/15

Abstract

This package provides the necessary files to use the Chivo fonts with LaTeX. Chivo is a set of eighteen fonts provided by Héctor Gatti & Omnibus-Type Team under the Open Font License (OFL).

Contents

| | | |
|----------|---|-----------|
| 1 | Introduction | 2 |
| 2 | Installation | 2 |
| 3 | Usage | 2 |
| 3.1 | Engine independent options | 2 |
| 3.2 | (pdf)LaTeX specific notes | 3 |
| 3.3 | XeLaTeX and LuaLaTeX specific notes | 4 |
| 4 | OT1 encoding font table | 5 |
| 5 | LY1 encoding font table | 6 |
| 6 | T1 encoding font table | 7 |
| 7 | TS1 encoding font table | 8 |
| 8 | Text samples | 9 |
| 9 | Implementation | 17 |
| 9.1 | Chivo.sty | 17 |

*This file has version number v2.2, last revised 2022/11/15.

1 Introduction

Chivo¹ is a set of eighteen fonts created by Héctor Gatti & Omnibus-Type Team and provided by Omnibus-Type under the SIL Open Font License, Version 1.1. From the readme:

“Chivo (‘goat’ in Spanish) is the first Omnibus-Type neo-grotesque typeface family. It has 9 weight variants, plus matching italics. Its solidness and balanced strokes give Chivo both elegance and practicality. Chivo Regular works perfectly in long-reading texts, while Chivo Black is ideal for headlines, banners and highlights. Developed by Héctor Gatti, this is an indispensable ally for any designer.”

The fonts were obtained from Omnibus-Type GitHub repository² (v2.002, 18 fonts, 877 glyphs each).

2 Installation

I suggest you use MikTeX or TeXlive and wait until the fonts are distributed for your TeX installation via their package manager.

3 Usage

The fonts can be used with traditional (pdf)TeX engine and newer XeTeX and LuaTeX engines which can access OTF fonts directly. They are described below. In general, this bundle tries not to be smart and loads only `kvoptions.sty` and `fontaxes.sty` or `fontspec.sty`, depending on the used engine. As the result, some work must be done by the user.

3.1 Engine independent options

A package `Chivo.sty` is provided which can be loaded in the preamble as usual:

```
\usepackage{Chivo}
```

Loading the package changes the document’s sans serif font to Chivo. The package offers some options.

`thin | extralight | light` The default font series is set with one of `thin`, `extralight`, `light`, `regular | medium` `regular` or `medium` – `regular` is the default. It can be changed like this:

```
\usepackage [medium]{Chivo}
```

`semibold | bold` The default bold series is set with one of `semibold`, `bold`, `extrabold` or `bold | extrabold | black` `black` – `bold` is the default.

1. Copyright © 2019, Omnibus-Type (<https://www.omnibus-type.com>).
2. <https://github.com/Omnibus-Type/Chivo>

`lining | oldstyle` The alignment and style for the figures of the document are set by the `proportional | tabular` options `lining` or `oldstyle` and `proportional` or `tabular`. `lining` and `proportional` are the defaults. Short aliases `lf`, `osf`, `prop` and `tab` are also available. Being boolean options, following example results in proportional `oldstyle` figures:

```
\usepackage[lining=false,tabular=false]{Chivo}
```

`familydefault` The main font of a document can be switched to Chivo with package option `familydefault` or `familydefault=true`, e.g.:

```
\usepackage[familydefault]{Chivo}
```

`opentype | type1` If the automatic engine detection fails, it can be specified by the user with one of `opentype` or `type1`. Note that these option do not take a boolean value `true` or `false`.

`scale | scaled` The size of the Chivo fonts can be adjusted with the `scale` or `scaled` option, e.g.:

```
\usepackage[scale=0.97]{Chivo}
```

3.2 (pdf)LaTeX specific notes

OT1, LY1, T1 and TS1 encodings are supported. Chivo.sty does not load the respective packages, it is up to user to load them, e.g.:

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

Chivo fonts provide a rich set of figures (see table 2). With traditional engines, `fontaxes.sty` is loaded and the command `\fontversion` is available to switch between `lining`, `oldstyle`, `tabular` and `proportional` styles and alignments. For other versions the macros below are provided. Note that the names of these macros used to be `\texttsu`, `\texttin3`, `\texttnu` and `\textde4`. This is a backward incompatible change in v2.2 of this package:

- `\textsuperior` renders its argument in superior figures.
`\textsuperior{123}` produces ¹²³. The corresponding declaration is `\sufigures`.
- `\textinferior` renders its argument in inferior figures.
`\textinferior{123}` produces ₁₂₃. The corresponding declaration is `\infigures`.
- `\textnumerator` renders its argument in numerator figures.
`\textnumerator{123}` produces ¹²³. The corresponding declaration is `\nufigures`.
- `\textdenominator` renders its argument in denominator figures.
`\textdenominator{123}` produces ₁₂₃. The corresponding declaration is `\deffigures`.

3. This macro is defined by the `hyperref` package.

4. These macros have a great potential to clash with `\babeltags` definitions.

Table 1. Chivo font features

| | |
|------|---------------------------------|
| aalt | Access All Alternates |
| case | Case-Sensitive Forms |
| ccmp | Glyph Composition/Decomposition |
| cpsp | Capital Spacing |
| dnom | Denominators |
| frac | Fractions |
| kern | Kerning |
| liga | Standard Ligatures |
| lnum | Lining Figures |
| mark | Mark Positioning |
| mkmk | Mark to Mark Positioning |
| numr | Numerators |
| onum | Oldstyle Figures |
| ordn | Ordinals |
| pnum | Proportional Figures |
| sinf | Scientific Inferiors |
| subs | Subscript |
| sups | Superscript |
| tnum | Tabular Figures |
| zero | Slashed Zero |

3.3 XeLaTeX and LuaLaTeX specific notes

These engines can access OTF fonts directly. The standard interface for this purpose is `fontspec.sty`⁵. `Chivo.sty` detects if XeLaTeX or LuaLaTeX are used and passes options given to the package to `\setsansfont` via `\defaultfeature`. Other `fontspec.sty` options can be set with `\defaultfeature+`:

```
\usepackage{fontspec}
\usepackage{Chivo}
\defaultfontfeatures+[Chivo]{
    Scale = MatchLowercase ,
    Color = blue
}
```

Table 1 contains a list of available font features.

LaTeX font selection macros like `\fontseries` work with these engines as well.

5. <https://ctan.org/pkg/fontspec>

4 OT1 encoding font table

| | ‘0 | ‘1 | ‘2 | ‘3 | ‘4 | ‘5 | ‘6 | ‘7 | |
|------|-------------------|--------------------|--------------------|------------------|------------------|------------------|------------------|-------------------|-----|
| ‘00x | 0 | Δ ₁ | 2 | 3 | 4 | 5 | 6 | 7 | ~0x |
| ‘01x | 8 | 9 | Ω ₁₀ | 11 | fi ₁₂ | fl ₁₃ | 14 | 15 | |
| ‘02x | I ₁₆ | J ₁₇ | ‘18 | ‘19 | ˇ20 | ˇ21 | ˇ22 | ˇ23 | ~1x |
| ‘03x | „24 | β ₂₅ | æ ₂₆ | œ ₂₇ | ø ₂₈ | Æ ₂₉ | Œ ₃₀ | Ø ₃₁ | |
| ‘04x | „32 | ! ₃₃ | ”34 | # ₃₅ | \$ ₃₆ | % ₃₇ | £ ₃₈ | ’39 | ~2x |
| ‘05x | (₄₀) | 41 | * ₄₂ | + ₄₃ | , ₄₄ | - ₄₅ | . ₄₆ | / ₄₇ | |
| ‘06x | 0 ₄₈ | 1 ₄₉ | 2 ₅₀ | 3 ₅₁ | 4 ₅₂ | 5 ₅₃ | 6 ₅₄ | 7 ₅₅ | ~3x |
| ‘07x | 8 ₅₆ | 9 ₅₇ | : ₅₈ | ; ₅₉ | j ₆₀ | = ₆₁ | ż ₆₂ | ? ₆₃ | |
| ‘10x | @ ₆₄ | A ₆₅ | B ₆₆ | C ₆₇ | D ₆₈ | E ₆₉ | F ₇₀ | G ₇₁ | ~4x |
| ‘11x | H ₇₂ | I ₇₃ | J ₇₄ | K ₇₅ | L ₇₆ | M ₇₇ | N ₇₈ | O ₇₉ | |
| ‘12x | P ₈₀ | Q ₈₁ | R ₈₂ | S ₈₃ | T ₈₄ | U ₈₅ | V ₈₆ | W ₈₇ | ~5x |
| ‘13x | X ₈₈ | Y ₈₉ | Z ₉₀ | [₉₁ | “ ₉₂ |] ₉₃ | ^ ₉₄ | · ₉₅ | |
| ‘14x | ‘96 | a ₉₇ | b ₉₈ | c ₉₉ | d ₁₀₀ | e ₁₀₁ | f ₁₀₂ | g ₁₀₃ | ~6x |
| ‘15x | h ₁₀₄ | i ₁₀₅ | j ₁₀₆ | k ₁₀₇ | l ₁₀₈ | m ₁₀₉ | n ₁₁₀ | o ₁₁₁ | |
| ‘16x | p ₁₁₂ | q ₁₁₃ | r ₁₁₄ | s ₁₁₅ | t ₁₁₆ | u ₁₁₇ | v ₁₁₈ | w ₁₁₉ | ~7x |
| ‘17x | x ₁₂₀ | y ₁₂₁ | z ₁₂₂ | — ₁₂₃ | — ₁₂₄ | ” ₁₂₅ | ~ ₁₂₆ | .. ₁₂₇ | |
| ‘20x | ff ₁₂₈ | ffi ₁₂₉ | ffl ₁₃₀ | 131 | 132 | 133 | 134 | 135 | ~8x |
| ‘21x | 136 | 137 | ł ₁₃₈ | 139 | 140 | 141 | 142 | 143 | |
| ‘24x | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | |
| ‘25x | 168 | 169 | ſ ₁₇₀ | 171 | 172 | 173 | 174 | 175 | ~Ax |
| | ~8 | ~9 | ~A | ~B | ~C | ~D | ~E | ~F | |

5 LY1 encoding font table

| | ‘0 | ‘1 | ‘2 | ‘3 | ‘4 | ‘5 | ‘6 | ‘7 | |
|------|-------------------|--------------------------------|------------------|------------------|------------------|--------------------|------------------|-------------------|-----|
| ‘00x | ff ₀ | € ₁ | ffi ₂ | ffl ₃ | / ₄ | · ₅ | ” ₆ | „ ₇ | ~0x |
| ‘01x | 8 | 9 | 10 | 11 | fi ₁₂ | fl ₁₃ | 14 | 15 | ~1x |
| ‘02x | I ₁₆ | J ₁₇ | ‘ ₁₈ | ’ ₁₉ | ˇ ₂₀ | ˇ ₂₁ | – ₂₂ | ° ₂₃ | ~2x |
| ‘03x | „ ₂₄ | ß ₂₅ | æ ₂₆ | œ ₂₇ | ø ₂₈ | Æ ₂₉ | Œ ₃₀ | Ø ₃₁ | ~3x |
| ‘04x | ! ₃₂ | ” ₃₃ | ” ₃₄ | # ₃₅ | \$ ₃₆ | % ₃₇ | £ ₃₈ | ’ ₃₉ | ~4x |
| ‘05x | (₄₀ |) ₄₁ | * ₄₂ | + ₄₃ | , ₄₄ | - ₄₅ | . ₄₆ | / ₄₇ | ~5x |
| ‘06x | 0 ₄₈ | 1 ₄₉ | 2 ₅₀ | 3 ₅₁ | 4 ₅₂ | 5 ₅₃ | 6 ₅₄ | 7 ₅₅ | ~6x |
| ‘07x | 8 ₅₆ | 9 ₅₇ | : ₅₈ | ; ₅₉ | < ₆₀ | = ₆₁ | > ₆₂ | ? ₆₃ | ~7x |
| ‘10x | @ ₆₄ | A ₆₅ | B ₆₆ | C ₆₇ | D ₆₈ | E ₆₉ | F ₇₀ | G ₇₁ | ~8x |
| ‘11x | H ₇₂ | I ₇₃ | J ₇₄ | K ₇₅ | L ₇₆ | M ₇₇ | N ₇₈ | O ₇₉ | ~9x |
| ‘12x | P ₈₀ | Q ₈₁ | R ₈₂ | S ₈₃ | T ₈₄ | U ₈₅ | V ₈₆ | W ₈₇ | ~Ax |
| ‘13x | X ₈₈ | Y ₈₉ | Z ₉₀ | [₉₁ | \ ₉₂ |] ₉₃ | ^ ₉₄ | _ ₉₅ | ~Bx |
| ‘14x | ‘ ₉₆ | a ₉₇ | b ₉₈ | c ₉₉ | d ₁₀₀ | e ₁₀₁ | f ₁₀₂ | g ₁₀₃ | ~Cx |
| ‘15x | h ₁₀₄ | i ₁₀₅ | j ₁₀₆ | k ₁₀₇ | l ₁₀₈ | m ₁₀₉ | n ₁₁₀ | o ₁₁₁ | ~Dx |
| ‘16x | p ₁₁₂ | q ₁₁₃ | r ₁₁₄ | s ₁₁₅ | t ₁₁₆ | u ₁₁₇ | v ₁₁₈ | w ₁₁₉ | ~Ex |
| ‘17x | x ₁₂₀ | y ₁₂₁ | z ₁₂₂ | { ₁₂₃ | ₁₂₄ | } ₁₂₅ | ~ ₁₂₆ | .. ₁₂₇ | ~Fx |
| ‘20x | ł ₁₂₈ | ‘ ₁₂₉ | , ₁₃₀ | f ₁₃₁ | „ ₁₃₂ | ... ₁₃₃ | † ₁₃₄ | ‡ ₁₃₅ | ~A |
| ‘21x | ^ ₁₃₆ | % ₀₀ ₁₃₇ | ſ ₁₃₈ | ‘ ₁₃₉ | œ ₁₄₀ | ž ₁₄₁ | ʌ ₁₄₂ | — ₁₄₃ | ~B |
| ‘22x | ł ₁₄₄ | ‘ ₁₄₅ | ’ ₁₄₆ | “ ₁₄₇ | ” ₁₄₈ | • ₁₄₉ | — ₁₅₀ | — ₁₅₁ | ~C |
| ‘23x | ~ ₁₅₂ | TM ₁₅₃ | ſ ₁₅₄ | ‘ ₁₅₅ | œ ₁₅₆ | ž ₁₅₇ | ~ ₁₅₈ | ÿ ₁₅₉ | ~D |
| ‘24x | 160 | ı ₁₆₁ | ç ₁₆₂ | ƒ ₁₆₃ | ¤ ₁₆₄ | ¥ ₁₆₅ | ‘ ₁₆₆ | § ₁₆₇ | ~E |
| ‘25x | .. ₁₆₈ | © ₁₆₉ | ª ₁₇₀ | « ₁₇₁ | ¬ ₁₇₂ | ‐ ₁₇₃ | ® ₁₇₄ | ‐ ₁₇₅ | ~F |
| ‘26x | º ₁₇₆ | ± ₁₇₇ | ² ₁₇₈ | ³ ₁₇₉ | ’ ₁₈₀ | µ ₁₈₁ | ¶ ₁₈₂ | · ₁₈₃ | ~G |
| ‘27x | „ ₁₈₄ | ¹ ₁₈₅ | º ₁₈₆ | » ₁₈₇ | ¼ ₁₈₈ | ½ ₁₈₉ | ¾ ₁₉₀ | ¸ ₁₉₁ | ~H |
| ‘30x | À ₁₉₂ | Á ₁₉₃ | Â ₁₉₄ | Ã ₁₉₅ | Ä ₁₉₆ | Å ₁₉₇ | Æ ₁₉₈ | Ç ₁₉₉ | ~I |
| ‘31x | È ₂₀₀ | É ₂₀₁ | Ê ₂₀₂ | Ë ₂₀₃ | Ì ₂₀₄ | Í ₂₀₅ | Î ₂₀₆ | Ï ₂₀₇ | ~J |
| ‘32x | Ð ₂₀₈ | Ñ ₂₀₉ | Ò ₂₁₀ | Ó ₂₁₁ | Ô ₂₁₂ | Õ ₂₁₃ | Ö ₂₁₄ | × ₂₁₅ | ~K |
| ‘33x | Ø ₂₁₆ | Ù ₂₁₇ | Ú ₂₁₈ | Û ₂₁₉ | Ü ₂₂₀ | Ý ₂₂₁ | Þ ₂₂₂ | ß ₂₂₃ | ~L |
| ‘34x | à ₂₂₄ | á ₂₂₅ | â ₂₂₆ | ã ₂₂₇ | ä ₂₂₈ | å ₂₂₉ | æ ₂₃₀ | ç ₂₃₁ | ~M |
| ‘35x | è ₂₃₂ | é ₂₃₃ | ê ₂₃₄ | ë ₂₃₅ | ì ₂₃₆ | í ₂₃₇ | î ₂₃₈ | ï ₂₃₉ | ~N |
| ‘36x | ð ₂₄₀ | ñ ₂₄₁ | ò ₂₄₂ | ó ₂₄₃ | ô ₂₄₄ | õ ₂₄₅ | ö ₂₄₆ | ÷ ₂₄₇ | ~O |
| ‘37x | ø ₂₄₈ | ù ₂₄₉ | ú ₂₅₀ | û ₂₅₁ | ü ₂₅₂ | ý ₂₅₃ | þ ₂₅₄ | ÿ ₂₅₅ | ~P |
| | ~8 | ~9 | ~A | ~B | ~C | ~D | ~E | ~F | |

6 T1 encoding font table

| | ‘0 | ‘1 | ‘2 | ‘3 | ‘4 | ‘5 | ‘6 | ‘7 | |
|------|---------|---------|---------|----------|----------|---------|----------|----------|-----|
| ‘00x | ‘_ 0 | ‘ ’ 1 | ‘ ^ 2 | ‘ ~ 3 | ‘ “ 4 | ‘ ” 5 | ‘ ° 6 | ‘ ^ 7 | ~0x |
| ‘01x | ‘ ‘ 8 | ‘ - 9 | ‘ . 10 | ‘ , 11 | ‘ . 12 | ‘ , 13 | ‘ < 14 | ‘ > 15 | |
| ‘02x | ‘ “ 16 | ‘ ” 17 | ‘ „ 18 | ‘ « 19 | ‘ » 20 | ‘ — 21 | ‘ — 22 | ‘ 23 | ~1x |
| ‘03x | ‘ ff 24 | ‘ l 25 | ‘ J 26 | ‘ ffi 27 | ‘ fi 28 | ‘ fl 29 | ‘ ffl 30 | ‘ 31 | |
| ‘04x | ‘ _ 32 | ‘ ! 33 | ‘ " 34 | ‘ # 35 | ‘ \$ 36 | ‘ % 37 | ‘ & 38 | ‘ ’ 39 | ~2x |
| ‘05x | ‘ (40 | ‘) 41 | ‘ * 42 | ‘ + 43 | ‘ , 44 | ‘ - 45 | ‘ . 46 | ‘ / 47 | |
| ‘06x | ‘ 0 48 | ‘ 1 49 | ‘ 2 50 | ‘ 3 51 | ‘ 4 52 | ‘ 5 53 | ‘ 6 54 | ‘ 7 55 | ~3x |
| ‘07x | ‘ 8 56 | ‘ 9 57 | ‘ : 58 | ‘ ; 59 | ‘ < 60 | ‘ = 61 | ‘ > 62 | ‘ ? 63 | |
| ‘10x | ‘ @ 64 | ‘ A 65 | ‘ B 66 | ‘ C 67 | ‘ D 68 | ‘ E 69 | ‘ F 70 | ‘ G 71 | ~4x |
| ‘11x | ‘ H 72 | ‘ I 73 | ‘ J 74 | ‘ K 75 | ‘ L 76 | ‘ M 77 | ‘ N 78 | ‘ O 79 | |
| ‘12x | ‘ P 80 | ‘ Q 81 | ‘ R 82 | ‘ S 83 | ‘ T 84 | ‘ U 85 | ‘ V 86 | ‘ W 87 | ~5x |
| ‘13x | ‘ X 88 | ‘ Y 89 | ‘ Z 90 | ‘ [91 | ‘ \ 92 | ‘] 93 | ‘ \ 94 | ‘ _ 95 | |
| ‘14x | ‘ ‘ 96 | ‘ a 97 | ‘ b 98 | ‘ c 99 | ‘ d 100 | ‘ e 101 | ‘ f 102 | ‘ g 103 | ~6x |
| ‘15x | ‘ h 104 | ‘ i 105 | ‘ j 106 | ‘ k 107 | ‘ l 108 | ‘ m 109 | ‘ n 110 | ‘ o 111 | |
| ‘16x | ‘ p 112 | ‘ q 113 | ‘ r 114 | ‘ s 115 | ‘ t 116 | ‘ u 117 | ‘ v 118 | ‘ w 119 | ~7x |
| ‘17x | ‘ x 120 | ‘ y 121 | ‘ z 122 | ‘ { 123 | ‘ 124 | ‘ } 125 | ‘ ~ 126 | ‘ - 127 | |
| ‘20x | ‘ Ā 128 | ‘ Ā 129 | ‘ Č 130 | ‘ Č 131 | ‘ Ď 132 | ‘ Ě 133 | ‘ Ě 134 | ‘ Ģ 135 | ~8x |
| ‘21x | ‘ Ľ 136 | ‘ Ľ 137 | ‘ Ľ 138 | ‘ đ 139 | ‘ ē 140 | ‘ ę 141 | ‘ ď 142 | ‘ ē 143 | |
| ‘22x | ‘ Ě 144 | ‘ Š 145 | ‘ Š 146 | ‘ Š 147 | ‘ Č 148 | ‘ Č 149 | ‘ Ū 150 | ‘ Ū 151 | ~9x |
| ‘23x | ‘ Ÿ 152 | ‘ Ÿ 153 | ‘ Ÿ 154 | ‘ Ÿ 155 | ‘ IJ 156 | ‘ ī 157 | ‘ ď 158 | ‘ Ÿ 159 | |
| ‘24x | ‘ ā 160 | ‘ ā 161 | ‘ Č 162 | ‘ Č 163 | ‘ ď 164 | ‘ ě 165 | ‘ ē 166 | ‘ ď 167 | ~Ax |
| ‘25x | ‘ ī 168 | ‘ ī 169 | ‘ ī 170 | ‘ ī 171 | ‘ ī 172 | ‘ ī 173 | ‘ ī 174 | ‘ ī 175 | |
| ‘26x | ‘ ċ 176 | ‘ Š 177 | ‘ Š 178 | ‘ Š 179 | ‘ ī 180 | ‘ ī 181 | ‘ ū 182 | ‘ ū 183 | ~Bx |
| ‘27x | ‘ Ÿ 184 | ‘ Ÿ 185 | ‘ Ÿ 186 | ‘ Ÿ 187 | ‘ ij 188 | ‘ ī 189 | ‘ ī 190 | ‘ ī 191 | |
| ‘30x | ‘ Ă 192 | ‘ Ă 193 | ‘ Ă 194 | ‘ Ă 195 | ‘ Ă 196 | ‘ Ă 197 | ‘ ĂE 198 | ‘ Ă 199 | ~Cx |
| ‘31x | ‘ Ě 200 | ‘ Ě 201 | ‘ Ě 202 | ‘ Ě 203 | ‘ ī 204 | ‘ ī 205 | ‘ ī 206 | ‘ ī 207 | |
| ‘32x | ‘ ă 208 | ‘ ă 209 | ‘ ă 210 | ‘ ă 211 | ‘ ă 212 | ‘ ă 213 | ‘ ă 214 | ‘ ĂE 215 | ~Dx |
| ‘33x | ‘ Ą 216 | ‘ Ą 217 | ‘ Ą 218 | ‘ Ą 219 | ‘ Ą 220 | ‘ Ą 221 | ‘ Ą 222 | ‘ ĄS 223 | |
| ‘34x | ‘ à 224 | ‘ á 225 | ‘ â 226 | ‘ ã 227 | ‘ ä 228 | ‘ å 229 | ‘ æ 230 | ‘ ç 231 | ~Ex |
| ‘35x | ‘ è 232 | ‘ é 233 | ‘ ê 234 | ‘ ë 235 | ‘ î 236 | ‘ í 237 | ‘ î 238 | ‘ ï 239 | |
| ‘36x | ‘ ö 240 | ‘ ñ 241 | ‘ ô 242 | ‘ ó 243 | ‘ ô 244 | ‘ õ 245 | ‘ ö 246 | ‘ œ 247 | ~Fx |
| ‘37x | ‘ ø 248 | ‘ ù 249 | ‘ ú 250 | ‘ û 251 | ‘ ü 252 | ‘ ý 253 | ‘ þ 254 | ‘ þ 255 | |
| | ‘ ~8 | ‘ ~9 | ‘ ~A | ‘ ~B | ‘ ~C | ‘ ~D | ‘ ~E | ‘ ~F | |

7 TS1 encoding font table

| | '0 | '1 | '2 | '3 | '4 | '5 | '6 | '7 | |
|------|-------|--------|-------|--------|-------|--------|-------|-------|-----|
| '00x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | "0x |
| '01x | 8 | 9 | 10 | , 11 | , 12 | , 13 | 14 | 15 | |
| '02x | 16 | 17 | , 18 | 19 | 20 | — 21 | — 22 | 23 | "1x |
| '03x | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
| '04x | „ 32 | 33 | 34 | 35 | \$ 36 | 37 | 38 | ‘ 39 | "2x |
| '05x | 40 | 41 | * 42 | 43 | , 44 | 45 | , 46 | / 47 | |
| '06x | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | "3x |
| '07x | 56 | 57 | 58 | 59 | ⟨ 60 | — 61 | ⟩ 62 | 63 | |
| '12x | 80 | 81 | 82 | 83 | 84 | 85 | 86 | Ω 87 | "5x |
| '13x | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | |
| '20x | 128 | 129 | 130 | 131 | † 132 | ‡ 133 | 134 | % 135 | "8x |
| '21x | • 136 | °C 137 | 138 | 139 | f 140 | ¢ 141 | ₩ 142 | 143 | |
| '22x | 144 | 145 | £ 146 | 147 | ? 148 | đ 149 | đ 150 | ™ 151 | "9x |
| '23x | 152 | 153 | 154 | Nº 155 | 156 | e 157 | 158 | 159 | |
| '24x | 160 | 161 | ¢ 162 | £ 163 | ¤ 164 | ¥ 165 | ‘ 166 | § 167 | "Ax |
| '25x | 168 | © 169 | ª 170 | 171 | ¬ 172 | 173 | ® 174 | 175 | |
| '26x | ° 176 | ± 177 | ² 178 | ³ 179 | 180 | µ 181 | ¶ 182 | · 183 | "Bx |
| '27x | 184 | ¹ 185 | º 186 | √ 187 | ¼ 188 | ½ 189 | ¾ 190 | € 191 | |
| '32x | 208 | 209 | 210 | 211 | 212 | 213 | × 214 | 215 | "Dx |
| '33x | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | |
| '36x | 240 | 241 | 242 | 243 | 244 | 245 | ÷ 246 | 247 | "Fx |
| '37x | 248 | 249 | 250 | fl 251 | l 252 | fi 253 | i 254 | f 255 | |
| | "8 | "9 | "A | "B | "C | "D | "E | "F | |

8 Text samples

Regular

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. 1234567890

Italic

***L**orem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.* 1234567890

Medium

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. 1234567890

Medium Italic

***L**orem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.* 1234567890

Semi bold

***L*orem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida**

mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

1234567890

Semi bold Italic

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. 1234567890

Bold

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo.

Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

1234567890

Bold italic

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

1234567890

Extra Bold

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna

fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. 1234567890

Extra Bold italic

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. 1234567890

Black

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem

vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. **1234567890**

Black italic

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. **1234567890**

Thin

Lore*m ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi,*

congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. 1234567890

Thin italic

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. 1234567890

Light

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum,

erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. 1234567890

Light italic

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum. Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris. 1234567890

Figures

Table 2. Figure styles and alignments

| | |
|-----------------------|--------------|
| Proportional lining | _0123456789_ |
| Tabular lining | _0123456789_ |
| Proportional oldstyle | _0123456789_ |
| Tabular oldstyle | _0123456789_ |
| Superiors | 0123456789 |
| Inferiors | — |
| Numerators | — |
| Denominators | — |

9 Implementation

Font support files are generated by `autoinst`, invoked with:

```
autoinst          \
  --encoding=OT1,T1,LY1 \
  --ts1             \
  --sanserif        \
  --nosmallcaps    \
  --noswash         \
  --notitling       \
  --inferiors=subs \
  --fractions       \
  --noornaments     \
  --ligatures       \
  --verbose          \
Chivo-* .otf
```

We don't use the `Chivo.sty` generated by `autoinst` and use our version instead.

9.1 Chivo.sty

```
1 <*package>
  Require the package iftex.sty:
2 \RequirePackage{iftex}
  First, we need a switch to know which engine is used:
3 \newif\ifChivo@otf
4 \iftutex                                     % we are in XeTeX or LuaTeX
5   \Chivo@otftrue
6 \else
7   \Chivo@otffalse
8 \fi
  Load the packages we rely on: fontspec.sty6 for LuaTeX and XeTeX, or
fontaxes.sty7 for (pdf)LaTeX:
9 \ifChivo@otf
10  \RequirePackage{fontspec}
11 \else
12  \RequirePackage{fontaxes}
13 \fi
  We use kvoptions8 for key handling:
14 \RequirePackage{kvoptions}
```

Setup the keyval options:

```
15 \SetupKeyvalOptions{%
16   family = Chivo ,
17   prefix = Chivo@
18 }
```

6. <https://www.ctan.org/pkg/fontspec>
7. <https://www.ctan.org/pkg/fontaxes>
8. <https://www.ctan.org/pkg/kvoptions>

The basic strategy for font and figure version related keys is to declare them as boolean options.

```

19 \DeclareBoolOption{thin}
20 \DeclareBoolOption{extralight}
21 \DeclareBoolOption{light}
22 \DeclareBoolOption{regular}
23 \DeclareBoolOption{medium}
24 \DeclareBoolOption{semibold}
25 \DeclareBoolOption{bold}
26 \DeclareBoolOption{extrabold}
27 \DeclareBoolOption{black}
28 \DeclareBoolOption{lining}
29 \DeclareComplementaryOption{oldstyle}{lining}
30 \DeclareBoolOption{tabular}
31 \DeclareComplementaryOption{proportional}{tabular}

```

Alias keys are defined with `\define@key`. Given values to these keys are passed to the original keys and they are set via `\kvsetkeys`.

```

32 \define@key{Chivo}{lf}[true]{%
33   \kvsetkeys{Chivo}{lining=#1}%
34 }
35 \define@key{Chivo}{osf}[true]{%
36   \kvsetkeys{Chivo}{oldstyle=#1}%
37 }
38 \define@key{Chivo}{tab}[true]{%
39   \kvsetkeys{Chivo}{tabular=#1}%
40 }
41 \define@key{Chivo}{prop}[true]{%
42   \kvsetkeys{Chivo}{proportional=#1}%
43 }

```

`scale` and `scaled` keys are special: With (pdf)LaTeX, `scale` is a string option, `scaled` is an alias and sets `\Chivo@scale` which is defined by the `scale` key. With XeLaTeX and LuaLaTeX, they set the macro `\Chivo@otf@scale` which is later used in `\defaultfontfeatures`.

```

44 \ifChivo@otf
45   \newcommand*\Chivo@otf@scaled{%
46     \define@key{Chivo}{scale}[1.0]{%
47       \def\Chivo@otf@scale{\#1}%
48     }
49     \define@key{Chivo}{scaled}[1.0]{%
50       \def\Chivo@otf@scale{\#1}%
51     }
52 \else
53   \DeclareStringOption[1.0]{scale}
54   \define@key{Chivo}{scaled}[1.0]{%
55     \renewcommand*\Chivo@scale{\#1}%
56   }
57 \fi
      familydefault switches the default font to Chivo:
58 \DeclareBoolOption{familydefault}

```

The next 2 are for users where the automatic engine detection might fail:

```

59 \DeclareVoidOption{opentype}{\Chivo@otftrue}
60 \DeclareVoidOption{type1}{\Chivo@otffalse}
    Execute the default options and process the rest.
61 \kvsetkeys{Chivo}{regular,bold,lining,proportional}
62 \ProcessKeyvalOptions{Chivo}

    We need some macros to store the figure alignment and style and font
definitions:
63 \newcommand*\Chivo@figurestyle{}
64 \newcommand*\Chivo@figurealign{}
65 \newcommand*\Chivo@otf@regular{}
66 \newcommand*\Chivo@otf@italic{}
67 \newcommand*\Chivo@otf@bold{}
68 \newcommand*\Chivo@otf@bolditalic{}

    Definition for thin, extralight, light, regular and medium keys for all
engines:
69 \ifChivo@regular
70   \ifChivo@otf
71     \def\Chivo@otf@regular{Regular}
72     \def\Chivo@otf@italic{Italic}
73   \else
74     \DeclareFontSeriesDefault[sf]{md}{m}
75   \fi
76 \fi
77 \ifChivo@medium
78   \ifChivo@otf
79     \def\Chivo@otf@regular{Medium}
80     \def\Chivo@otf@italic{MediumItalic}
81   \else
82     \DeclareFontSeriesDefault[sf]{md}{medium}
83   \fi
84 \fi
85 \ifChivo@light
86   \ifChivo@otf
87     \def\Chivo@otf@regular{Light}
88     \def\Chivo@otf@italic{LightItalic}
89   \else
90     \DeclareFontSeriesDefault[sf]{md}{l}
91   \fi
92 \fi
93 \ifChivo@extralight
94   \ifChivo@otf
95     \def\Chivo@otf@regular{ExtraLight}
96     \def\Chivo@otf@italic{ExtraLightItalic}
97   \else
98     \DeclareFontSeriesDefault[sf]{md}{el}
99   \fi
100 \fi
101 \ifChivo@thin
102   \ifChivo@otf
103     \def\Chivo@otf@regular{Thin}
104     \def\Chivo@otf@italic{ThinItalic}

```

```

105  \else
106    \DeclareFontSeriesDefault[sf]{md}{ul}
107  \fi
108\fi
      Definition for semibold, bold, extrabold and black keys for all engines:
109\ifChivo@bold
110  \ifChivo@otf
111    \def\Chivo@otf@bold{Bold}
112    \def\Chivo@otf@bolditalic{BoldItalic}
113  \else
114    \DeclareFontSeriesDefault[sf]{bf}{b}
115  \fi
116\fi
117\ifChivo@semibold
118  \ifChivo@otf
119    \def\Chivo@otf@bold{SemiBold}
120    \def\Chivo@otf@bolditalic{SemiBoldItalic}
121  \else
122    \DeclareFontSeriesDefault[sf]{bf}{sb}
123  \fi
124\fi
125\ifChivo@extrabold
126  \ifChivo@otf
127    \def\Chivo@otf@bold{ExtraBold}
128    \def\Chivo@otf@bolditalic{ExtraBoldItalic}
129  \else
130    \DeclareFontSeriesDefault[sf]{bf}{eb}
131  \fi
132\fi
133\ifChivo@black
134  \ifChivo@otf
135    \def\Chivo@otf@bold{Black}
136    \def\Chivo@otf@bolditalic{BlackItalic}
137  \else
138    \DeclareFontSeriesDefault[sf]{bf}{ub}
139  \fi
140\fi
      Definition for figure styles for all engines:
141\ifChivo@lining
142  \ifChivo@otf
143    \def\Chivo@figurestyle{Lining}
144  \else
145    \def\Chivo@figurestyle{LF}
146  \fi
147\else
148  \ifChivo@otf
149    \def\Chivo@figurestyle{OldStyle}
150  \else
151    \def\Chivo@figurestyle{OsF}
152  \fi
153\fi

```

Definition for figure alignments for all engines:

```
154 \ifChivo@tabular
155   \ifChivo@otf
156     \def\Chivo@figurealign{Monospaced}
157   \else
158     \def\Chivo@figurealign{T}
159   \fi
160 \else
161   \ifChivo@otf
162     \def\Chivo@figurealign{Proportional}
163   \else
164     \def\Chivo@figurealign{}
165   \fi
166 \fi
```

Standard setup for fontaxes.sty. This is only relevant for (pdf)LaTeX:

```
167 \ifChivo@otf \else
168   \fa@naming@exception{figures}{{superior}{proportional}}{Sup}
169   \fa@naming@exception{figures}{{superior}{tabular}}{Sup}
170   \def\sufigures{\@nomath\sufigures
171     \fontfigurestyle{superior}\selectfont}
172   \DeclareTextFontCommand{\textsuperior}{\sufigures}
173
174   \fa@naming@exception{figures}{{inferior}{proportional}}{Inf}
175   \fa@naming@exception{figures}{{inferior}{tabular}}{Inf}
176   \def\infigures{\@nomath\infigures
177     \fontfigurestyle{inferior}\selectfont}
178   \DeclareTextFontCommand{\textinferior}{\infigures}
179
180   \fa@naming@exception{figures}{{numerators}{proportional}}{Numr}
181   \fa@naming@exception{figures}{{numerators}{tabular}}{Numr}
182   \def\nufigures{\@nomath\nufigures
183     \fontfigurestyle{numerators}\selectfont}
184   \DeclareTextFontCommand{\textnumerator}{\nufigures}
185
186   \fa@naming@exception{figures}{{denominators}{proportional}}{Dnom}
187   \fa@naming@exception{figures}{{denominators}{tabular}}{Dnom}
188   \def\deffigures{\@nomath\deffigures
189     \fontfigurestyle{denominators}\selectfont}
190   \DeclareTextFontCommand{\textdenominator}{\deffigures}
191 \fi
```

For XeLaTeX/LuaLaTeX, we define the font features depending on the given package options:

```
192 \ifChivo@otf
193   \defaultfontfeatures[Chivo]{%
194     Extension      = .otf
195     Ligatures      = {TeX,Common}
196     Scale          = \Chivo@otf@scale
197     UprightFont    = *-\Chivo@otf@regular
198     ItalicFont     = *-\Chivo@otf@italic
199     BoldFont       = *-\Chivo@otf@bold
200     BoldItalicFont = *-\Chivo@otf@bolditalic}
```

```

201   FontFace      = {ul}{n}{*-Thin}          ,
202   FontFace      = {ul}{it}{*-ThinItalic}    ,
203   FontFace      = {el}{n}{*-ExtraLight}     ,
204   FontFace      = {el}{it}{*-ExtraLightItalic} ,
205   FontFace      = {l}{n}{*-Light}           ,
206   FontFace      = {l}{it}{*-LightItalic}     ,
207   FontFace      = {m}{n}{*-Regular}        ,
208   FontFace      = {m}{it}{*-Italic}         ,
209   FontFace      = {medium}{n}{*-Medium}      ,
210   FontFace      = {medium}{it}{*-MediumItalic} ,
211   FontFace      = {sb}{n}{*-SemiBold}       ,
212   FontFace      = {sb}{it}{*-SemiBoldItalic}  ,
213   FontFace      = {b}{n}{*-Bold}            ,
214   FontFace      = {b}{it}{*-BoldItalic}      ,
215   FontFace      = {eb}{n}{*-ExtraBold}       ,
216   FontFace      = {eb}{it}{*-ExtraBoldItalic} ,
217   FontFace      = {ub}{n}{*-Black}          ,
218   FontFace      = {ub}{it}{*-BlackItalic}    ,
219   Numbers        = {\Chivo@figurestyle,\Chivo@figurealign}
220 }
221 \fi

Switch the sans serif font to Chivo. With fontspec, we delay the \setsansfont until AtBeginDocument so that user can provide additional features with \defaultfontfeatures+.

222 \ifChivo@otf
223   \AtBeginDocument{%
224     \setsansfont{Chivo}%
225   }
226 \else
227   \renewcommand*\sfdefault{%
228     Chivo-\Chivo@figurealign\Chivo@figurestyle
229   }
230 \fi

Switch the default font if the respective key is given:

231 \ifChivo@familydefault
232   \ifChivo@otf
233     \AtBeginDocument{%
234       \setmainfont{Chivo}%
235     }
236 \else
237   \renewcommand*\familydefault{\sfdefault}
238 \fi
239 \fi

Also set the TS1 subset supported by the fonts. LaTeX kernel sets this as well, but we put it here for the sake of completeness:

240 \ifChivo@otf \else
241   \DeclareEncodingSubset{TS1}{Chivo-*}{4}
242 \fi
243 
```

Change History

| | | | | | |
|------|---|---|--|---|---|
| v1.0 | General: Initial version | 1 | fonts, 843 glyphs each | 1 | |
| v2.0 | General: Add the 'scaled' key as requested by FMI | 1 | Use NFSS scheme for fonts mapping | 1 | |
| | Rewrite major part of the code supporting 14 fonts. | | v2.1 | General: Fix a bug in handling of alias keys | 1 |
| | Harmonize the usage of package options over different TeX engines | 1 | v2.2 | General: Rename the macros \textin, \texttsu, \textnu and \textde | 1 |
| | Update OTF fonts to version 1.007 now consisting of 14 | | | Update the fonts to v.2.0, adjust the package | 1 |