

# Support for the Spark OpenType fonts

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## v. 0.05

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## 1 Introduction

A sparkline is a very small line chart, typically drawn without axes or coordinates. It presents the general shape of the variation (typically over time) in some measurement, such as temperature or stock market price, in a simple and highly condensed way. Sparklines are small enough to be embedded in text, or several sparklines may be grouped together as elements of a small multiple. Whereas the typical chart is designed to show as much data as possible, and is set off from the flow of text, sparklines are intended to be succinct, memorable, and located where they are discussed. [5]

## 2 The fonts

The fonts are available from <https://github.com/aftertheflood/spark> and should be saved either in Library/fonts/ (MAC OSX), c:\Windows\Fonts (Windows) or /usr/local/share/fonts (Linux) or any other location where the fonts will be found by the system.

Sparks-Bar-Extranarrow.otf  
Sparks-Bar-Extrawide.otf  
Sparks-Bar-Medium.otf  
Sparks-Bar-Narrow.otf  
Sparks-Bar-Wide.otf  
Sparks-Dot-Extralarge.otf  
Sparks-Dot-Extrasmall.otf  
Sparks-Dot-Large.otf  
Sparks-Dot-Medium.otf  
Sparks-Dot-Small.otf  
Sparks-Dotline-Extrathick.otf  
Sparks-Dotline-Extrathin.otf  
Sparks-Dotline-Medium.otf  
Sparks-Dotline-Thick.otf  
Sparks-Dotline-Thin.otf

The package defines the following font macros (using symbol names):

```
\newfontface\sparkBarMedium{Spark-Bar-Medium}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkBarNarrow{Spark-Bar-Narrow}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkBarExtranarrow{Spark-Bar-Extranarrow}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkBarWide{Spark-Bar-Wide}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkBarExtrawide{Spark-Bar-Extrawide}[RawFeature=+calt,\spark@DefaultFeatures]  
%  
\newfontface\sparkDotLineMedium{Spark-Dotline-Medium}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkDotLineThick{Spark-Dotline-Thick}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkDotLineExtrathick{Spark-Dotline-Extrathick}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkDotLineThin{Spark-Dotline-Thin}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkDotLineExtrathin{Spark-Dotline-Extrathin}[RawFeature=+calt,\spark@DefaultFeatures]  
%  
\newfontface\sparkDotMedium{Spark-Dot-Medium}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkDotSmall{Spark-Dot-Small}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkDotExtralarge{Spark-Dot-Extralarge}[RawFeature=+calt,\spark@DefaultFeatures]  
\newfontface\sparkDotExtrasmall{Spark-Dot-Extrasmall}[RawFeature=+calt,\spark@DefaultFeatures]
```

### 3 The macros

```

\sparkBar[<Type>][<No>]{values}[<No>]
\sparkDot[<Type>][<No>]{values}[<No>]
\sparkDotLine[<Type>][<No>]{values}[<No>]
\sparkBar* [ <Type> ] [ <No> ] { values } [ <No> ]
\sparkDot* [ <Type> ] [ <No> ] { values } [ <No> ]
\sparkDotLine* [ <Type> ] [ <No> ] { values } [ <No> ]
\sparkBar[<Type>]{!value,values,...,!value}
\sparkDot[<Type>]{!value,values,...,!value}
\sparkDotLine[<Type>]{!value,values,...,!value}
\sparkBar* [ <Type> ] { !value, values, ..., !value }
\sparkDot* [ <Type> ] { !value, values, ..., !value }
\sparkDotLine* [ <Type> ] { !value, values, ..., !value }

```

If [ <Type> ] is missing, Medium is assumed. The type is mandatory if you use the first [ <No> ] argument! The star versions are only valid for Lua<sup>A</sup>T<sub>E</sub>X where the values can be of any interval. They will be changed to the allowed interval:

- for \sparkDotLine: [0, 9]
- for all other: [0, 100]

Instead of using the optional arguments for printing the first and/or last value you can use the !-notation, then the first and/or last listed value are printed. There is no difference in using the optional arguments; it saves only some keystrokes if the printed values are the same as in the list.

## 4 Text examples

### 4.1 Bars

#### 4.1.1 Bar-Medium

Text		Text
Text		Text
Text	14.	92 Text
Text	14.	92 Text



- 1 Text \sparkBar{14,95,68,9,19,41,91,1,81,97,79,45,96,76,17,65,8,92} Text\\
- 2 Text \sparkBar[Medium]{14,95,68,9,19,41,91,1,81,97,79,45,96,76,17,65,8,92} Text\\
- 3 Text \sparkBar[Medium][14]{14,95,68,9,19,41,91,1,81,97,79,45,96,76,17,65,8,92}[92] Text\\
- 4 Text \sparkBar{!14,95,68,9,19,41,91,1,81,97,79,45,96,76,17,65,8,!92} Text

#### 4.1.2 Bar-Narrow

Text  Text  
 Text 19  8 Text  
 Text 19  8 Text





- 1 Text \sparkBar[Narrow]{19,32,93,4,95,46,13,23,50,86,94,68,58,41,89,57,74,8} Text\\
- 2 Text \sparkBar[Narrow][19]{19,32,93,4,95,46,13,23,50,86,94,68,58,41,89,57,74,!8} Text\\
- 3 Text \sparkBar[Narrow]{!19,32,93,4,95,46,13,23,50,86,94,68,58,41,89,57,74,!8} Text

#### 4.1.3 Bar-Extranarrow

Text  Text  
 Text 19  8 Text  
 Text 19  8 Text





- 1 Text \sparkBar[Extranarrow]{19,32,93,4,95,46,13,23,50,86,94,68,58,41,89,57,74,8} Text\\
- 2 Text \sparkBar[Extranarrow][19]{19,32,93,4,95,46,13,23,50,86,94,68,58,41,89,57,74,!8} Text\\
- 3 Text \sparkBar[Extranarrow]{!19,32,93,4,95,46,13,23,50,86,94,68,58,41,89,57,74,!8} Text

#### 4.1.4 Bar-Wide

Text  Text  
 Text 13  22 Text  
 Text 13  Text  
 Text 13  22 Text

- 1 Text \sparkBar[Wide]{13,15,59,73,42,1,41,51,4,97,35,55,37,24,89,21,30,22} Text\\
- 2 Text \sparkBar[Wide][13]{13,15,59,73,42,1,41,51,4,97,35,55,37,24,89,21,30,22}[22] Text\\
- 3 Text \sparkBar[Wide]{!13,15,59,73,42,1,41,51,4,97,35,55,37,24,89,21,30,22} Text\\
- 4 Text \sparkBar[Wide]{!13,15,59,73,42,1,41,51,4,97,35,55,37,24,89,21,30,!22} Text

#### 4.1.5 Bar-Extrawide

Text  Text  
 Text 13  22 Text  
 Text 13  Text  
 Text 13  22 Text

- 1 Text \sparkBar[Extrawide]{13,15,59,73,42,1,41,51,4,97,35,55,37,24,89,21,30,22} Text\\
- 2 Text \sparkBar[Extrawide][13]{13,15,59,73,42,1,41,51,4,97,35,55,37,24,89,21,30,22}[22] Text\\
- 3 Text \sparkBar[Extrawide]{!13,15,59,73,42,1,41,51,4,97,35,55,37,24,89,21,30,22} Text\\
- 4 Text \sparkBar[Extrawide]{!13,15,59,73,42,1,41,51,4,97,35,55,37,24,89,21,30,!22} Text

## 4.2 Dots

### 4.2.1 Dot-Medium – the default

Text ..... Text  
 Text 54.....1 Text  
 Text 54.....1 Text

- 1 Text \sparkDot{54,39,26,65,29,58,36,99,16,56,76,69,71,77,7,40,79,1} Text\\
- 2 Text \sparkDot[Medium][54]{54,39,26,65,29,58,36,99,16,56,76,69,71,77,7,40,79,1}[1] Text\\
- 3 Text \sparkDot{!54,39,26,65,29,58,36,99,16,56,76,69,71,77,7,40,79,!1} Text

### 4.2.2 Dot-Small

Text ..... Text  
 Text 1.....76 Text  
 Text 1.....76 Text

- 1 Text \sparkDot[Small]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkDot[Small][1]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76}[76] Text\\
- 3 Text \sparkDot[Small]{!1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,!76} Text

### 4.2.3 Dot-Extrasmall

Text ..... Text  
 Text 1.....76 Text  
 Text 1.....76 Text

- 1 Text \sparkDot[Extrasmall]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkDot[Extrasmall][1]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76}[76] Text\\
- 3 Text \sparkDot[Extrasmall]{!1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,!76} Text

### 4.2.4 Dot-Extralarge

Text ..... Text  
 Text 1.....76 Text  
 Text 1.....76 Text

- 1 Text \sparkDot[Extralarge]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkDot[Extralarge][1]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76}[76] Text\\
- 3 Text \sparkDot[Extralarge]{!1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,!76} Text

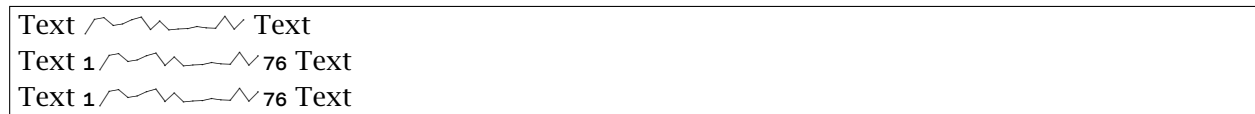
### 4.3 Dotline

#### 4.3.1 Dotline-Thin



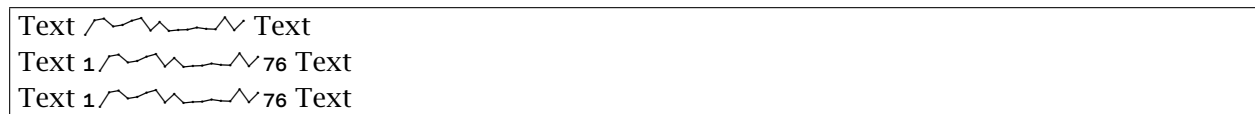
- 1 Text \sparkDotline[Thin]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkDotline[Thin][1]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76}[76] Text\\
- 3 Text \sparkDotline[Thin]!{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text

#### 4.3.2 Dotline-Extrathin



- 1 Text \sparkDotline[Extrathin]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkDotline[Extrathin][1]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76}[76] Text\\
- 3 Text \sparkDotline[Extrathin]!{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text

#### 4.3.3 Dotline-Medium - the default



- 1 Text \sparkDotline{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkDotline[Medium][1]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76}[76] Text\\
- 3 Text \sparkDotline!{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text

#### 4.3.4 Dotline-Thick



- 1 Text \sparkDotline[Thick]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkDotline[Thick][1]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76}[76] Text\\
- 3 Text \sparkDotline[Thick]!{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text

### 4.3.5 Dottedline-Extrathick



- 1 Text \sparkDottedline[Extrathick]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkDottedline[Extrathick][1]{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76}[76] Text\\
- 3 Text \sparkDottedline[Extrathick]!{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,!76} Text

## 5 Examples for Lua<sup>A</sup>T<sub>E</sub>X

The current version of spark-otf supports only star versions for Lua<sup>A</sup>T<sub>E</sub>X.

### 5.1 Bars



- 1 Text \sparkBar\*{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkBar\*{9,4,2,1,6,7,3,8,3,7,1,4,9,2,8,5,1,8} Text\\
- 3 Text \sparkBar\*[Narrow]{111,179,188,146,154,177,191,124,170,122,127,129,140,133,131,195,126,176} Text\\

### 5.2 Dots



- 1 Text \sparkDottedline\*{1,79,88,46,54,77,91,24,70,22,27,29,40,33,31,95,26,76} Text\\
- 2 Text \sparkDottedline{9,4,2,1,6,7,3,8,3,7,1,4,9,2,8,5,1,8} Text\\
- 3 Text \sparkDottedline+{9,4,2,1,6,7,3,8,3,7,1,4,9,2,8,5,1,8} Text\\
- 4 Text \sparkDot\*[Medium][19]{19,114,12,111,16,17,113,118,113,67,61,74,39,52,38,55,111,88}[88] Text\\
- 5 Text \sparkDottedline\*[Medium][111]{111,179,188,146,154,177,191,124,170,122,127,129,140,133,131,195,126,176} Text\\

## 6 Using color

It is possible to mark single or some values with a specific color, which must be given in binary notation, e.g. ff0000 for red (R-G-B). The macro \setSparkColor *should* include the (last) comma after the value:

Text 91,1,81,97,79,45,96,76,17,65,8,92} Text 14 91,1,81,97,79,45,96,76,17,65,8,92}92 Text  
 Text 91,1,81,97,79,45,96,76,17,65,8,92} Text 14 91,1,81,97,79,45,96,76,17,65,8,92}92 Text

- 1 Text \sparkBar{14,95,68,9,19,41,\setSparkColor{ff0000}{91,1,81,97,79,45,96,76,17,65,8,92} Text
- 2 \sparkBar{!14,95,68,9,19,41,\setSparkColor{ff0000}{91,1,81,97,79,45,96,76,17,65,8,92} Text
- 3
- 4 \bigskip
- 5 \noindent
- 6 Text \sparkDot{14,95,68,9,19,41,\setSparkColor{ff0000}{91,1,81,97,79,45,96,76,17,65,8,92} Text
- 7 \sparkDot{!14,95,68,9,19,41,\setSparkColor{ff0000}{91,1,81,97,79,45,96,76,17,65,8,92} Text

Coloring does *not* work for the star version of the macro and *not* for \sparkDotline.

## 7 The charsets

### 7.1 Spark-BarMedium

32: !"#\$%&'()\*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNO  
 82: RSTUVWXYZ[\]^\_`ABCDEFGHIJKLMN PQRSTU VWXYZ{|}~  
 132: iŒƒ¤¥¦§¨©ª«¬®¯°±²³´  
 182: ¶·¸¹º»¼½¾¿ÀÁÂÃÄÅÆÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖ×ØÙÚÛÜÝÞßàáâãäåæç  
 232: ÈÉÊËÌÍÎÏÐÑÒÓÔÕÖ÷ØÙÚÛÜÝÞÿ  
 282: I  
 332: Œœ  
 532: B  
 682: ^~  
 732: ~`  
 932: μ  
 8182: --- " " " ...  
 8232: ¨  
 8332: €  
 8582: ←↑→↓ ↖↗↘↙  
 8682: -  
 57582:  
 61432:  
 983032: ☐<sup>4</sup>.....  
 983082: ..  
 983132: ..

### Spark-BarNarrow

32: !"#\$%&'()\*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNO  
 82: RSTUVWXYZ[\]^\_`ABCDEFGHIJKLMN PQRSTU VWXYZ{|}~  
 132: iŒƒ¤¥¦§¨©ª«¬®¯°±²³´  
 182: ¶·¸¹º»¼½¾¿ÀÁÂÃÄÅÆÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖ×ØÙÚÛÜÝÞßàáâãäåæç



## References

232: ÈÉÈÈÌÌÏÏÑÒÓÔÖ÷ØÙÚÛÜÝÞ  
282: |  
332: Œœ  
532: ß  
682: ~  
732: ~  
932: μ  
8182: -- " " ...  
8232: ◊  
8332: €  
8582: ←↑→↓ ↖↗↘↙  
8682: -  
57582:  
61432:  
983032: □<sup>4</sup>.....  
983082: .....

## References

- [1] freedesktop.org. *Fontconfig. A library for configuring and customizing font access.* July 5, 2017. URL: <https://www.freedesktop.org/wiki/Software/fontconfig/> (visited on 09/26/2017).
- [2] Max Gadney et al. *AtF Spark.* *Our new typeface for code-free sparklines.* URL: <https://aftertheflood.com/projects/sparks/>.
- [3] Edward Tufte. *History of Sparklines and Edward Tufte Contribution.* Sept. 19, 2017. URL: [https://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg\\_id=000AIr00](https://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg_id=000AIr00) (visited on 09/19/2017).
- [4] WIKIPEDIA. *List of typographic features.* Feb. 21, 2017. URL: [https://en.wikipedia.org/wiki/List\\_of\\_typographic\\_features](https://en.wikipedia.org/wiki/List_of_typographic_features) (visited on 03/24/2017).
- [5] WIKIPEDIA. *Sparkline.* Sept. 3, 2017. URL: <https://en.wikipedia.org/wiki/Sparkline> (visited on 09/19/2017).