

# Fira Sans Hair Italic

## Technical Documentation

A-z				€	Lat	ŁłŤ	Ext	Ελ	Κιρ
				2 <sub>2</sub> 2 <sup>2</sup>		b·B	B·B	<i>ia</i>	
						fi		st	
619	123	123	123	0	7/	/8	7/8		
				x <sup>2</sup>		x <sub>2</sub>	1 <sup>st</sup>		
				(G}		Œ·Œ	g·g		
				[1]		[2]	[3]		
						Σ·Σ			
				N↗E	T↘o	‘↘’	‘↗’		

## Copyright © 2015 by Carrois Type Design

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written consent of the publisher.

This publication and the information herein is furnished AS IS, is subject to change without notice, and should not be construed as a commitment by Carrois Type Design. Carrois Type Design assumes no responsibility for any errors or inaccuracies, makes no warranty of any kind (express, implied or statutory) with respect to this publication, and expressly disclaims any and all warranties of merchantability, fitness for particular purposes and noninfringement of third party rights.

Brand or product names, used in this publication, are the trademarks or registered trademarks of their respective holders.

For questions and comments please contact:

Carrois Type Design GbR  
Simplonstr. 54  
10245 Berlin  
Germany  
Tel.: +49 (30) 920 389 66  
e-Mail: [post@carrois.com](mailto:post@carrois.com)  
Internet: [www.carrois.com](http://www.carrois.com)

Document generated 2015/07/22-18:31:03  
with e-font PDF Generator

# Table of Content

Encoded Characters	5
Basic Latin	5
Latin-1 Supplement	5
Latin Extended-A	6
Latin Extended-B	6
IPA Extensions	7
Spacing Modifier Letters	8
Combining Diacritical Marks	8
Greek and Coptic	8
Cyrillic	9
Cyrillic Supplement	10
Phonetic Extensions	10
Phonetic Extensions Supplement	10
Combining Diacritical Marks Supplement	10
Latin Extended Additional	11
Greek Extended	11
General Punctuation	12
Superscripts and Subscripts	13
Currency Symbols	13
Letterlike Symbols	13
Number Forms	13
Arrows	13
Mathematical Operators	13
Miscellaneous Technical	14
Geometric Shapes	14
Dingbats	14
Miscellaneous Symbols and Arrows	14
Latin Extended-C	14
Latin Extended-D	14
unassigned Block	15
Private Use Area	15
Alphabetic Presentation Forms	15
Arabic Presentation Forms-B	15
Unencoded Glyphs	16
Small Capitals From Capitals	16
Small Capitals From Capitals, Contextual Alternates, Small Capitals	16
Small Capitals From Capitals, Small Capitals	16
Contextual Alternates, Stylistic Set 3	18
Case-Sensitive Forms	19
Discretionary Ligatures	19
Denominators	19
Denominators, Fractions	19
Fractions, Numerators	19
Localized Forms	19
Numerators	20
Old Style Figures, Proportional Figures	20
Old Style Figures, Tabular Figures	20
Stylistic Alternates, Stylistic Set 1	20
Small Capitals	20
Stylistic Set 2	21
Tabular Figures	21
Slashed Zero	21
Other	21
OpenType Layout Features	22

Substitution Features	22
Positioning Features	24
Codepages	25
MacOS	25
MS Windows	25
ISO	25
Languages	26
Latin	26
Cyrillic	26
Greek	27

# Encoded Characters

All encoded characters should be accessible with every unicode capable application.  
For details about Unicode Blocks visit the [Unicode Website](#).

## Basic Latin

Block from 0000 to 007F

000D	0020	0021	0022	0023	0024	0025	0026	0027	0028	0029	002A	002B	002C	002D	002E
		!	"	#	\$	%	&	'	(	)	*	+	,	-	.
002F	0030	0031	0032	0033	0034	0035	0036	0037	0038	0039	003A	003B	003C	003D	003E
/	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>
003F	0040	0041	0042	0043	0044	0045	0046	0047	0048	0049	004A	004B	004C	004D	004E
?	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N
004F	0050	0051	0052	0053	0054	0055	0056	0057	0058	0059	005A	005B	005C	005D	005E
O	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^
005F	0060	0061	0062	0063	0064	0065	0066	0067	0068	0069	006A	006B	006C	006D	006E
_	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n
006F	0070	0071	0072	0073	0074	0075	0076	0077	0078	0079	007A	007B	007C	007D	007E
o	p	q	r	s	t	u	v	w	x	y	z	{		}	~

## Latin-1 Supplement

Block from 0080 to 00FF

00A0	00A1	00A2	00A3	00A4	00A5	00A6	00A7	00A8	00A9	00AA	00AB	00AC	00AD	00AE	00AF
	ı	ç	£	¤	¥	¦	§	¨	©	ª	«	¬	­	®	¯
00B0	00B1	00B2	00B3	00B4	00B5	00B6	00B7	00B8	00B9	00BA	00BB	00BC	00BD	00BE	00BF
°	±	²	³	´	µ	¶	·	¸	¹	º	»	¼	½	¾	¿
00C0	00C1	00C2	00C3	00C4	00C5	00C6	00C7	00C8	00C9	00CA	00CB	00CC	00CD	00CE	00CF
À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï
00D0	00D1	00D2	00D3	00D4	00D5	00D6	00D7	00D8	00D9	00DA	00DB	00DC	00DD	00DE	00DF
Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
00E0	00E1	00E2	00E3	00E4	00E5	00E6	00E7	00E8	00E9	00EA	00EB	00EC	00ED	00EE	00EF
à	á	â	ã	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï
00F0	00F1	00F2	00F3	00F4	00F5	00F6	00F7	00F8	00F9	00FA	00FB	00FC	00FD	00FE	00FF
ð	ñ	ò	ó	ô	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ÿ

# Latin Extended-A

Block from 0100 to 017F

[illegible]

# Latin Extended-B

Block from 0180 to 024F

[illegible]

01E0	01E1	01E2	01E3	01E4	01E5	01E6	01E7	01E8	01E9	01EA	01EB	01EC	01ED	01EE	01EF
Ā ā	Ē ē	Ĝ ĝ	Ĥ ĥ	Q q	Q̇ q̇	Q̈ q̈	Q̉ q̉	Q̊ q̊	Q̋ q̋	Q̌ q̌	Q̍ q̍	Q̎ q̎	Q̏ q̏	Q̐ q̐	Q̑ q̑
01F0	01F1	01F2	01F3	01F4	01F5	01F6	01F7	01F8	01F9	01FA	01FB	01FC	01FD	01FE	01FF
Ĵ ĵ	Đ đ	Ġ ġ	Ĥ ĥ	Q q	Q̇ q̇	Q̈ q̈	Q̉ q̉	Q̊ q̊	Q̋ q̋	Q̌ q̌	Q̍ q̍	Q̎ q̎	Q̏ q̏	Q̐ q̐	Q̑ q̑
0200	0201	0202	0203	0204	0205	0206	0207	0208	0209	020A	020B	020C	020D	020E	020F
Ā ā	Ē ē	Ĝ ĝ	Ĥ ĥ	Q q	Q̇ q̇	Q̈ q̈	Q̉ q̉	Q̊ q̊	Q̋ q̋	Q̌ q̌	Q̍ q̍	Q̎ q̎	Q̏ q̏	Q̐ q̐	Q̑ q̑
0210	0211	0212	0213	0214	0215	0216	0217	0218	0219	021A	021B	021C	021D	021E	021F
Ĵ ĵ	Đ đ	Ġ ġ	Ĥ ĥ	Q q	Q̇ q̇	Q̈ q̈	Q̉ q̉	Q̊ q̊	Q̋ q̋	Q̌ q̌	Q̍ q̍	Q̎ q̎	Q̏ q̏	Q̐ q̐	Q̑ q̑
0220	0221	0222	0223	0224	0225	0226	0227	0228	0229	022A	022B	022C	022D	022E	022F
Ĵ ĵ	Đ đ	Ġ ġ	Ĥ ĥ	Q q	Q̇ q̇	Q̈ q̈	Q̉ q̉	Q̊ q̊	Q̋ q̋	Q̌ q̌	Q̍ q̍	Q̎ q̎	Q̏ q̏	Q̐ q̐	Q̑ q̑
0230	0231	0232	0233	0234	0235	0236	0237	0238	0239	023A	023B	023C	023D	023E	023F
Ĵ ĵ	Đ đ	Ġ ġ	Ĥ ĥ	Q q	Q̇ q̇	Q̈ q̈	Q̉ q̉	Q̊ q̊	Q̋ q̋	Q̌ q̌	Q̍ q̍	Q̎ q̎	Q̏ q̏	Q̐ q̐	Q̑ q̑
0240	0241	0242	0243	0244	0245	0246	0247	0248	0249	024A	024B	024C	024D	024E	024F
Ĵ ĵ	Đ đ	Ġ ġ	Ĥ ĥ	Q q	Q̇ q̇	Q̈ q̈	Q̉ q̉	Q̊ q̊	Q̋ q̋	Q̌ q̌	Q̍ q̍	Q̎ q̎	Q̏ q̏	Q̐ q̐	Q̑ q̑

## IPA Extensions

Block from 0250 to 02AF

0250	0251	0252	0253	0254	0255	0256	0257	0258	0259	025A	025B	025C	025D	025E	025F
ɐ	ɑ	ɒ	ɓ	ɔ	ɔ̃	ɔ̄	ɔ̅	ɔ̆	ɔ̇	ɔ̈	ɔ̉	ɔ̊	ɔ̋	ɔ̌	ɔ̍
0260	0261	0262	0263	0264	0265	0266	0267	0268	0269	026A	026B	026C	026D	026E	026F
ɔ̎	ɔ̏	ɔ̐	ɔ̑	ɔ̒	ɔ̓	ɔ̔	ɔ̕	ɔ̖	ɔ̗	ɔ̘	ɔ̙	ɔ̚	ɔ̛	ɔ̜	ɔ̝
0270	0271	0272	0273	0274	0275	0276	0277	0278	0279	027A	027B	027C	027D	027E	027F
ɔ̞	ɔ̟	ɔ̠	ɔ̡	ɔ̢	ɔ̣	ɔ̤	ɔ̥	ɔ̦	ɔ̧	ɔ̨	ɔ̩	ɔ̪	ɔ̫	ɔ̬	ɔ̭
0280	0281	0282	0283	0284	0285	0286	0287	0288	0289	028A	028B	028C	028D	028E	028F
ɔ̮	ɔ̯	ɔ̰	ɔ̱	ɔ̲	ɔ̳	ɔ̴	ɔ̵	ɔ̶	ɔ̷	ɔ̸	ɔ̹	ɔ̺	ɔ̻	ɔ̼	ɔ̽
0290	0291	0292	0293	0294	0295	0296	0297	0298	0299	029A	029B	029C	029D	029E	029F
ɔ̾	ɔ̿	ɔ̻	ɔ̼	ɔ̽	ɔ̾	ɔ̿	ɔ̻	ɔ̼	ɔ̽	ɔ̾	ɔ̿	ɔ̻	ɔ̼	ɔ̽	ɔ̾
02A0	02A1	02A2	02A3	02A4	02A5	02A6	02A7	02A8	02A9	02AA	02AB	02AC	02AD	02AE	02AF
ɔ̿	ɔ̻	ɔ̼	ɔ̽	ɔ̾	ɔ̿	ɔ̻	ɔ̼	ɔ̽	ɔ̾	ɔ̿	ɔ̻	ɔ̼	ɔ̽	ɔ̾	ɔ̿

## Spacing Modifier Letters

### Block from 02B0 to 02FF

02B0	02B1	02B2	02B4	02B7	02B8	02B9	02BA	02BB	02BC	02BF	02C0	02C6	02C7	02C8	02CA
h	h̃	j	j̃	w	y	/	//	/	/	‘	?	^	˘	˙	˚
02CB	02CC	02CE	02CF	02D0	02D1	02D4	02D6	02D7	02D8	02D9	02DA	02DB	02DC	02DD	02DE
˛		˛	˛	˙	˙	±	+	—	˘	˙	˚		˘	˙	˚
02E0	02E1	02E2	02E3	02E4	02E5	02E6	02E7	02E8	02E9	02EE					
Ÿ	l	s	x	Ÿ	7	7	7	7	7	”					

## Combining Diacritical Marks

### Block from 0300 to 036F

0300	0301	0302	0303	0304	0306	0307	0308	0309	030A	030B	030C	030D	030F	0311	0312
˘	˙	˚	˛	—	˘	˙	˙	?	˚	//	˘	˙	˙	˙	˙
0313	0316	0317	0318	0319	031A	031B	031C	031D	031E	031F	0320	0321	0323	0324	0325
˙					7	7									
0326	0327	0328	0329	032A	032B	032C	032D	032F	0330	0331	0332	0334	0335	0336	0339
˙	˙	˙	˙	˙			˙	˙	˙	˙	˙	˙	˙	˙	˙
033A	033B	033C	033D	0342	0345	035C	0361								
˙	˙	˙	˙	˙	˙	˙	˙								

## Greek and Coptic

### Block from 0370 to 03FF

0370	0371	0372	0373	0374	0375	0376	0377	037A	037B	037C	037D	037E	037F	0384	0385
Ɔ	Ɔ	Ɔ	Ɔ	˙	˙	И	И	˙	Ɔ	Ɔ	Ɔ	˙	Ɔ	˙	˙
0386	0387	0388	0389	038A	038C	038E	038F	0390	0391	0392	0393	0394	0395	0396	0397
Α	˙	Ε	Η	Ι	Ο	Υ	Ω	ι	Α	Β	Γ	Δ	Ε	Ζ	Η
0398	0399	039A	039B	039C	039D	039E	039F	03A0	03A1	03A3	03A4	03A5	03A6	03A7	03A8
Θ	Ι	Κ	Λ	Μ	Ν	Ξ	Ο	Π	Ρ	Σ	Τ	Υ	Φ	Χ	Ψ
03A9	03AA	03AB	03AC	03AD	03AE	03AF	03B0	03B1	03B2	03B3	03B4	03B5	03B6	03B7	03B8
Ω	ϊ	ϋ	ά	έ	ή	ί	ύ	α	β	γ	δ	ε	ζ	η	θ
03B9	03BA	03BB	03BC	03BD	03BE	03BF	03C0	03C1	03C2	03C3	03C4	03C5	03C6	03C7	03C8
ι	κ	λ	μ	ν	ξ	ο	π	ρ	ς	σ	τ	υ	φ	χ	ψ



03C9	03CA	03CB	03CC	03CD	03CE	03CF	03D0	03D1	03D2	03D3	03D4	03D5	03D6	03D7	03D8
ω	ï	ü	ó	ú	ώ	κ	β	θ	Υ	Υ	ÿ	φ	ω	ι	ρ
03D9	03DA	03DB	03DC	03DD	03DE	03DF	03E0	03E1	03F0	03F1	03F2	03F3	03F4	03F5	03F6
ρ	ς	ς	Ƒ	Ƒ	ς	ς	λ	λ	и	ρ	с	ј	Θ	ε	э
03F7	03F8	03F9	03FA	03FB	03FC	03FD	03FE	03FF							
ρ	ρ	с	М	М	ρ	с	с	с							

## Cyrillic

### Block from 0400 to 04FF

0400	0401	0402	0403	0404	0405	0406	0407	0408	0409	040A	040B	040C	040D	040E	040F
È	Ë	Ĥ	Ħ	Є	Ƨ	Ƨ	Ĭ	Ј	Љ	Њ	Ћ	Ќ	Й	Ў	Ц
0410	0411	0412	0413	0414	0415	0416	0417	0418	0419	041A	041B	041C	041D	041E	041F
А	Б	В	Г	Д	Е	Ж	З	И	Й	К	Л	М	Н	О	П
0420	0421	0422	0423	0424	0425	0426	0427	0428	0429	042A	042B	042C	042D	042E	042F
Р	С	Т	У	Ф	Х	Ц	Ч	Ш	Щ	Ъ	Ы	Ь	Э	Ю	Я
0430	0431	0432	0433	0434	0435	0436	0437	0438	0439	043A	043B	043C	043D	043E	043F
а	б	в	г	д	е	ж	з	и	й	к	л	м	н	о	п
0440	0441	0442	0443	0444	0445	0446	0447	0448	0449	044A	044B	044C	044D	044E	044F
р	с	т	у	ф	х	ц	ч	ш	щ	ъ	ы	ь	э	ю	я
0450	0451	0452	0453	0454	0455	0456	0457	0458	0459	045A	045B	045C	045D	045E	045F
è	ë	ĥ	ĥ	є	Ƨ	Ƨ	Ĭ	Ј	Љ	Њ	Ћ	Ќ	ù	ў	ц
0460	0461	0462	0463	0464	0465	0466	0467	0468	0469	046A	046B	046C	046D	046E	046F
ω	ω	ѐ	ѐ	Ѡ	Ѡ	Ѡ	Ѡ	Ѡ	Ѡ	Ѡ	Ѡ	Ѡ	Ѡ	Ѡ	Ѡ
0470	0471	0472	0473	0474	0475	0476	0477	0478	0479	048A	048B	048C	048D	048E	048F
ψ	ψ	θ	θ	ϐ	ϐ	ϐ	ϐ	ϐ	ϐ	ϐ	ϐ	ϐ	ϐ	ϐ	ϐ
0490	0491	0492	0493	0494	0495	0496	0497	0498	0499	049A	049B	049C	049D	049E	049F
Г	г	Ƒ	Ƒ	Ĥ	Ĥ	Ж	Ж	З	З	К	К	К	К	К	К
04A0	04A1	04A2	04A3	04A4	04A5	04A6	04A7	04A8	04A9	04AA	04AB	04AC	04AD	04AE	04AF
К	к	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н
04B0	04B1	04B2	04B3	04B4	04B5	04B6	04B7	04B8	04B9	04BA	04BB	04BC	04BD	04BE	04BF
У	у	Х	х	Ц	ц	Ч	ч	Ч	ч	Ч	Ч	Ч	Ч	Ч	Ч
04C0	04C1	04C2	04C3	04C4	04C5	04C6	04C7	04C8	04C9	04CA	04CB	04CC	04CD	04CE	04CF
І	Ж	Ж	К	К	Л	Л	Н	Н	Н	Н	Н	Н	Н	Н	Н

04D0	04D1	04D2	04D3	04D4	04D5	04D6	04D7	04D8	04D9	04DA	04DB	04DC	04DD	04DE	04DF
Ă	ă	Ä	ä	Æ	æ	Ě	ě	Ə	ə	Ӑ	ӓ	Ж	ж	Ӣ	ӣ
04E0	04E1	04E2	04E3	04E4	04E5	04E6	04E7	04E8	04E9	04EA	04EB	04EC	04ED	04EE	04EF
З	з	Й	й	Ӣ	ӣ	Ӧ	ӧ	Ө	ө	Ӗ	ӗ	Э	э	Ү	ү
04F0	04F1	04F2	04F3	04F4	04F5	04F6	04F7	04F8	04F9	04FA	04FB	04FC	04FD	04FE	04FF
Ӹ	ӹ	Ӻ	ӻ	Ӽ	ӽ	Ҁ	ҁ	Ӡ	ӡ	҄	҅	Х	х	Ж	ж

## Cyrillic Supplement

Block from 0500 to 052F

0500	0501	0502	0503	0504	0505	0506	0507	0508	0509	050A	050B	050C	050D	050E	050F
ɀ	Ɂ	ɂ	Ƀ	Ʉ	Ʌ	Ɇ	ɇ	Ɉ	ɉ	Ɋ	ɋ	Ɍ	ɍ	Ɏ	ɏ
0510	0511	0512	0513	0514	0515	0516	0517	0518	0519	051A	051B	051C	051D	051E	051F
ɐ	ɑ	ɒ	ɓ	ɔ	ɕ	ɖ	ɗ	ɘ	ə	ɚ	ɛ	ɞ	ɟ	ɠ	ɡ
0520	0521	0522	0523	0524	0525	0526	0527	0528	0529	052A	052B	052C	052D	052E	052F
ɢ	ɣ	ɤ	ɥ	ɦ	ɧ	ɨ	ɩ	ɪ	ɫ	ɬ	ɭ	ɮ	ɯ	ɰ	ɱ

## Phonetic Extensions

Block from 1D00 to 1D7F

1D4A	1D6C	1D6D	1D6E	1D6F	1D70	1D71	1D72	1D73	1D74	1D75	1D76
ə	ɸ	ɹ	ɻ	ɼ	ɽ	ɿ	ɿ	ɿ	ɿ	ɿ	ɿ

## Phonetic Extensions Supplement

Block from 1D80 to 1DBF

1D91	1DBF
ɿ	ɿ

## Combining Diacritical Marks Supplement

Block from 1DC0 to 1DFF

1DC4	1DC5	1DC6	1DC7	1DC8	1DC9
˘	˘	˘	˘	˘	˘

## Latin Extended Additional

Block from 1E00 to 1EFF

1E02	1E03	1E04	1E05	1E0A	1E0B	1E0C	1E0D	1E0E	1E0F	1E12	1E13	1E1E	1E1F	1E24	1E25
Ā ā	Ḃ ḃ	Ḅ ḅ	Ḇ ḇ	Ḑ ḑ	Ḓ ḓ	Ḕ ḕ	Ḗ ḗ	Ḙ ḙ	Ḛ ḛ	Ḝ ḝ	Ḟ ḟ	Ḡ ḡ	Ḣ ḣ	Ḥ ḥ	
1E2E	1E2F	1E36	1E37	1E3C	1E3D	1E3E	1E3F	1E40	1E41	1E44	1E45	1E46	1E47	1E4A	1E4B
Ḧ ḧ	Ḫ ḫ	Ḭ ḭ	Ḯ ḯ	Ḱ ḱ	Ḳ ḳ	Ḵ ḵ	Ḷ ḷ	Ḹ ḹ	Ḻ ḻ	Ḽ ḽ	Ḿ ḿ	Ṁ ṁ	Ṃ ṃ	Ṅ ṅ	
1E4C	1E4D	1E50	1E51	1E52	1E53	1E54	1E55	1E56	1E57	1E5A	1E5B	1E60	1E61	1E62	1E63
Ṫ ṫ	Ṭ ṭ	Ṱ ṱ	Ṳ ṳ	Ṵ ṵ	Ṷ ṷ	Ṹ ṹ	Ṻ ṻ	Ṽ ṽ	Ṽ ṽ	Ṛ ṛ	Ṝ ṝ	Ṡ ṡ	Ṣ ṣ	Ṥ ṥ	
1E6A	1E6B	1E6C	1E6D	1E6E	1E6F	1E70	1E71	1E78	1E79	1E80	1E81	1E82	1E83	1E84	1E85
Ṯ ṯ	Ṻ ṻ	Ṽ ṽ	Ṛ ṛ	Ṝ ṝ	Ṡ ṡ	Ṣ ṣ	Ṥ ṥ	Ṹ ṹ	Ṻ ṻ	Ṽ ṽ	Ṛ ṛ	Ṝ ṝ	Ṡ ṡ	Ṣ ṣ	Ṥ ṥ
1E92	1E93	1E9E	1EA0	1EA1	1EA2	1EA3	1EA4	1EA5	1EA6	1EA7	1EA8	1EA9	1EAA	1EAB	1EAC
Ẑ ẑ	Ẓ ẓ	Ẕ ẕ	ẖ ẗ	ẙ ẚ	ẜ ẝ	ẞ ẟ	Ạ ạ	Ả ả	Ấ ấ	Ầ ầ	Ẩ ẩ	Ẫ ẽ	ế ẻ	Ế ế	
1EAD	1EAE	1EAF	1EB0	1EB1	1EB2	1EB3	1EB4	1EB5	1EB6	1EB7	1EB8	1EB9	1EBA	1EBB	1EBC
Ẽ ẽ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ	Ẹ ẹ
1EBD	1EBE	1EBF	1EC0	1EC1	1EC2	1EC3	1EC4	1EC5	1EC6	1EC7	1EC8	1EC9	1ECA	1ECB	1ECC
Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ	Ẻ ẻ
1ECD	1ECE	1ECF	1ED0	1ED1	1ED2	1ED3	1ED4	1ED5	1ED6	1ED7	1ED8	1ED9	1EDA	1EDB	1EDC
Ṫ ṫ	Ṭ ṭ	Ṱ ṱ	Ṳ ṳ	Ṵ ṵ	Ṷ ṷ	Ṹ ṹ	Ṻ ṻ	Ṽ ṽ	Ṽ ṽ	Ṛ ṛ	Ṝ ṝ	Ṡ ṡ	Ṣ ṣ	Ṥ ṥ	
1EDD	1EDE	1EDF	1EE0	1EE1	1EE2	1EE3	1EE4	1EE5	1EE6	1EE7	1EE8	1EE9	1EEA	1EEB	1EEC
Ṫ ṫ	Ṭ ṭ	Ṱ ṱ	Ṳ ṳ	Ṵ ṵ	Ṷ ṷ	Ṹ ṹ	Ṻ ṻ	Ṽ ṽ	Ṽ ṽ	Ṛ ṛ	Ṝ ṝ	Ṡ ṡ	Ṣ ṣ	Ṥ ṥ	
1EED	1EEE	1EEF	1EF0	1EF1	1EF2	1EF3	1EF4	1EF5	1EF6	1EF7	1EF8	1EF9			
Ṫ ṫ	Ṭ ṭ	Ṱ ṱ	Ṳ ṳ	Ṵ ṵ	Ṷ ṷ	Ṹ ṹ	Ṻ ṻ	Ṽ ṽ	Ṽ ṽ	Ṛ ṛ	Ṝ ṝ	Ṡ ṡ	Ṣ ṣ	Ṥ ṥ	

## Greek Extended

Block from 1F00 to 1FFF

1F00	1F01	1F02	1F03	1F04	1F05	1F06	1F07	1F08	1F09	1F0A	1F0B	1F0C	1F0D	1F0E	1F0F
Ά ά	Έ έ	Ή ή	Ί ί	Ό ό	ΰ	ΰ	ΰ	Ά ά	Έ έ	Ή ή	Ί ί	Ό ό	ΰ	ΰ	ΰ
1F10	1F11	1F12	1F13	1F14	1F15	1F18	1F19	1F1A	1F1B	1F1C	1F1D	1F20	1F21	1F22	1F23
Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ	Έ έ
1F24	1F25	1F26	1F27	1F28	1F29	1F2A	1F2B	1F2C	1F2D	1F2E	1F2F	1F30	1F31	1F32	1F33
Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή
1F34	1F35	1F36	1F37	1F38	1F39	1F3A	1F3B	1F3C	1F3D	1F3E	1F3F	1F40	1F41	1F42	1F43
Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή	Ή ή

1F44	1F45	1F48	1F49	1F4A	1F4B	1F4C	1F4D	1F50	1F51	1F52	1F53	1F54	1F55	1F56	1F57
Ō	ō	Ŏ	ŏ	Ɔ	ɔ	Ɔ	ɔ	Ú	ú	Û	ü	Ŭ	ŭ	Ű	ű
1F59	1F5B	1F5D	1F5F	1F60	1F61	1F62	1F63	1F64	1F65	1F66	1F67	1F68	1F69	1F6A	1F6B
Ƴ	ƴ	ƶ	Ʒ	Ų	ų	Ŵ	ŵ	Ŷ	ŷ	Ź	ź	Ɔ	ɔ	Ɔ	ɔ
1F6C	1F6D	1F6E	1F6F	1F70	1F71	1F72	1F73	1F74	1F75	1F76	1F77	1F78	1F79	1F7A	1F7B
Ɔ	ɔ	Ɔ	ɔ	à	á	è	é	ĥ	ĥ	ì	í	ò	ó	ù	ú
1F7C	1F7D	1F80	1F81	1F82	1F83	1F84	1F85	1F86	1F87	1F88	1F89	1F8A	1F8B	1F8C	1F8D
ŵ	ŵ	à	á	à	à	à	à	à	à	À	À	À	À	À	À
1F8E	1F8F	1F90	1F91	1F92	1F93	1F94	1F95	1F96	1F97	1F98	1F99	1F9A	1F9B	1F9C	1F9D
À	À	ĥ	ĥ	ĥ	ĥ	ĥ	ĥ	ĥ	ĥ	Ĥ	Ĥ	Ĥ	Ĥ	Ĥ	Ĥ
1F9E	1F9F	1FA0	1FA1	1FA2	1FA3	1FA4	1FA5	1FA6	1FA7	1FA8	1FA9	1FAA	1FAB	1FAC	1FAD
Ĥ	Ĥ	Ų	ų	Ŵ	ŵ	Ŷ	ŷ	Ź	ź	Ɔ	ɔ	Ɔ	ɔ	Ɔ	ɔ
1FAE	1FAF	1FB0	1FB1	1FB2	1FB3	1FB4	1FB6	1FB7	1FB8	1FB9	1FBA	1FBB	1FBC	1FBD	1FBE
Ɔ	ɔ	ă	ā	à	ɑ	ǎ	ǎ	ǎ	ǎ	Ă	Ă	Ă	Ă	Ă	ˆ
1FBF	1FC0	1FC1	1FC2	1FC3	1FC4	1FC6	1FC7	1FC8	1FC9	1FCA	1FCB	1FCC	1FCD	1FCE	1FCF
ˆ	˜	˜	ĥ	ĥ	ĥ	ĥ	ĥ	Ĥ	Ĥ	Ĥ	Ĥ	Ĥ	ˆ	ˆ	˜
1FD0	1FD1	1FD2	1FD3	1FD6	1FD7	1FD8	1FD9	1FDA	1FDB	1FDD	1FDE	1FDF	1FE0	1FE1	1FE2
ĩ	ī	ì	í	ĩ	ĩ	ĩ	ī	ı	ı	ˆ	ˆ	˜	Ŭ	Ū	Ù
1FE3	1FE4	1FE5	1FE6	1FE7	1FE8	1FE9	1FEA	1FEB	1FEC	1FED	1FEE	1FEF	1FF2	1FF3	1FF4
Ú	Ṗ	Ṗ	Ŭ	Ū	Ỳ	Ȳ	Ƴ	ƴ	Ƴ	ˆ	ˆ	ˆ	ŵ	ŵ	ŵ
1FF6	1FF7	1FF8	1FF9	1FFA	1FFB	1FFC	1FFD	1FFE							
ŵ	ŵ	Ɔ	ɔ	Ɔ	ɔ	Ɔ	ˆ	ˆ							

## General Punctuation

### Block from 2000 to 206F

2007	2008	200B	200C	200D	200E	200F	2012	2013	2014	2015	2016	2018	2019	201A	201C
				↑	↑	↑	—	—	—	—	//	ˆ	ˆ	,	“
201D	201E	2020	2021	2022	2026	2030	2039	203A	203F	2044	204A				
”	„	†	‡	·	...	‰	<	>	⌒	/	7				

## Superscripts and Subscripts

Block from 2070 to 209F

2070	2074	2075	2076	2077	2078	2079	207A	207B	207C	207D	207E	207F	2080	2081	2082
0	4	5	6	7	8	9	+	−	=	(	)	<sup>n</sup>	0	1	2
2083	2084	2085	2086	2087	2088	2089	208A	208B	208C	208D	208E				
3	4	5	6	7	8	9	+	−	=	(	)				

## Currency Symbols

Block from 20A0 to 20CF

20AC	20AF	20B9	20BA	20BD
€	₤	₹	₧	₦

## Letterlike Symbols

Block from 2100 to 214F

210A	2113	2116	2122	2126	212E
g	ℓ	N <sub>2</sub>	™	Ω	e

## Number Forms

Block from 2150 to 218F

2153	2154	2155	2156	2157	2158	2159	215A	215B	215C	215D	215E	215F
1/3	2/3	1/5	2/5	3/5	4/5	1/6	5/6	1/8	3/8	5/8	7/8	1/

## Arrows

Block from 2190 to 21FF

2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	21E6	21E7	21E8	21E9	21EA
←	↑	→	↓	↔	↕	↖	↗	↘	↙	↩	↪	↬	↭	↮

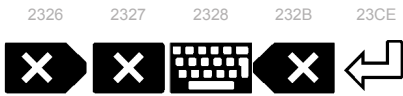
## Mathematical Operators

Block from 2200 to 22FF

2202	2205	2206	220F	2211	2212	2215	2219	221A	221E	222B	2248	2260	2264	2265	22C5
∂	∅	Δ	∏	Σ	−	/	·	√	∞	∫	≈	≠	≤	≥	·

## Miscellaneous Technical

Block from 2300 to 23FF



## Geometric Shapes

Block from 25A0 to 25FF



## Dingbats

Block from 2700 to 27BF

27A1



## Miscellaneous Symbols and Arrows

Block from 2B00 to 2BFF

2B05 2B06 2B07



## Latin Extended-C

Block from 2C60 to 2C7F

2C64 2C65 2C66 2C6D 2C71 2C72 2C73

R ø t a v W w

## Latin Extended-D

Block from A720 to A7FF

A789 A78A A78B A78C A78D A7AA A7AD A7AE A7B2 A7B3 A7B4 A7B5 A7B6 A7B7

: = ' ' 4 H £ I J X β β ω ω

## unassigned Block

Block from AB30 to ABBF

AB53



## Private Use Area

Block from E000 to F8FF

E000

E001

E002

E003



## Alphabetic Presentation Forms

Block from FB00 to FB4F

FB01

FB02



## Arabic Presentation Forms-B

Block from FE70 to FEFF

FEFF





Ñ Ñ Ñ Ñ Ñ Ñ Ñ Ñ Ñ Ó Ó Ó Ó Ó Ó Ó  
 Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò  
 Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò Ò  
 Œ P P P P Q Q R R R R R R R S  
 Š Š Š Š Š Š Š Š Š Š Š Š Š Š Š  
 T T T T T T T T T T T T T T T  
 U U U U U U U U U U U U U U U  
 Ù Ù Ù Ù Ù Ù Ù Ù Ù Ù Ù Ù Ù Ù Ù  
 Ũ Ũ V U W W W W W W W W W  
 Y Y Y Y Y Y Y Y Y Z Z Z Z Z Z Z  
 A B B Г Г Г Д Е Е Ж З И Й Й Й  
 К К Л М Н О П Р С Т У Ÿ Ф Х Ч Ц  
 Ш Щ Ц Я Ъ Ъ Ъ Ъ Ъ Ъ Ъ Ъ Ъ  
 Ю Ъ Ѡ Ъ Ъ А А А А А А А А А  
 Ъ Ж З К К К К К К К К К К К  
 Ч Ч ч ч е е I К Л Н Н Ч М Æ Æ Æ  
 Ě Ə Ə 3 Й Ө Ө 3 Ÿ Ÿ Ÿ Č Ć Ć Ć

Ж	д	д	з	з	л	л	Г	т	ε	л	л	Р	Æ	Q	W
К	л	л	б	Р	Д	Д	л	л	А	В	Г	Δ	Е	Ζ	Н
Θ	Ι	Κ	Λ	Μ	Ν	Ξ	Ο	Π	Ρ	Σ	Τ	Υ	Φ	Χ	Ψ
Ω	Ι	Υ	Ο	Ω	Α	Ε	Η	Τ	И	У	Э	Q	ς	ƒ	
⚡	Λ	Κ	С	Ј	Р	М	А	А	А	А	А	А	А	А	А
А	А	А	А	А	А	А	А	А	А	А	А	А	Е	Е	Е
Е	Е	Е	Е	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н
Н	Н	Н	Н	Н	Н	Н	І	І	І	І	І	І	І	І	І
І	І	І	О	О	О	О	О	О	О	О	Р	Υ	Υ	Υ	Υ
Υ	Υ	Υ	Υ	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω
Ω	Ω	Ω	Ω	Ω	Ω	Ω	ˊ	ˊ	ˋ	ˋ	ˋ	ˋ			ˆ
ˆ		˙	˙	˙	˙	˘	˘	˝	˝	˚	˚		˚	˚	˚
˜	˜	€	˘	ℓ	β	ω	Ι	Χ							

## Contextual Alternates, Stylistic Set 3

e

## Case-Sensitive Forms

i j { } [ ] ( ) — — — — ‹ › ‹ ›  
 ∞ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘  
 ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘  
 ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘

## Discretionary Ligatures

fi fl

## Denominators

( ) = - +

## Denominators, Fractions

0 1 2 3 4 5 6 7 8 9

## Fractions, Numerators

0 1 2 3 4 5 6 7 8 9

## Localized Forms

Ć Ć Ó Ś Ź i f Ć Ć Ó Ś Ź fi fl fi fl  
 Ć Ć Ó Ś Ź ‘ ‘ ‘

## Numerators

( ) = - +

## Old Style Figures, Proportional Figures

0 1 2 3 4 5 6 7 8 9 # − ¢ ¤ \$ ™  
 € ₧ ₨ ₹ £ ¥ ≈ ~ ÷ = > ≥ ∞ ∫ < ≤  
 ¬ − × ≠ ∂ ‰ ‰ + ± ∏ √ ∑ ∔ ∘ †  
 ‡

## Old Style Figures, Tabular Figures

0 1 2 3 4 5 6 7 8 9 # − ¢ ¤ \$ ™  
 € ₧ ₨ ₹ £ ¥ ≈ ~ ÷ = > ≥ ∞ ∫ < ≤  
 ¬ − × ≠ ∂ ‰ ‰ + ± ∏ √ ∑ ∔ ∘ †  
 ‡

## Stylistic Alternates, Stylistic Set 1

ŋ ƚ ɿ ƀ ɿ ƚ ƚ

## Small Capitals

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï  
 Ð Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß

I I P Y Y Y Y Y Y Y Y Q Q Q Q

## Stylistic Set 2

Б Ч Ч Б

## Tabular Figures

0 1 2 3 4 5 6 7 8 9 # − ¢ ¤ \$ ¢  
 € ₧ ₨ ₹ £ ¥ ≈ ~ ÷ = > ≥ ∞ ∫ < ≤  
 ¬ − × ≠ ∂ ‰ ‰ + ± ∏ √ ∑ ∅ § ° †  
 ‡

## Slashed Zero

0 0 0 0

## Other

/? 🌐 ' ~

# OpenType Layout Features

For details about OpenType Layout Features see the [OpenType Layout tag registry](#).

## Substitution Features



### Access All Alternates

This feature makes all variations of a selected character accessible.



### Small Capitals

This feature turns lowercase characters into small capitals. This corresponds to the common SC font layout. It is generally used for display lines set in Large and small caps, such as titles. Forms related to small capitals, such as oldstyle figures, may be included.



### Small Capitals From Capitals

This feature turns capital characters into small capitals.



### Contextual Alternates

In specified situations, replaces default glyphs with alternate forms which provide better joining behavior.



### Standard Ligatures

Replaces a sequence of glyphs with a single glyph which is preferred for typographic purposes. This feature covers the ligatures which the designer/manufacturer judges should be used in normal conditions.



### Discretionary Ligatures

Replaces a sequence of glyphs with a single glyph which is preferred for typographic purposes. This feature covers those ligatures which may be used for special effect, at the user's preference.



### Old Style Figures

This feature changes selected figures from the default lining style to oldstyle form.



### Lining Figures

This feature changes selected figures from oldstyle to the default lining form.



### Proportional Figures

Replaces figure glyphs set on uniform (tabular) widths with corresponding glyphs set on glyph-specific (proportional) widths.



### Tabular Figures

Replaces figure glyphs set on proportional widths with corresponding glyphs set on uniform (tabular) widths.



### Slashed Zero

Some fonts contain both a default form of zero, and an alternative form which uses a diagonal slash through the counter. This feature allows the user to change from the default 0 to a slashed form.

7/

**Numerators**

Replaces selected figures which precede a slash with numerator figures, and replaces the typographic slash with the fraction slash.

/8

**Denominators**

Replaces selected figures which follow a slash with denominator figures.

7/8

**Fractions**

Replaces figures separated by a slash with 'common' (diagonal) fractions.

x<sup>2</sup>**Superscript**

Replaces lining or oldstyle figures with superior figures (primarily for footnote indication), and may replace lowercase letters with superior letters (primarily for abbreviated French titles).

x<sub>2</sub>**Subscript**

The "subs" feature may replace a default glyph with a subscript glyph.

1<sup>st</sup>**Ordinals**

Replaces default alphabetic glyphs with the corresponding ordinal forms for use after figures.

(G}

**Case-Sensitive Forms**

Shifts various punctuation marks up to a position that works better with all-capital sequences or sets of lining figures; also changes oldstyle figures to lining figures.

ſſ

**Localized Forms**

This feature enables localized forms of glyphs to be substituted for default forms.

g·g

**Stylistic Alternates**

Many fonts contain alternate glyph designs for a purely esthetic effect; these don't always fit into a clear category like swash or historical. This feature replaces the default forms with the stylistic alternates.

[ 1 ]

**Stylistic Set 1**

Glyphs in stylistic sets may be designed to harmonise visually, interact in particular ways, or otherwise work together.

[ 2 ]

**Stylistic Set 2**

[ 3 ]

**Stylistic Set 3**

Σ·Σ

**Mathematical Greek**

Replaces standard typographic forms of Greek glyphs with corresponding forms commonly used in mathematical notation (which are a subset of the Greek alphabet).

## Positioning Features



### Capital Spacing

Globally adjusts inter-glyph spacing for all-capital text. Most typefaces contain capitals and lowercase characters, and the capitals are positioned to work with the lowercase. When capitals are used for words, they need more space between them for legibility and esthetics.



### Kerning

Adjusts amount of space between glyphs, generally to provide optically consistent spacing between glyphs.



### Mark Positioning

Positions mark glyphs with respect to base glyphs.



### Mark to Mark Positioning

Positions marks with respect to other marks. Required in various non-Latin scripts like Arabic.



# Codepages

## MacOS

MacOS Central Europe  
MacOS Croatian  
MacOS Cyrillic  
MacOS Greek

MacOS Icelandic  
MacOS Roman  
MacOS Romanian  
MacOS Turkish

## MS Windows

MS Windows 1250 Central European  
MS Windows 1251 Cyrillic  
MS Windows 1252 Western (ANSI)

MS Windows 1253 Greek  
MS Windows 1254 Turkish  
MS Windows 1257 Baltic

## ISO

ISO 8859- 1 Latin 1 (Western)  
ISO 8859- 2 Latin 2 (Central Europe)  
ISO 8859- 3 Latin 3 (Tu, Malt, Gal, Esp)  
ISO 8859- 4 Latin 4 (Baltic)  
ISO 8859- 5 Cyrillic  
ISO 8859- 7 Greek

ISO 8859- 9 Latin 5 (Turkish)  
ISO 8859-10 Latin 6 (Scandinavian)  
ISO 8859-13 Latin 7 (Baltic 2)  
ISO 8859-14 Latin 8 (Celtic)  
ISO 8859-15 Latin 9  
ISO 8859-16 Latin 10

# Languages

Information about languages is mainly based on the Unicode Common Locale Data Repository. For details visit the [Unicode CLDR Project](#).

## Latin

Afar	Ga	Machame	Slovak
Afrikaans	Galician	Makonde	Slovenian
Akan	Ganda	Malagasy	Soga
Albanian	German	Malay	Somali
Asu	Gusii	Maltese	Sorbian, Lower
Azerbaijani	Hausa	Manx	Sorbian, Upper
Bambara	Hawaiian	Maori	Sotho, Northern
Basque	Hungarian	Masai	Sotho, Southern
Bemba	Icelandic	Meru	South Ndebele
Bena	Igbo	Moldavian	Spanish
Bosnian	Indonesian	Morisyen	Swahili
Breton	Interlingua	Nama	Swati
Catalan	Irish	North Ndebele	Swedish
Central Morocco Tamazight	Italian	Norwegian Bokmål	Swiss German
Chiga	Jju	Norwegian Nynorsk	Tachelhit
Cognian	Kabuverdianu	Nyanja	Taita
Cornish	Kabyle	Nyankole	Taroko
Crimean Tatar	Kalaallisut	Occitan	Teso
Croatian	Kalenjin	Oromo	Tonga
Czech	Kamba	Polish	Tsonga
Danish	Kikuyu	Portuguese	Tswana
Dutch	Kinyarwanda	Romanian	Turkish
Embu	Koro	Romansh	Tyap
English	Koyra Chiini	Rombo	Venda
Esperanto	Koyraboro Senni	Rwa	Vietnamese
Estonian	Kpelle	Saho	Vunjo
Ewe	Kurdish	Samburu	Welsh
Faroese	Langi	Sami Northern	Wolof
Filipino	Latvian	Sango	Xhosa
Finnish	Lingala	Sena	Yoruba
French	Lithuanian	Serbian	Zulu
Frisian West	Low German	Shambala	
Friulian	Luo	Shona	
Fulah	Luyia	Sidamo	

## Cyrillic

Azerbaijani	Chechen	Mongolian	Uighur
Bashkir	Kazakh	Russian	Ukrainian
Belarusian	Kirghiz	Serbian	Uzbek
Bulgarian	Macedonian	Tajik	
Buriat	Mari	Tatar	

# Greek

Greek