

Fourth edition
2014-09-01

AMENDMENT 2
2016-05-01

Information technology — Universal Coded Character Set (UCS)

AMENDMENT 2: Bhaiksuki, Marchen, Tangut and other characters

Technologies de l'information — Jeu universel de caractères codés (JUC)

AMENDEMENT 2: Bhaiksuki, Marchen, Tangut et autres caractères



Reference number
ISO/IEC 10646:2014/Amd.2:2016(E)

AVA Documents
Document Sharing Hub
© ISO/IEC 2016



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#).

Amendment 2 to ISO/IEC 10646:2014 was prepared by Joint Technical Committee ISO/IEC JTC1, *Information technology*, Subcommittee SC 2, *Coded character sets*.

Information technology — Universal Coded Character Set (UCS)

AMENDMENT 2: Bhaiksuki, Marchen, Tangut and other characters

Page 5 Sub-clause 4.25 extended collection

In the Note 3, insert 'typically' between 'are' and 'referenced'.

Page 12 Sub-clause 6.4 Naming of character

In the list, insert the following new items after c) and adjust the next list item numbers accordingly:

d) follows the rule given in 25.7 for Tangut ideographs, or

Page 29 Sub-clause 23.1 List of source references

In the list of Hanzi G sources, insert the following new sources:

GFC Modern Chinese Standard Dictionary (现代汉语规范词典第二版。主编：李行健。北京：外语教学与研究出版社) 2010, ISBN : 978-7-5600-9518-9

GGFZ Tongyong Guifan Hanzi Zidian (通用规范汉字字典)

In the list of Kanji J sources, replace '2000' with '2004' for the J3 and J4 sources. Modify the J3A entry to read:

J3A JIS X 0213:2004 level-3 addendum from JIS X 0213:2000 level-3

Add the following entries:

J13 JIS X 0213:2004 level-3 characters replacing J1 characters

J13A JIS X 0213:2004 level-3 addendum from JIS X 0213:2000 level-3 replacing J1 characters

JA3 JIS X 0213:2004 level-3 characters replacing JA characters

J14 JIS X 0213:2004 level-4 characters replacing J1 characters

JA4 JIS X 0213:2004 level-4 characters replacing JA characters

Replace all J1 and JA sources that are also included in JIS X 0213:2004 by the values defined in JIS X 0213:2004 using the prefixes described above (J13, J13A, JA3, J14, and JA4). This represents 85 original JA sources and 2743 original J1 sources.

After the list of J sources, add the following notes:

NOTE 3 – When a source such as JIS X 0213:2004 includes encoded characters already included in older referenced sources, the more recent source references are typically used to reflect contemporary usage. This also reflects the fact that some of these more recent references were accompanied by minor adjustment for the graphic representation of the related characters.

NOTE 4 – J Sources that have been partially superseded (J1 and JA) are described in Annex A (see A.4.3 and A4.4). They can also be found as provisional sources in the Unihan Data base in <http://www.unicode.org/reports/tr38/> fully described as kJis1 for J1: JIS X 0212-1990 and kJA for the JA source.

In Table 5: Format details of the tags used in the source reference file for CJK Ideographs,

in the line for kIRG_GSource, insert the additional third field format values:

GFC-ddd, and GGFZ-dddddd.

in the line for kIRG_JSource, insert the additional third field format values:

J13-hhhh, J13A-hhhh, JA3-hhhh, J14-hhhh, and JA4-hhhh.

In the same Table 5, in the last row, remove the last sentence starting by “Only the first Radical-Stroke” from the fourth paragraph.

Insert new source references for the new 9 characters part of CJK Unified Ideographs.

Perform the additional updates to the source references:

- Move U+3D1D H source to U+2A3ED,
- Remove U+4CA4 H source (already moved to U+9FD0),
- Replace U+2AD12 U source with T source: TE-353F,
- Remove U+2B08F U source,
- Replace U+2F949 T source with U source: UCI-01199.

Provide a new reference file with updated references.

(The following text is identical to ISO/IEC 10646:2014 but is linked to the new file)

[Click on this highlighted text to access the reference file.](#)

NOTE – The content is also available as a separate viewable file in the same file directory as this document. The file is named: “CJKSrc.txt”.

Page 32 Sub-clause 23.2 Source references file for CJK Ideographs

In the third paragraph starting with ‘The Format definition’, replace ‘LINE TABULATION control character (000B)’ by ‘CHARACTER TABULATION control character (0009)’.

Page 37 Before Clause 24 Character names and annotations

Insert new clause, table, and figure as follows, renumbering the following clauses, tables, and figures:

24 Source references for Tangut Ideographs

24.1 List of source references

A Tangut ideograph is always referenced by one source reference. These source references are provided in a machine-readable format that is accessible as a link from this document. The content pointed by these links is also normative.

The source reference information establishes the character identity for Tangut ideographs. A source reference is established by associating a Tangut ideograph code point with one value in the source standards listed below. The Tangut sources are:

H2004-A Hán Xiǎománg 2004 (PhD dissertation on the correct form of Tangut ideographs), H1 sub-division

H2004-B	Hán Xiǎománg 2004 (PhD dissertation on the correct form of Tangut ideographs), H2 sub-division
L1986	Lǐ Fànwén 1986 (Study of the Homophones)
L1997	Lǐ Fànwén 1997 (Tangut-Chinese Dictionary, 1 st edition)
L2006	Lǐ Fànwén 2006 (Comparative Study of Wuyin Qieyun and Wenhai Baoyun)
L2008	Lǐ Fànwén 2008 (Tangut-Chinese Dictionary, 2 nd edition)
N1966	Nishida 1966 (Little Dictionary of Tangut)
S1968	Sofronov 1968 (Grammar of the Tangut Language)

24.2 Source reference file for Tangut Ideographs

The content linked to is a plain text file, using ISO/IEC 646-IRV characters with CARRIAGE RETURN/ LINE FEED as end of line mark. The file specifies the sources references data for all Tangut Ideographs. The file also contains information concerning Radical-Stroke index. Each line in the text file contains the following information organized in three fields:

- 1st field: UCS code point in the format (U+hhhhh)
- 2nd field: Tag indicating the type of information in the third field (kTGT_MergedSrc, kRSTUnicode)
- 3rd field: Information corresponding to the tag value specified by the second field. The Table 6 provides the format details.

The format definition for the first field uses 'h' as a hexadecimal unit. The three fields are delimited by a CHARACTER TABULATION control character (0009). Comment lines, starting with a NUMBER SIGN ('#') are informational only. Comment lines and blank lines in the text file should be ignored by any automatic process which parses the data file to extract the source reference information.

Table 6: Format details of the tags used in the source reference file for Tangut ideographs

Tag Value	Tag description	Third field format
kTGT_MergedSrc	Tangut source	(H2004-A-dddd), (H2004-B-dddd), (L1986-dddd), (L1997-dddd), (L2006-dddd), (L2008-dddd), (L2008-dddd-dddd), (N1966-ddd-ddx), (N1966-ddd-ddxx), or (S1968-dddd)
kRSTUnicode	Radical Stroke index	(d{1,3}.d{1,2})
The format definition uses 'd' as a decimal unit, and 'x' as an alphanumerical unit (0 to 9 and A to Z). Uppercase characters, digits and all other symbols between parentheses appear as shown. The Radical-Stroke index (d{1,3}.d{1,2}) is an informative field contains one construct: a radical index (one to three digits), followed by a full stop, and ending by one or two digits for the stroke count. The stroke count includes all strokes for the character, including the radical. The radical index is an entry on the Tangut Components block at 18800-18AFF, with the index '1' representing the code point 18800. NOTE – Concerning Lǐ Fànwén 2008 entries, the notation (L2008-dddd) denotes a character mapped to a single entry while the notation (L2008-dddd-dddd) denotes a character mapped to two entries.		

The following examples shows file entries for the Tangut ideographs 17000, 17001, 17A7A, and 17E91.

EXAMPLES

U+17000	kTGT_MergedSrc	L2008-0008
U+17000	kRSTUnicode	1.6
U+17001	kTGT_MergedSrc	L2008-0030
U+17001	kRSTUnicode	1.7
U+17A7A	kTGT_MergedSrc	N1966-204-10GG
U+17A7A	kRSTUnicode	141.14

U+17E91	kTGT_MergedSrc	L2008-2027-2350
U+17E91	kRSTUnicode	259.10

[Click on this highlighted text to access the reference file.](#)

NOTE – The content is also available as a separate viewable file in the same file directory as this document. The file is named: “TangutSrc.txt”.

24.3 Source reference presentation for Tangut Ideographs

The code charts for Tangut ideographs show one graphic symbol per character, along with additional information related to their identity such as radical, stroke count, and numeric value of the various source references.

The graphic representation for the radical is shown immediately below the code point, along with the radical number and the stroke count. That stroke count includes the radical itself.

NOTE – The radicals shown in this representation are part of the Tangut Components block at 18800-18AFF.

The figure 7 shows an example for characters 177D0-177D2, 177E4-177E6, 177F8-177FA, 1780C-1780E, and 17820-17822

177D0 𐍪 106.20 𐍪 L2008-4336	177E4 𐍪 108.9 𐍪 L2008-0714	177F8 𐍪 111.10 𐍪 L2008-1847	1780C 𐍪 112.8 𐍪 L2008-4585	17820 𐍪 112.10 𐍪 L2008-4644
177D1 𐍪 106.20 𐍪 L2008-4239	177E5 𐍪 108.9 𐍪 L2008-1868	177F9 𐍪 111.10 𐍪 L2008-1591	1780D 𐍪 112.8 𐍪 L2008-4580	17821 𐍪 112.10 𐍪 L2008-4669
177D2 𐍪 106.20 𐍪 L2008-4119	177E6 𐍪 108.10 𐍪 L2008-0598	177FA 𐍪 111.10 𐍪 L2008-1645	1780E 𐍪 112.8 𐍪 L2008-4509	17822 𐍪 112.10 𐍪 L2008-4636

Figure 7 – Chart presentation for TANGUT IDEOGRAPHS

Page 37 Clause 24 Character names and annotations

The clause is now renumbered 25. Insert one new sub-clause after 25.6 Character names for CJK Ideographs and renumber the following sub-clause accordingly.

25.7 Character names for Tangut Ideographs

For Tangut ideographs the names are algorithmically constructed by appending their coded representation in their five hexadecimal digit notation to “TANGUT IDEOGRAPH-”. For example, the first Tangut Ideograph has the name “TANGUT IDEOGRAPH-17000”.

Page 47 Sub-Clause 31.2 Code chart

The sub-clause is now renumbered 32.2. Replace the two last sentences starting with “Code charts” with: Code charts for CJK ideographs and Tangut ideographs have different formats. See Clause 23 and 24.

Page 47-2380 Clause 31, Code charts and list of character names

The clause is now renumbered 32.

1. Modifications to existing blocks

Insert the additional character glyphs and names at the indicated positions in the blocks given below.

Plane 00

Arabic Extended-A
Kannada
Malayalam
Currency Symbols
Miscellaneous Technical
Supplemental Punctuation
CJK Unified Ideographs
Latin Extended-D
Saurashtra

Plane 01

Ancient Greek Numbers
Khojki
Miscellaneous Symbols and Pictographs
Emoticons
Transport and Map Symbols

These blocks contain new characters and names at the following code positions:

08B6-08BD 08D4-08E2 0C80 0D4F 0D54-0D56 0D58-0D5E 0D76-0D78 20BE 23FB-23FE 2E43-2E44 9FCD-9FD5 A7AE A8C5 1018D-1018E 1123E 1F32D-1F32F 1F37E-1F37F 1F3CF-1F3D3 1F3F8-1F3FF 1F4FF 1F54B-1F54E 1F643-1F644 1F6D0

updated graphic representation at the following code positions:

19B0-19C0, 19C8-19C9, 301C, 3127, 3D1D, 4CA4, 7921, 2AD12, and 2B08F.

2. New blocks

Insert the following additional blocks.

Plane 00

Cyrillic Extended-C

Plane 01

Osage
Mongolian Supplement
Bhaiksuki
Marchen
Ideographic Symbols and Punctuation
Tangut
Tangut Components
Glagolitic Supplement
Supplemental Symbols and Pictographs

These blocks add new characters and names at the following code positions:

1C80-1C88 104B0-104D3 104D8-104FB 11660-1166C 11C00-11C08 11C0A-11C36 11C38-11C45 11C50-11C6C 11C70-11C8F 11C92-11CA7 11CA9-11CB6 16FE0 17000-187EC 18800-18AF2 1E000-1E006 1E008-1E018 1E01B-1E021 1E023-1E024 1E026-1E02A 1F910-1F918 1F980-1F984 1F9C0

Page 2381, Annex A.1

Add a “*” (for fixed collection) for the following collection:

1046 EMOTICONS

In the list of collection numbers and names, after

166 CHEROKEE SUPPLEMENT

insert a new entry as follows:

167 CYRILLIC EXTENDED-C 1C80-1C8F

In the list of collection numbers and names, after

1092 SUTTON SIGNWRITING

insert new entries as follows:

1093 OSAGE	104B0-104FF
1094 MONGOLIAN SUPPLEMENT	11660-1167F
1095 BHAIKSUKI	11C00-11C6F
1096 MARCHEN	11C70-11CBF
1097 IDEOGRAPHIC SYMBOLS AND PUNCTUATION	16FE0-16FFF
1098 TANGUT	17000-187EF
1199 TANGUT COMPONENTS	18800-18AFF
1100 GLAGOLITIC SUPPLEMENT	1E000-1E02F
1101 SUPPLEMENTAL SYMBOLS AND PICTOGRAPHS	1F900-1F9FF

In the list of collection numbers and names, after

314 UNICODE 7.0

insert a new entry as follows:

315 UNICODE 8.0 see A.6.14 *

In the list of collection numbers and names, after

372 JAPANESE IDEOGRAPHS SUPPLEMENT

insert new entries as follows:

373 JAPANESE IT VENDORS CONTEMPORARY IDEOGRAPHS-1993	see A.4.4 *
374 JAPANESE JIS X 0213:2004 IDEOGRAPHS FROM PREVIOUS JIS STANDARDS	see A.4.5 *

Page 2385, annex A.1

In the alphabetical list of keywords in Note 3, add the value 167 to the Cyrillic entry, the value 1094 to the Mongolian, the value 1097 to the Tamil entry, the value 1098 to the Punctuation entry and the Symbols entry respectively, the value 1101 to the Glagolitic entry, the value 1102 to the Symbols entry, the values 2003, 2004, and 2005 to the CJK entry; and insert the following entries:

Bhaiksuki	1095
Marchen	1096
Osage	1093
Tangut	1098 1099

Page 2387, Annex A.2.1

In the list of blocks in the BMP, insert the following new entry:

CYRILLIC EXTENDED-C	1C80-1C8F
---------------------	-----------

Page 2388, Annex A.2.2

In the list of blocks in the SMP, insert the following new entries:

OSAGE	104B0-104FF
MONGOLIAN SUPPLEMENT	11660-1667F
BHAIKSUKI	11C00-11C6F
MARCHEN	11C70-11CBF
IDEOGRAPHIC SYMBOLS AND PUNCTUATION	
	16FE0-16FFF
TANGUT	17000-187EF
TANGUT COMPONENTS	18800-18AFF
GLAGOLITIC SUPPLEMENT	1E000-1E02F
SUPPLEMENTAL SYMBOLS AND PICTOGRAPHS	
	1F900-1F9FF

Page 2393, Annex A.4

Replace Annex A.4.2 and A.4.3 and insert new A.4.4 and A.4.6 sub-clauses as follows:

A.4.2 371 JIS2004 IDEOGRAPHICS EXTENSION

The fixed collection 371 JIS2004 IDEOGRAPHICS EXTENSION consists of all level 3 and level 4 CJK characters defined in JIS X 0213:2004. It contains 3 695 characters.

The code points of this collection are identified by J3 Kanji J sources (J3, J3A, J13, J13A, and JA3) and J4 Kanji J sources (J4, J14, and JA4) in the Source Reference file for CJK Unified Ideographs (CJKSrc.txt). See 23.1 and 23.2 for details.

A.4.3 372 JAPANESE IDEOGRAPHICS SUPPLEMENT

The fixed collection 372 JAPANESE IDEOGRAPHICS SUPPLEMENT consists of all CJK characters defined in JIS X 0212:1990. It contains 5 801 characters.

NOTE – 2 743 characters are common between the collections 371 and 372.

The code points of this collection are identified by the Kanji J sources: J1, J13, J13A, and J14 in the Source Reference file for CJK Unified Ideographs (CJKSrc.txt). See 23.1 for further details.

A.4.4 373 JAPANESE IT VENDORS CONTEMPORARY IDEOGRAPHS-1993

The fixed collection 373 JAPANESE IT VENDORS CONTEMPORARY IDEOGRAPHS-1993 consists of all CJK characters defined in the Unified Japanese IT Vendors Contemporary Ideographs, 1993 set. It contains 660 characters.

The code points of this collection are identified by the Kanji J sources: JA, JA3, and JA4 in the Source Reference file for CJK Unified Ideographs (CJKSrc.txt). See 23.1 for further details.

A.4.5 374 JAPANESE JIS X 0213:2004 IDEOGRAPHS FROM PREVIOUS JIS STANDARDS

The fixed collection 374 JAPANESE JIS X 0213:2004 IDEOGRAPHS FROM PREVIOUS JIS STANDARDS The set consists of 2828 characters, of which 2743 were part of JIS X 0212-1990 (referred as J1 sources in the previous version of this International Standard) and 85 were part of the 'Unified Japanese IT Vendors Contemporary Ideographs, 1993' (referred as JA in the previous version of this International Standard). Among these 2828 characters, 205 had their glyph representation slightly modified.

These 2828 characters use the 'J13, J13A, J14, JA3, and JA4' notations in their prefix four source identification as described in sub-clause 23.1.

NOTE 1 – Given its large size and the large number of sparse ranges, the collection is not specified by code point ranges in this document but instead by a linked content.

The content linked to is a plain text file, using ISO/IEC 646-IRV characters with CARRIAGE RETURN/LINE FEED as end of line mark, which specifies, after a 7-lines header, as many lines as characters in the collection; each containing the following information in fixed length field:

- 1st field: BMP UCS code point (hhhh), normative.
- 2nd field: J Source reference in previous editions of this standard.
- 3rd field: J Source reference in this standard

The fields are delimited by a SPACE character; the format definition for the code point uses 'h' as a hexadecimal unit. The J Source references use the format specified in 23.2.

[Click on this highlighted text to access the reference file.](#)

NOTE 2 – The content is also available as a separate viewable file in the same file directory as this document. The file is named: "JIS-X-0213-FromPrevious".

Page 2409, Annex A.6

Add a new Annex A.6.14 as follows:

A.6.14 315 UNICODE 8.0

The fixed collection 315 UNICODE 8.0 is arranged by planes as follows.

Plane 00

Row	Values within row		
00	20-7E A0-FF	11	00-FF
01-02	0100-02FF	12	00-48 4A-4D 50-56 58 5A-5D 60-88 8A-8D
03	00-77 7A-7F 84-8A 8C 8E-A1 A3-FF		90-B0 B2-B5 B8-BE C0 C2-C5 C8-D6 D8-FF
04	00-FF	13	00-10 12-15 18-5A 5D-7C 80-99 A0-F5 F8-FD
05	00-2F 31-56 59-5F 61-87 89-8A 8D-8F 91-C7	14-15	1400-15FF
	D0-EA F0-F4	16	00-9C A0-F8
06	00-1C 1E-FF	17	00-0C 0E-14 20-36 40-53 60-6C 6E-70 72-73
07	00-0D 0F-4A 4D-B1 C0-FA		80-DD E0-E9 F0-F9
08	00-2D 30-3E 40-5B 5E A0-B4 E3-FF	18	00-0E 10-19 20-77 80-AA B0-F5
09	00-83 85-8C 8F-90 93-A8 AA-B0 B2 B6-B9 BC-	19	00-1E 20-2B 30-3B 40 44-6D 70-74 80-AB B0-
	C4 C7-C8 CB-CE D7 DC-DD DF-E3 E6-FB		C9 D0-DA DE-FF
0A	01-03 05-0A 0F-10 13-28 2A-30 32-33 35-36	1A	00-1B 1E-5E 60-7C 7F-89 90-99 A0-AD B0-BE
	38-39 3C 3E-42 47-48 4B-4D 51 59-5C 5E 66-	1B	00-4B 50-7C 80-F3 FC-FF
	75 81-83 85-8D 8F-91 93-A8 AA-B0 B2-B3 B5-	1C	00-37 3B-49 4D-7F C0-C7 D0-F6 F8-F9
	B9 BC-C5 C7-C9 CB-CD D0 E0-E3 E6-F1 F9	1D	00-F5 FC-FF
0B	01-03 05-0C 0F-10 13-28 2A-30 32-33 35-39	1E	00-FF
	3C-44 47-48 4B-4D 56-57 5C-5D 5F-63 66-77	1F	00-15 18-1D 20-45 48-4D 50-57 59 5B 5D 5F-
	82-83 85-8A 8E-90 92-95 99-9A 9C 9E-9F A3-		7D 80-B4 B6-C4 C6-D3 D6-DB DD-EF F2-F4
	A4 A8-AA AE-B9 BE-C2 C6-C8 CA-CD D0 D7		F6-FE
	E6-FA	20	00-64 66-71 74-8E 90-9C A0-BE D0-F0
0C	00-03 05-0C 0E-10 12-28 2A-39 3D-44 46-48	21	00-8B 90-FF
	4A-4D 55-56 58-5A 60-63 66-6F 78-7F 81-83	22	00-FF
	85-8C 8E-90 92-A8 AA-B3 B5-B9 BC-C4 C6-C8	23	00-FA
	CA-CD D5-D6 DE E0-E3 E6-EF F1-F2	24	00-26 40-4A 60-FF
0D	01-03 05-0C 0E-10 12-3A 3D-44 46-48 4A-4E	25	00-FF
	57 5F-63 66-75 79-7F 82-83 85-96 9A-B1 B3-	26	00-FF
	BB BD C0-C6 CA CF-D4 D6 D8-DF E6-EF F2-F4	27	00-FF
0E	01-3A 3F-5B 81-82 84 87-88 8A 8D 94-97 99-	28-2A	2800-2AFF
	9F A1-A3 A5 A7 AA-A8 AD-B9 BB-BD C0-C4 C6	2B	00-73 76-95 98-B9 BD-C8 CA-D1 EC-EF
	C8-CD D0-D9 DC-DF	2C	00-2E 30-5E 60-F3 F9-FF
0F	00-47 49-6C 71-97 99-BC BE-CC CE-DA	2D	00-25 27 2D 30-67 6F-70 7F-96 A0-A6 A8-AE
10	00-C5 C7 CD D0-FF		B0-B6 B8-BE C0-C6 C8-CE D0-D6 D8-DE E0-FF
		2E	00-42 80-99 9B-F3

2F 00-D5 F0-FB
 30 00-3F 41-96 99-FF
 31 05-2D 31-8E 90-BA C0-E3 F0-FF
 32 00-1E 20-FE
 33 00-FF
 34-4C 3400-4CFF
 4D 00-B5 C0-FF
 4E-9F 4E00-9FD5
 A0-A3 A000-A3FF
 A4 00-8C 90-C6 D0-FF
 A5 00-FF
 A6 00-2B 40-F7
 A7 00-AD B0-B7 F7-FF
 A8 00-2B 30-39 40-77 80-C4 CE-D9 E0-FD
 A9 00-53 5F-7C 80-CD CF-D9 DE-FE

AA 00-36 40-4D 50-59 5C-C2 DB-F6
 AB 01-06 09-0E 11-16 20-26 28-2E 30-65 70-ED
 F0-F9
 AC-D6 AC00-D6FF
 D7 00-A3 B0-C6 CB-FB
 E0-F8 E000-F8FF
 F9 00-FF
 FA 00-6D 70-D9
 FB 00-06 13-17 1D-36 38-3C 3E 40-41 43-44 46-
 C1 D3-FF
 FC 00-FF
 FD 00-3F 50-8F 92-C7 F0-FD
 FE 00-19 20-52 54-66 68-6B 70-74 76-FC FF
 FF 01-BE C2-C7 CA-CF D2-D7 DA-DC E0-E6 E8-
 EE F9-FD

Plane 01**Row Values within row**

00 00-0B 0D-26 28-3A 3C-3D 3F-4D 50-5D 80-FA
 01 00-02 07-33 37-8C 90-9B A0 D0-FD
 02 80-9C A0-D0 E0-FB
 03 00-23 30-4A 50-7A 80-9D 9F-C3 C8-D5
 04 00-9D A0-A9
 05 00-27 30-63 6F
 06 00-FF
 07 00-36 40-55 60-67
 08 00-05 08 0A-35 37-38 3C 3F-55 57-9E A7-AF
 E0-F2 F4-F5 FB-FF
 09 00-1B 1F-39 3F 80-B7 BC-CF D2-FF
 0A 00-03 05-06 0C-13 15-17 19-33 38-3A 3F-47
 50-58 60-9F C0-E6 EB-F6
 0B 00-35 39-55 58-72 78-91 99-9C A9-AF
 0C 00-48 80-B2 C0-F2 FA-FF
 0E 60-7E
 10 00-4D 52-6F 7F-C1 D0-E8 F0-F9
 11 00-34 36-43 50-76 80-CD D0-DF E1-F4
 12 00-11 13-3D 80-86 88 8A-8D 8F-9D 9F-A9 B0-
 EA F0-F9
 13 00-03 05-0C 0F-10 13-28 2A-30 32-33 35-39
 3C-44 47-48 4B-4D 50 57 5D-63 66-6C 70-74
 14 80-C7 D0-D9
 15 80-B5 B8-DD
 16 00-44 50-59 80-B7 C0-C9
 17 00-19 1D-2B 30-3F
 18 A0-F2 FF
 1A C0-F8
 20-22 2000-22FF
 23 00-99
 24 00-6E 70-74 80-FF
 25 00-43
 30-34 3000-342E

44-46 4400-4646
 68-69 6800-69FF
 6A 00-38 40-5E 60-69 6E-6F D0-ED F0-F5
 6B 00-45 50-59 5B-61 63-77 7D-8F
 6F 00-44 50-7E 8F-9F
 B0 00-01
 BC 00-6A 70-7C 80-88 90-99 9C-A3
 D0 00-F5
 D1 00-26 29-E8
 D2 00-45
 D3 00-56 60-71
 D4 00-54 56-9C 9E-9F A2 A5-A6 A9-AC AE-B9 BB
 BD-C3 C5-FF
 D5 00-05 07-0A 0D-14 16-1C 1E-39 3B-3E 40-44
 46 4A-50 52-FF
 D6 00-A5 A8-FF
 D7 00-CB CE-FF
 D8-D9 D800-D9FF
 DA 00-8B 9B-AF
 E8 00-C4 C7-D6
 EE 00-03 05-1F 21-22 24 27 29-32 34-37 39 3B
 42 47 49 4B 4D-4F 51-52 54 57 59 5B 5D 5F
 61-62 64 67-6A 6C-72 74-77 79-7C 7E 80-89
 8B-9B A1-A3 A5-A9 AB-BB F0-F1
 F0 00-2B 30-93 A0-AE B1-BF C1-CF D1-F5
 F1 00-0C 10-2E 30-6B 70-9A E6-FF
 F2 00-02 10-3A 40-48 50-51
 F3 00-FF
 F4 00-FF
 F5 00-79 7B-A3 A5-FF
 F6 00-D0 E0-EC F0-F3
 F7 00-73 80-D4
 F8 00-0B 10-47 50-59 60-87 90-AD
 F9 10-18 80-84 C0

Plane 02**Row Values within row**

00-A6 0000-A6D6
 A7-B6 A700-B6FF
 B7 00-34 40-FF
 B8 00-1D 20
 B9-CD B900-CDFF
 CE 00-A1
 F8-FA F800-FA1D

Plane 0E**Row Values within row**

00 01 20-7F
 01 00-EF

Plane 0F

<u>Row</u>	<u>Values within row</u>
00-FF	0000-FFFF

Plane 10

<u>Row</u>	<u>Values within row</u>
00-FF	0000-FFFF

NOTE – The collection 315 UNICODE 8.0 can also be determined by using another fixed collection from **Error! Reference source not found.** and several ranges of code points.

Plane 00-10

<u>Collection number and name</u>
314 UNICODE 7.0

Plane 00

<u>Row</u>	<u>Values within row</u>		
08	B3-B4 E3	2B	EC-EF
0A	F9	9F	CD-D5
0C	5A	A6	9E
0D	5F	A7	8F B2-B7
13	F5 F8-FD	A8	FC-FD
20	BE	AB	60-63 70-BF
21	8A-8B	FE	2E-2F

Plane 01

<u>Row</u>	<u>Values within row</u>		
08	E0-F2 F4-F5 FB-FF	25	00-43
09	BC-BD C0-CF D2-FF	44-46	4400-4646
0C	80-B2 C0-F2 FA-FF	D1	DE-E8
11	C9-CC DB-DF	D8-D9	D800-D9FF
12	80-86 88 8A-8D 8F-9D 9F-A9	DA	00-8B 9B-AF
13	00 50	F3	2D-2F 7E-7F CF-D3 F8-FF
15	CA-DD	F4	FF
17	00-19 1D-2B 30-3F	F5	4B-4F
23	99	F6	D0
24	80-FF	F9	10-18 80-84 C0

Plane 02

<u>Row</u>	<u>Values within row</u>
B8	20-FF
B9-CD	B900-CDFF
CE	00-A1

Page 2421, Annex G

In first paragraph, replace ‘and CJK ideographs’ with ‘, CJK ideographs, and Tangut ideographs’.

In the list of blocks, insert the following new block:

TANGUT

Insert each of the new character name entries at the appropriate position, ordered alphabetically by the character name, in the list of character names in Annex G. These new names are provided in a machine-readable format that is accessible as a link to this document.

[Click on this highlighted text to access the file containing the new names.](#)

NOTE – The content is also available as a separate viewable file in the same file directory as this document. The file is named: “Am2names.txt”.

Page 2423, Annex I.2

Replace the text from the sub-clause, starting from the first paragraph until the first Note with the following text:

An IDS consist of an IDC followed by a fixed number of Description Component (DC) organized in subgroups corresponding to script category, such as CJK ideographs or Tangut ideographs. An IDS should only use items belonging to a single subgroup, to clarify the script that it belongs to. The subgroups and their contents are as follows:

- CJK IDS, including DCs which may be of any one of the following:
 - a coded CJK ideographs, which consists of any coded character from the CJK UNIFIED IDEOGRAPHS block or the CJK COMPATIBILITY IDEOGRAPHS blocks,
 - a coded CJK radical, which consists of any coded character from the CJK RADICALS blocks or the KANGXI RADICALS block,
 - a coded stroke, which consists of any coded character from the CJK STROKES block,
 - the character FF1F FULL WIDTH QUESTION MARK to represent an otherwise un-described DC,
 - a private use character (as long as the interchanging parties have agreed that the particular private use character represents a particular CJK ideograph or component of a CJK ideograph),
 - another CJK IDS.
- Tangut IDS, including DCs which may be of any one of the following:
 - a Tangut Ideograph, which consists of any character from the TANGUT block,
 - a Tangut component, which consists of any coded character from the TANGUT COMPONENT block,
 - a coded stroke, which consists of any coded character from the CJK STROKES block,
 - another Tangut IDS.

NOTE 1 – The above description implies that any IDS may be nested within another IDS in same subgroup.

Page 2453, Annex P

Insert new text after Table P.1:

The Japanese Industrial Standard JIS X 0213:2004 includes a set of characters which were part of previous JIS standards. The set consists of 2828 characters, of which 2743 were part of JIS X 0212-1990 (referred as J1 sources in the previous version of this International Standard) and 85 were part of the 'Unified Japanese IT Vendors Contemporary Ideographs, 1993' (referred as JA in the previous version of this International Standard). Among these 2828 characters, 205 had their glyph representation slightly modified. These 2828 characters use the 'J13, J13A, J14, JA3, and JA4' notations in their prefix four source identification as described in sub-clause 23.1. Their glyph representation also reflects the one shown in JIS X 0213:2004. The set of these 2828 characters is further defined as the fixed collection 374 (see A.4.5).

Page 2459, Annex S.1.6

Insert a new note before the first note, adjusting the consequent note numbers accordingly:

NOTE 1 – The characters from the J source: JIS X 0212-1990 encoded in this International Standard are listed in the collection 372 JAPANESE IDEOGRAPHICS SUPPLEMENT.

Insert a new note after the first note:

NOTE 2 – Seven pairs described below have J sources which were originally part of the JIS X 212-1990 level-3, therefore covered by the Source separation rule, which are also part of the JIS X 213:2004 with source identified as J13. The pairs (J13 character code points emphasized) are: **U+5861**-U+586B, U+6483-**U+64CA**, U+75E9-**U+7626**, **U+83D1**-U+8458, U+848B-**U+8523**, U+91A4-**U+91AC**, and **U+985A**-U+985B.

	08A	08B	08C	08D	08E	08F
0	ب 08A0	گ 08B0			ع 08E0	ف 08F0
1	ب 08A1	ه 08B1			ع 08E1	ف 08F1
2	ج 08A2	ز 08B2			ه 08E2	ف 08F2
3	ظ 08A3	ع 08B3			و 08E3	ف 08F3
4	ف 08A4	ك 08B4		ع 08D4	و 08E4	ف 08F4
5	ق 08A5			ص 08D5	و 08E5	ف 08F5
6	ل 08A6	ب 08B6		ع 08D6	و 08E6	ف 08F6
7	م 08A7	پ 08B7		ق 08D7	و 08E7	ف 08F7
8	ي 08A8	ت 08B8		ن 08D8	و 08E8	ف 08F8
9	ني 08A9	ر 08B9		ن 08D9	و 08E9	ف 08F9
A	ه 08AA	ني 08BA		الثاني 08DA	و 08EA	ف 08FA
B	و 08AB	ف 08BB		السجدة 08DB	و 08EB	ف 08FB
C	ي 08AC	و 08BC		التصنيف 08DC	و 08EC	ف 08FC
D	ر 08AD	ن 08BD		سجدة 08DD	و 08ED	ف 08FD
E	پ 08AE			قف 08DE	و 08EE	ف 08FE
F	ص 08AF			وقفه 08DF	و 08EF	ف 08FF

Arabic letters for African languages

08A0	ب	ARABIC LETTER BEH WITH SMALL V BELOW
08A1	بْ	ARABIC LETTER BEH WITH HAMZA ABOVE - Adamawa Fulfulde (Cameroon) - used for the implosive bilabial stop → 0253 ɓ latin small letter b with hook
08A2	جْ	ARABIC LETTER JEEM WITH TWO DOTS ABOVE
08A3	طْ	ARABIC LETTER TAH WITH TWO DOTS ABOVE
08A4	فْ	ARABIC LETTER FEH WITH DOT BELOW AND THREE DOTS ABOVE
08A5	قْ	ARABIC LETTER QAF WITH DOT BELOW
08A6	ظْ	ARABIC LETTER LAM WITH DOUBLE BAR
08A7	مْ	ARABIC LETTER MEEM WITH THREE DOTS ABOVE
08A8	يْ	ARABIC LETTER YEH WITH TWO DOTS BELOW AND HAMZA ABOVE - Adamawa Fulfulde - used for the implosive palatal approximant, realized as pharyngealization of the approximant → 01B4 y' latin small letter y with hook
08A9	يْ	ARABIC LETTER YEH WITH TWO DOTS BELOW AND DOT ABOVE - Adamawa Fulfulde - used for the voiced palatal nasal → 0272 ɲ latin small letter n with left hook

Dependent consonants for Rohingya

08AA	رْ	ARABIC LETTER REH WITH LOOP = bottya-reh
08AB	وْ	ARABIC LETTER WAW WITH DOT WITHIN = nota-wa
08AC	ھْ	ARABIC LETTER ROHINGYA YEH = bottya-yeh

Arabic letters for European and Central Asian languages

08AD	ا	ARABIC LETTER LOW ALEF Bashkir, Tatar
08AE	دْ	ARABIC LETTER DAL WITH THREE DOTS BELOW Belarusian
08AF	سْ	ARABIC LETTER SAD WITH THREE DOTS BELOW Belarusian
08B0	گْ	ARABIC LETTER GAF WITH INVERTED STROKE Crimean Tatar, Chechen, Lak
08B1	قْ	ARABIC LETTER STRAIGHT WAW Tatar

Arabic letter for Berber

08B2	زْ	ARABIC LETTER ZAIN WITH INVERTED V ABOVE
------	----	--

Arabic letters for Arwi

08B3	عْ	ARABIC LETTER AIN WITH THREE DOTS BELOW
08B4	كْ	ARABIC LETTER KAF WITH DOT BELOW

Arabic letters for Bravanese

08B6	بْ	ARABIC LETTER BEH WITH SMALL MEEM ABOVE
08B7	پْ	ARABIC LETTER PEH WITH SMALL MEEM ABOVE
08B8	تْ	ARABIC LETTER TEH WITH SMALL TEH ABOVE
08B9	رْ	ARABIC LETTER REH WITH SMALL NOON ABOVE
08BA	يْ	ARABIC LETTER YEH WITH TWO DOTS BELOW AND SMALL NOON ABOVE

Arabic letters for West Africa

08BB	فْ	ARABIC LETTER AFRICAN FEH
08BC	قْ	ARABIC LETTER AFRICAN QAF
08BD	نْ	ARABIC LETTER AFRICAN NOON

Pakistani Quranic marks

08D4	ٱ	ARABIC SMALL HIGH WORD AR-RUB
08D5	اَ	ARABIC SMALL HIGH SAD
08D6	اِ	ARABIC SMALL HIGH AIN
08D7	اُ	ARABIC SMALL HIGH QAF
08D8	اْ	ARABIC SMALL HIGH NOON WITH KASRA
08D9	آَ	ARABIC SMALL LOW NOON WITH KASRA
08DA	آٓ	ARABIC SMALL HIGH WORD ATH-THALATHA
08DB	آٓٓ	ARABIC SMALL HIGH WORD AS-SAJDA
08DC	آٓٓٓ	ARABIC SMALL HIGH WORD AN-NISF
08DD	آٓٓٓٓ	ARABIC SMALL HIGH WORD SAKTA
08DE	آٓٓٓٓٓ	ARABIC SMALL HIGH WORD QIF
08DF	آٓٓٓٓٓٓ	ARABIC SMALL HIGH WORD WAQFA
08E0	ٓ	ARABIC SMALL HIGH FOOTNOTE MARKER
08E1	ٔ	ARABIC SMALL HIGH SIGN SAFHA
08E2	۞	ARABIC DISPUTED END OF AYAH

Extended vowel sign for Arwi

08E3	ٓٓٓ	ARABIC TURNED DAMMA BELOW
------	-----	---------------------------

Extended vowel signs for Rohingya

08E4	آَ	ARABIC CURLY FATHA
08E5	آِ	ARABIC CURLY DAMMA
08E6	آُ	ARABIC CURLY KASRA
08E7	آَٓ	ARABIC CURLY FATHATAN
08E8	آِٓ	ARABIC CURLY DAMMATAN
08E9	آُٓ	ARABIC CURLY KASRATAN

Tone marks for Rohingya

08EA	آَٓٓ	ARABIC TONE ONE DOT ABOVE
08EB	آِٓٓ	ARABIC TONE TWO DOTS ABOVE
08EC	آُٓٓ	ARABIC TONE LOOP ABOVE
08ED	آَٓٓٓ	ARABIC TONE ONE DOT BELOW
08EE	آِٓٓٓ	ARABIC TONE TWO DOTS BELOW
08EF	آُٓٓٓ	ARABIC TONE LOOP BELOW

Quranic annotation signs

08F0	ٱٓ	ARABIC OPEN FATHATAN = successive fathatan
08F1	ٱٓٓ	ARABIC OPEN DAMMATAN = successive dammatan
08F2	ٱٓٓٓ	ARABIC OPEN KASRATAN = successive kasratan
08F3	آَٓٓٓ	ARABIC SMALL HIGH WAW

Extended vowel signs for African languages

08F4	آَٓٓٓ	ARABIC FATHA WITH RING
08F5	آِٓٓٓ	ARABIC FATHA WITH DOT ABOVE
08F6	آُٓٓٓ	ARABIC KASRA WITH DOT BELOW also used in Philippine languages
08F7	آَٓٓٓٓ	ARABIC LEFT ARROWHEAD ABOVE
08F8	آِٓٓٓٓ	ARABIC RIGHT ARROWHEAD ABOVE
08F9	آُٓٓٓٓ	ARABIC LEFT ARROWHEAD BELOW
08FA	آَٓٓٓٓٓ	ARABIC RIGHT ARROWHEAD BELOW
08FB	آَٓٓٓٓٓٓ	ARABIC DOUBLE RIGHT ARROWHEAD ABOVE
08FC	آِٓٓٓٓٓٓ	ARABIC DOUBLE RIGHT ARROWHEAD ABOVE WITH DOT
08FD	آُٓٓٓٓٓٓ	ARABIC RIGHT ARROWHEAD ABOVE WITH DOT

08FE

Arabic Extended-A

08FF

Extended vowel signs

08FE ٥ ARABIC DAMMA WITH DOT

- Philippine languages

08FF ٥ ARABIC MARK SIDEWAYS NOON GHUNNA

	0C8	0C9	0CA	0CB	0CC	0CD	0CE	0CF
0	ಁ 0C80	ಁ 0C90	ರ 0CA0	ರ 0CB0	ೀ 0CC0		ಮ 0CE0	
1	ಃ 0C81		ಡ 0CA1	ಱ 0CB1	ು 0CC1		಼ 0CE1	ಽ 0CF1
2	ಂ 0C82	ಒ 0C92	ಢ 0CA2	ಲ 0CB2	ೂ 0CC2		ಱ್ಱ 0CE2	ಂಂ 0CF2
3	ಃಃ 0C83	ಓ 0C93	ಣ 0CA3	ಳ 0CB3	ೂ 0CC3		ಱ್ಱ 0CE3	
4		ಔ 0C94	ತ 0CA4		ೂ 0CC4			
5	ಅ 0C85	ಕ 0C95	ಢ 0CA5	ಬ 0CB5		ೇ 0CD5		
6	ಆ 0C86	ಖ 0C96	ದ 0CA6	ತ 0CB6	ಿ 0CC6	ು 0CD6	೦ 0CE6	
7	ಇ 0C87	ಗ 0C97	ಢ 0CA7	ಱ 0CB7	ೀ 0CC7		೧ 0CE7	
8	ಈ 0C88	ಘ 0C98	ಞ 0CA8	ಱ 0CB8	ಿ 0CC8		೨ 0CE8	
9	ಉ 0C89	ಜ 0C99		ಱ 0CB9			೩ 0CE9	
A	ಊ 0C8A	ಚ 0C9A	ಞ 0CAA		ಿ 0CCA		೪ 0CEA	
B	ಋ 0C8B	ಛ 0C9B	ಞ 0CAB		ಿ 0CCB		೫ 0CEB	
C	ಃ 0C8C	ಜ 0C9C	ಬ 0CAC	ಃಃ 0CBC	ಿ 0CCC		೬ 0CEC	
D		ಝ 0C9D	ಭ 0CAD	ಃಃ 0CBD	ಿ 0CCD		೭ 0CED	
E	ಎ 0C8E	ಞ 0C9E	ಮ 0CAE	ಾ 0CBE		ಱ 0CDE	೮ 0CEE	
F	ಏ 0C8F	ಟ 0C9F	ಯ 0CAF	ಿ 0CBF			೯ 0CEF	

Various signs

0C80	◌	KANNADA SIGN SPACING CANDRABINDU
0C81	◌	KANNADA SIGN CANDRABINDU
0C82	◌◌	KANNADA SIGN ANUSVARA
0C83	◌	KANNADA SIGN VISARGA

Independent vowels

0C85	ಅ	KANNADA LETTER A
0C86	ಆ	KANNADA LETTER AA
0C87	ಇ	KANNADA LETTER I
0C88	ಈ	KANNADA LETTER II
0C89	ಉ	KANNADA LETTER U
0C8A	ಊ	KANNADA LETTER UU
0C8B	ಋ	KANNADA LETTER VOCALIC R
0C8C	ೠ	KANNADA LETTER VOCALIC L
0C8D	◌	<reserved>
0C8E	ಎ	KANNADA LETTER E
0C8F	ಏ	KANNADA LETTER EE
0C90	ಐ	KANNADA LETTER AI
0C91	◌	<reserved>
0C92	ಒ	KANNADA LETTER O
0C93	ಓ	KANNADA LETTER OO
0C94	ಔ	KANNADA LETTER AU

Consonants

0C95	ಕ	KANNADA LETTER KA
0C96	ಖ	KANNADA LETTER KHA
0C97	ಗ	KANNADA LETTER GA
0C98	ಘ	KANNADA LETTER GHA
0C99	ಙ	KANNADA LETTER NGA
0C9A	ಚ	KANNADA LETTER CA
0C9B	ಛ	KANNADA LETTER CHA
0C9C	ಜ	KANNADA LETTER JA
0C9D	ಝ	KANNADA LETTER JHA
0C9E	ಞ	KANNADA LETTER NYA
0C9F	ಟ	KANNADA LETTER TTA
0CA0	ಠ	KANNADA LETTER TTHA
0CA1	ಡ	KANNADA LETTER DDA
0CA2	ಢ	KANNADA LETTER DDHA
0CA3	ಣ	KANNADA LETTER NNA
0CA4	ತ	KANNADA LETTER TA
0CA5	ಥ	KANNADA LETTER THA
0CA6	ದ	KANNADA LETTER DA
0CA7	ಧ	KANNADA LETTER DHA
0CA8	ನ	KANNADA LETTER NA
0CA9	◌	<reserved>
0CAA	ಪ	KANNADA LETTER PA
0CAB	ಫ	KANNADA LETTER PHA
0CAC	ಬ	KANNADA LETTER BA
0CAD	ಭ	KANNADA LETTER BHA
0CAE	ಮ	KANNADA LETTER MA
0CAF	ಯ	KANNADA LETTER YA
0CB0	ರ	KANNADA LETTER RA
0CB1	ಱ	KANNADA LETTER RRA
0CB2	ಲ	KANNADA LETTER LA
0CB3	ಳ	KANNADA LETTER LLA
0CB4	◌	<reserved>
0CB5	ವ	KANNADA LETTER VA
0CB6	ಶ	KANNADA LETTER SHA
0CB7	ಷ	KANNADA LETTER SSA
0CB8	ಸ	KANNADA LETTER SA
0CB9	ಹ	KANNADA LETTER HA

Various signs

0CBC	◌	KANNADA SIGN NUKTA
0CBD	◌	KANNADA SIGN AVAGRAHA

Dependent vowel signs

0CBE	◌	KANNADA VOWEL SIGN AA
0CBF	◌	KANNADA VOWEL SIGN I
0CC0	◌	KANNADA VOWEL SIGN II
		≡ 0CBF ◌ 0CD5 ◌
0CC1	◌	KANNADA VOWEL SIGN U
0CC2	◌	KANNADA VOWEL SIGN UU
0CC3	◌	KANNADA VOWEL SIGN VOCALIC R
0CC4	◌	KANNADA VOWEL SIGN VOCALIC RR
0CC5	◌	<reserved>
0CC6	◌	KANNADA VOWEL SIGN E
0CC7	◌	KANNADA VOWEL SIGN EE
		≡ 0CC6 ◌ 0CD5 ◌
0CC8	◌	KANNADA VOWEL SIGN AI
		≡ 0CC6 ◌ 0CD6 ◌
0CC9	◌	<reserved>
0CCA	◌	KANNADA VOWEL SIGN O
		≡ 0CC6 ◌ 0CC2 ◌
0CCB	◌	KANNADA VOWEL SIGN OO
		≡ 0CCA ◌ 0CD5 ◌
0CCC	◌	KANNADA VOWEL SIGN AU

Virama

0CCD	◌	KANNADA SIGN VIRAMA
		• preferred name is halant

Various signs

0CD5	◌	KANNADA LENGTH MARK
0CD6	◌	KANNADA AI LENGTH MARK

Additional consonants

0CDE	ಱ	KANNADA LETTER FA
		× KANNADA LETTER LLLA
		• obsolete historic letter
		• name is a mistake for LLLA

Additional vowels for Sanskrit

0CE0	ಋ	KANNADA LETTER VOCALIC RR
0CE1	ೠ	KANNADA LETTER VOCALIC LL

Dependent vowels

0CE2	◌	KANNADA VOWEL SIGN VOCALIC L
0CE3	◌	KANNADA VOWEL SIGN VOCALIC LL

Reserved

For viram punctuation, use the generic Indic 0964 and 0965.

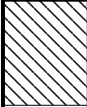
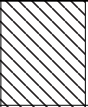
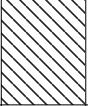
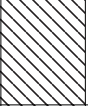
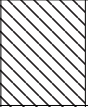
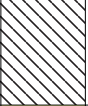
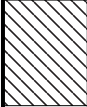
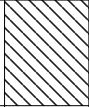
0CE4	◌	<reserved>
		→ 0964 I devanagari danda
0CE5	◌	<reserved>
		→ 0965 II devanagari double danda

Digits

0CE6	೦	KANNADA DIGIT ZERO
0CE7	೧	KANNADA DIGIT ONE
0CE8	೨	KANNADA DIGIT TWO
0CE9	೩	KANNADA DIGIT THREE
0CEA	೪	KANNADA DIGIT FOUR
0CEB	೫	KANNADA DIGIT FIVE
0CEC	೬	KANNADA DIGIT SIX
0CED	೭	KANNADA DIGIT SEVEN
0CEE	೮	KANNADA DIGIT EIGHT
0CEF	೯	KANNADA DIGIT NINE

Signs used in Sanskrit

- 0CF1 𑌀 KANNADA SIGN JIHVAMULIYA
 → 1CF5 𑌀 vedic sign jihvamuliya
- 0CF2 𑌁 KANNADA SIGN UPADHMANIYA
 → 1CF6 𑌁 vedic sign upadhmaniya

	0D0	0D1	0D2	0D3	0D4	0D5	0D6	0D7
0		ഐ 0D10	ഠ 0D20	ര 0D30	ീ 0D40		ജ 0D60	ധ 0D70
1	ഌ 0D01		ഡ 0D21	റ 0D31	ു 0D41		ഞ 0D61	ന 0D71
2	഍ 0D02	ഒ 0D12	ഡ 0D22	ല 0D32	ൂ 0D42		ണ 0D62	നം 0D72
3	ഃ 0D03	ഓ 0D13	ണ 0D23	ള 0D33	ു 0D43		ൺ 0D63	ട 0D73
4		ഔ 0D14	ത 0D24	ഴ 0D34	ൂ 0D44	ള 0D54		ർ 0D74
5	അ 0D05	ക 0D15	ഥ 0D25	വ 0D35		യ് 0D55		ൻ 0D75
6	ആ 0D06	ഖ 0D16	ഭ 0D26	ശ 0D36	െ 0D46	ഴ 0D56	ഠ 0D66	ഫ 0D76
7	ഇ 0D07	ഗ 0D17	ധ 0D27	ഷ 0D37	േ 0D47	ൗ 0D57	മ 0D67	ഹ 0D77
8	ഇു 0D08	ഘ 0D18	ന 0D28	സ 0D38	ൈ 0D48	ധി 0D58	റ 0D68	ഗ്ല 0D78
9	ഉ 0D09	ങ 0D19	ണ 0D29	ഹ 0D39		ര 0D59	ന 0D69	ന 0D79
A	ഊ 0D0A	ച 0D1A	പ 0D2A	ട 0D3A	ൊ 0D4A	നു 0D5A	ർ 0D6A	ൺ 0D7A
B	ഋ 0D0B	ഋ 0D1B	ഫ 0D2B		ോ 0D4B	രു 0D5B	ദ്ര 0D6B	ൻ 0D7B
C	ൺ 0D0C	ജ 0D1C	ബ 0D2C		ൌ 0D4C	സ 0D5C	ന 0D6C	ർ 0D7C
D		ഡ 0D1D	ഭ 0D2D	് 0D3D	് 0D4D	സ 0D5D	െ 0D6D	ൽ 0D7D
E	എ 0D0E	ണ 0D1E	മ 0D2E	ാ 0D3E	് 0D4E	ര 0D5E	വ 0D6E	ൾ 0D7E
F	ഏ 0D0F	ട 0D1F	യ 0D2F	ി 0D3F	ൺ 0D4F	രം 0D5F	ൻ 0D6F	ക 0D7F

Various signs

0D01	൬	MALAYALAM SIGN CANDRABINDU
0D02	ഠ	MALAYALAM SIGN ANUSVARA
0D03	ഡ	MALAYALAM SIGN VISARGA

Independent vowels

0D05	അ	MALAYALAM LETTER A
0D06	ആ	MALAYALAM LETTER AA
0D07	ഇ	MALAYALAM LETTER I
0D08	ഈ	MALAYALAM LETTER II
0D09	ഉ	MALAYALAM LETTER U
0D0A	ഊ	MALAYALAM LETTER UU
0D0B	ഋ	MALAYALAM LETTER VOCALIC R
0D0C	ൠ	MALAYALAM LETTER VOCALIC L
0D0D	ൡ	<reserved>
0D0E	എ	MALAYALAM LETTER E
0D0F	ഐ	MALAYALAM LETTER EE
0D10	ഐ	MALAYALAM LETTER AI
0D11	ൢ	<reserved>
0D12	ഒ	MALAYALAM LETTER O
0D13	ഓ	MALAYALAM LETTER OO
0D14	ഔ	MALAYALAM LETTER AU

Consonants

Alternate romanizations are shown as aliases for some letters to clarify their identity.

0D15	ക	MALAYALAM LETTER KA
0D16	ഖ	MALAYALAM LETTER KHA
0D17	ഗ	MALAYALAM LETTER GA
0D18	ഘ	MALAYALAM LETTER GHA
0D19	ങ	MALAYALAM LETTER NGA
0D1A	ച	MALAYALAM LETTER CA = cha
0D1B	ഛ	MALAYALAM LETTER CHA = chha
0D1C	ജ	MALAYALAM LETTER JA
0D1D	ഝ	MALAYALAM LETTER JHA
0D1E	ഞ	MALAYALAM LETTER NYA = nha
0D1F	ട	MALAYALAM LETTER TTA = ta
0D20	ഠ	MALAYALAM LETTER TTHA = tta
0D21	ഡ	MALAYALAM LETTER DDA = hard da
0D22	ഢ	MALAYALAM LETTER DDHA = hard dda
0D23	ണ	MALAYALAM LETTER NNA = hard na
0D24	ത	MALAYALAM LETTER TA = tha
0D25	ഥ	MALAYALAM LETTER THA = ttha
0D26	ദ	MALAYALAM LETTER DA = soft da
0D27	ഢ	MALAYALAM LETTER DHA = soft dda
0D28	ന	MALAYALAM LETTER NA
0D29	ണ	MALAYALAM LETTER NNNA • historic use only
0D2A	പ	MALAYALAM LETTER PA
0D2B	ഫ	MALAYALAM LETTER PHA
0D2C	ബ	MALAYALAM LETTER BA

0D2D	ഭ	MALAYALAM LETTER BHA
0D2E	മ	MALAYALAM LETTER MA • also used to denote the fraction one eightieth (kaani)
0D2F	യ	MALAYALAM LETTER YA
0D30	ര	MALAYALAM LETTER RA
0D31	റ	MALAYALAM LETTER RRA
0D32	ല	MALAYALAM LETTER LA
0D33	ള	MALAYALAM LETTER LLA
0D34	ഴ	MALAYALAM LETTER LLLA = zha
0D35	വ	MALAYALAM LETTER VA
0D36	ശ	MALAYALAM LETTER SHA = soft sha
0D37	ഷ	MALAYALAM LETTER SSA = sha
0D38	സ	MALAYALAM LETTER SA
0D39	ഹ	MALAYALAM LETTER HA
0D3A	ട	MALAYALAM LETTER TTTA • historic use only

Addition for Sanskrit

0D3D	ഌ	MALAYALAM SIGN AVAGRAHA = praslesham
------	---	---

Dependent vowel signs

0D3E	ഌ	MALAYALAM VOWEL SIGN AA
0D3F	ഌ	MALAYALAM VOWEL SIGN I
0D40	ഌ	MALAYALAM VOWEL SIGN II
0D41	ഌ	MALAYALAM VOWEL SIGN U
0D42	ഌ	MALAYALAM VOWEL SIGN UU
0D43	ഌ	MALAYALAM VOWEL SIGN VOCALIC R
0D44	ഌ	MALAYALAM VOWEL SIGN VOCALIC RR
0D45	ൣ	<reserved>
0D46	ഌ	MALAYALAM VOWEL SIGN E • stands to the left of the consonant
0D47	ഌ	MALAYALAM VOWEL SIGN EE • stands to the left of the consonant
0D48	ഌ	MALAYALAM VOWEL SIGN AI • stands to the left of the consonant

Two-part dependent vowel signs

These vowel signs have glyph pieces which stand on both sides of the consonant; they follow the consonant in logical order, and should be handled as a unit for most processing.

0D4A	ഌ	MALAYALAM VOWEL SIGN O ≡ 0D46 ഌ 0D3E ഌ
0D4B	ഌ	MALAYALAM VOWEL SIGN OO ≡ 0D47 ഌ 0D3E ഌ
0D4C	ഌ	MALAYALAM VOWEL SIGN AU • archaic form of the /au/ dependent vowel → 0D57 ഌ malayalam au length mark ≡ 0D46 ഌ 0D57 ഌ

Virama

0D4D	ഌ	MALAYALAM SIGN VIRAMA = candrakkala (the preferred name) = vowel half-u
------	---	---

Dot reph

0D4E	ൣ	MALAYALAM LETTER DOT REPH • not used in reformed modern Malayalam orthography
------	---	--

Measurement symbol

0D4F  MALAYALAM SIGN PARA
 • used historically to measure rice

Chillu letters

0D54  MALAYALAM LETTER CHILLU M

0D55  MALAYALAM LETTER CHILLU Y

0D56  MALAYALAM LETTER CHILLU LLL

Various signs

0D57  MALAYALAM AU LENGTH MARK
 • used alone to write the /au/ dependent vowel in modern texts
 → 0D4C  malayalam vowel sign au

Minor fractions

Some minor fractions are represented by letters.

The fraction one three-hundred and twentieth "muntiri" is denoted by the syllable "pta" (0D2A 0D4D 0D24).

0D58  MALAYALAM FRACTION ONE ONE-HUNDRED-AND-SIXTIETH
 = arakaani

0D59  MALAYALAM FRACTION ONE FORTIETH
 = aramaa

0D5A  MALAYALAM FRACTION THREE EIGHTIETHS
 = muunnukaani

0D5B  MALAYALAM FRACTION ONE TWENTIETH
 = orumaa

0D5C  MALAYALAM FRACTION ONE TENTH
 = rantumaa

0D5D  MALAYALAM FRACTION THREE TWENTIETHS
 = muunnumaa

0D5E  MALAYALAM FRACTION ONE FIFTH
 = naalumaa

Additional historic vowel

0D5F  MALAYALAM LETTER ARCHAIC II

Additional vowels for Sanskrit

0D60  MALAYALAM LETTER VOCALIC RR

0D61  MALAYALAM LETTER VOCALIC LL

Dependent vowels

0D62  MALAYALAM VOWEL SIGN VOCALIC L

0D63  MALAYALAM VOWEL SIGN VOCALIC LL

Reserved

For viram punctuation, use the generic Indic 0964 and 0965.

0D64  <reserved>
 → 0964 I devanagari danda

0D65  <reserved>
 → 0965 II devanagari double danda

Digits

0D66  MALAYALAM DIGIT ZERO

0D67  MALAYALAM DIGIT ONE

0D68  MALAYALAM DIGIT TWO

0D69  MALAYALAM DIGIT THREE

0D6A  MALAYALAM DIGIT FOUR

0D6B  MALAYALAM DIGIT FIVE

0D6C  MALAYALAM DIGIT SIX

0D6D  MALAYALAM DIGIT SEVEN

0D6E  MALAYALAM DIGIT EIGHT

0D6F  MALAYALAM DIGIT NINE

Malayalam numerics

0D70  MALAYALAM NUMBER TEN

0D71  MALAYALAM NUMBER ONE HUNDRED

0D72  MALAYALAM NUMBER ONE THOUSAND

Fractions

0D73  MALAYALAM FRACTION ONE QUARTER
 = kaal

0D74  MALAYALAM FRACTION ONE HALF
 = ara

0D75  MALAYALAM FRACTION THREE QUARTERS
 = mukkaal

0D76  MALAYALAM FRACTION ONE SIXTEENTH
 = maakaani

0D77  MALAYALAM FRACTION ONE EIGHTH
 = arakkaal

0D78  MALAYALAM FRACTION THREE SIXTEENTHS
 = muntaani

Date mark

0D79  MALAYALAM DATE MARK

Chillu letters

0D7A  MALAYALAM LETTER CHILLU NN

0D7B  MALAYALAM LETTER CHILLU N

0D7C  MALAYALAM LETTER CHILLU RR
 • historically derived from the full letter ra
 • also used for chillu r

0D7D  MALAYALAM LETTER CHILLU L
 • historically derived from the full letter ta
 • used for chillu t and chillu d

0D7E  MALAYALAM LETTER CHILLU LL

0D7F  MALAYALAM LETTER CHILLU K

	198	199	19A	19B	19C	19D
0	၁ 1980	၂ 1990	၃ 19A0	၄ 19B0	၅ 19C0	၆ 19D0
1	၇ 1981	၈ 1991	၉ 19A1	၁၀ 19B1	၁၁ 19C1	၁၂ 19D1
2	၁၃ 1982	၁၄ 1992	၁၅ 19A2	၁၆ 19B2	၁၇ 19C2	၁၈ 19D2
3	၁၉ 1983	၂၀ 1993	၂၁ 19A3	၂၂ 19B3	၂၃ 19C3	၂၄ 19D3
4	၂၅ 1984	၂၆ 1994	၂၇ 19A4	၂၈ 19B4	၂၉ 19C4	၃၀ 19D4
5	၃၁ 1985	၃၂ 1995	၃၃ 19A5	၃၄ 19B5	၃၅ 19C5	၃၆ 19D5
6	၃၇ 1986	၃၈ 1996	၃၉ 19A6	၄၀ 19B6	၄၁ 19C6	၄၂ 19D6
7	၄၃ 1987	၄၄ 1997	၄၅ 19A7	၄၆ 19B7	၄၇ 19C7	၄၈ 19D7
8	၄၉ 1988	၅၀ 1998	၅၁ 19A8	၅၂ 19B8	၅၃ 19C8	၅၄ 19D8
9	၅၅ 1989	၅၆ 1999	၅၇ 19A9	၅၈ 19B9	၅၉ 19C9	၆၀ 19D9
A	၆၁ 198A	၆၂ 199A	၆၃ 19AA	၆၄ 19BA		၆၅ 19DA
B	၆၆ 198B	၆၇ 199B	၆၈ 19AB	၆၉ 19BB		
C	၆၁၀ 198C	၆၁၁ 199C		၆၁၂ 19BC		
D	၆၁၃ 198D	၆၁၄ 199D		၆၁၅ 19BD		
E	၆၁၆ 198E	၆၁၇ 199E		၆၁၈ 19BE		၆၁၉ 19DE
F	၆၁၁၀ 198F	၆၁၁၁ 199F		၆၁၁၂ 19BF		၆၁၁၃ 19DF

Note the similarly named but distinct Tai Le script encoded at 1950..197F. The New Tai Lue script is also known as Xishuangbanna Dai.

Consonants

1980	ᨆ	NEW TAI LUE LETTER HIGH QA
1981	ᨇ	NEW TAI LUE LETTER LOW QA
1982	ᨈ	NEW TAI LUE LETTER HIGH KA
1983	ᨉ	NEW TAI LUE LETTER HIGH XA
1984	ᨊ	NEW TAI LUE LETTER HIGH NGA
1985	ᨋ	NEW TAI LUE LETTER LOW KA
1986	ᨌ	NEW TAI LUE LETTER LOW XA
1987	ᨍ	NEW TAI LUE LETTER LOW NGA
1988	ᨎ	NEW TAI LUE LETTER HIGH TSA
1989	ᨏ	NEW TAI LUE LETTER HIGH SA
198A	ᨐ	NEW TAI LUE LETTER HIGH YA
198B	ᨑ	NEW TAI LUE LETTER LOW TSA
198C	ᨒ	NEW TAI LUE LETTER LOW SA
198D	ᨓ	NEW TAI LUE LETTER LOW YA
198E	ᨔ	NEW TAI LUE LETTER HIGH TA
198F	ᨕ	NEW TAI LUE LETTER HIGH THA
1990	ᨖ	NEW TAI LUE LETTER HIGH NA
1991	ᨗ	NEW TAI LUE LETTER LOW TA
1992	ᨘ	NEW TAI LUE LETTER LOW THA
1993	ᨙ	NEW TAI LUE LETTER LOW NA
1994	ᨚ	NEW TAI LUE LETTER HIGH PA
1995	ᨛ	NEW TAI LUE LETTER HIGH PHA
1996	᨜	NEW TAI LUE LETTER HIGH MA
1997	᨝	NEW TAI LUE LETTER LOW PA
1998	᨞	NEW TAI LUE LETTER LOW PHA
1999	᨟	NEW TAI LUE LETTER LOW MA
199A	ᨠ	NEW TAI LUE LETTER HIGH FA
199B	ᨡ	NEW TAI LUE LETTER HIGH VA
199C	ᨢ	NEW TAI LUE LETTER HIGH LA
199D	ᨣ	NEW TAI LUE LETTER LOW FA
199E	ᨤ	NEW TAI LUE LETTER LOW VA
199F	ᨥ	NEW TAI LUE LETTER LOW LA
19A0	ᨦ	NEW TAI LUE LETTER HIGH HA
19A1	ᨧ	NEW TAI LUE LETTER HIGH DA
19A2	ᨨ	NEW TAI LUE LETTER HIGH BA
19A3	ᨩ	NEW TAI LUE LETTER LOW HA
19A4	ᨪ	NEW TAI LUE LETTER LOW DA
19A5	ᨫ	NEW TAI LUE LETTER LOW BA
19A6	ᨬ	NEW TAI LUE LETTER HIGH KVA
19A7	ᨭ	NEW TAI LUE LETTER HIGH XVA
19A8	ᨮ	NEW TAI LUE LETTER LOW KVA
19A9	ᨯ	NEW TAI LUE LETTER LOW XVA
19AA	ᨰ	NEW TAI LUE LETTER HIGH SUA
19AB	ᨱ	NEW TAI LUE LETTER LOW SUA

Vowel signs

19B0	ᨲ	NEW TAI LUE VOWEL SIGN VOWEL SHORTENER
19B1	ᨳ	NEW TAI LUE VOWEL SIGN AA
19B2	ᨴ	NEW TAI LUE VOWEL SIGN II
19B3	ᨵ	NEW TAI LUE VOWEL SIGN U
19B4	ᨶ	NEW TAI LUE VOWEL SIGN UU
19B5	ᨷ	NEW TAI LUE VOWEL SIGN E
19B6	ᨸ	NEW TAI LUE VOWEL SIGN AE
19B7	ᨹ	NEW TAI LUE VOWEL SIGN O
19B8	ᨺ	NEW TAI LUE VOWEL SIGN OA
19B9	ᨻ	NEW TAI LUE VOWEL SIGN UE
19BA	ᨼ	NEW TAI LUE VOWEL SIGN AY

19BB	ᨽ	NEW TAI LUE VOWEL SIGN AAY
19BC	ᨿ	NEW TAI LUE VOWEL SIGN UY
19BD	ᩀ	NEW TAI LUE VOWEL SIGN OY
19BE	ᩁ	NEW TAI LUE VOWEL SIGN OAY
19BF	ᩂ	NEW TAI LUE VOWEL SIGN UEY
19C0	ᩃ	NEW TAI LUE VOWEL SIGN IY

Final consonants

19C1	ᩄ	NEW TAI LUE LETTER FINAL V
19C2	ᩅ	NEW TAI LUE LETTER FINAL NG
19C3	ᩆ	NEW TAI LUE LETTER FINAL N
19C4	ᩇ	NEW TAI LUE LETTER FINAL M
19C5	ᩈ	NEW TAI LUE LETTER FINAL K
19C6	ᩉ	NEW TAI LUE LETTER FINAL D
19C7	ᩊ	NEW TAI LUE LETTER FINAL B

Tone marks

19C8	ᩋ	NEW TAI LUE TONE MARK-1
19C9	ᩌ	NEW TAI LUE TONE MARK-2

Digits

19D0	ᩍ	NEW TAI LUE DIGIT ZERO
19D1	ᩎ	NEW TAI LUE DIGIT ONE
19D2	ᩏ	NEW TAI LUE DIGIT TWO
19D3	ᩐ	NEW TAI LUE DIGIT THREE
19D4	ᩑ	NEW TAI LUE DIGIT FOUR
19D5	ᩒ	NEW TAI LUE DIGIT FIVE
19D6	ᩓ	NEW TAI LUE DIGIT SIX
19D7	ᩔ	NEW TAI LUE DIGIT SEVEN
19D8	ᩕ	NEW TAI LUE DIGIT EIGHT
19D9	ᩖ	NEW TAI LUE DIGIT NINE
19DA	ᩗ	NEW TAI LUE THAM DIGIT ONE

Various signs

19DE	ᩙ	NEW TAI LUE SIGN LAE
		• conjunction: and
19DF	ᩚ	NEW TAI LUE SIGN LAEV
		• perfective

1C8
0 Ё 1C80
1 Д 1C81
2 0 1C82
3 С 1C83
4 1 1C84
5 III 1C85
6 Ъ 1C86
7 Ъ 1C87
8 Ѹ 1C88
9
A
B
C
D
E
F

Historic letter variants

1C80	Ѣ	CYRILLIC SMALL LETTER ROUNDED VE
1C81	Ѥ	CYRILLIC SMALL LETTER LONG-LEGGED DE
1C82	Ѧ	CYRILLIC SMALL LETTER NARROW O
1C83	Ѩ	CYRILLIC SMALL LETTER WIDE ES
1C84	Ѭ	CYRILLIC SMALL LETTER TALL TE
1C85	Ѯ	CYRILLIC SMALL LETTER THREE-LEGGED TE
1C86	Ѱ	CYRILLIC SMALL LETTER TALL HARD SIGN
1C87	Ѳ	CYRILLIC SMALL LETTER TALL YAT
1C88	Ѵ	CYRILLIC SMALL LETTER UNBLENDED UK

	20A	20B	20C
0	₣ 20A0	₧ 20B0	
1	₡ 20A1	₪ 20B1	
2	₢ 20A2	₣ 20B2	
3	₤ 20A3	₥ 20B3	
4	₦ 20A4	₧ 20B4	
5	₨ 20A5	₩ 20B5	
6	₪ 20A6	₫ 20B6	
7	€ 20A7	₭ 20B7	
8	₮ 20A8	₯ 20B8	
9	₰ 20A9	₱ 20B9	
A	₲ 20AA	₳ 20BA	
B	₴ 20AB	₵ 20BB	
C	₶ 20AC	₷ 20BC	
D	₸ 20AD	₹ 20BD	
E	₺ 20AE	₺ 20BE	
F	₻ 20AF		

Currency symbols

A number of currency symbols are found in other blocks.

Fullwidth versions of some currency symbols are found in the Halfwidth and Fullwidth Forms block.

→ 0024 \$	dollar sign	20AD ₭	KIP SIGN
→ 00A2 ¢	cent sign	20AE ₮	TUGRIK SIGN
→ 00A3 £	pound sign		• Mongolia
→ 00A4 ₤	currency sign		• also transliterated as tugrug, tugric, tugrog, togrog, tögrög
→ 00A5 ¥	yen sign	20AF ₭	DRACHMA SIGN
→ 0192 f	latin small letter f with hook		• Greece
→ 058F ₼	armenian dram sign	20B0 ₰	GERMAN PENNY SIGN
→ 060B ⅈ	afghani sign	20B1 ₱	PESO SIGN
→ 09F2 ₭	bengali rupee mark		= Filipino peso sign
→ 09F3 ₭	bengali rupee sign		• Philippines
→ 0AF1 ₨	gujarati rupee sign		• extant and discontinued Latin-American peso currencies (Mexican, Chilean, Colombian, etc.) use the dollar sign
→ 0BF9 ₭	tamil rupee sign		→ 0024 \$ dollar sign
→ 0E3F ฿	thai currency symbol baht		→ 20A7 ₪ peseta sign
→ 17DB ៛	khmer currency symbol riel	20B2 ₲	GUARANI SIGN
→ 2133 ℳ	script capital m		• Paraguay
→ 5143 元	CJK unified ideograph-5143		• Often represented by G. or Gs.
→ 5186 円	CJK unified ideograph-5186	20B3 ₳	AUSTRAL SIGN
→ 5706 圓	CJK unified ideograph-5706		• former Argentinian currency
→ 5713 圓	CJK unified ideograph-5713	20B4 ₴	HRVYNIA SIGN
→ FDFC ৳	rial sign		• Ukraine
20A0 €	EURO-CURRENCY SIGN	20B5 ₵	CEDI SIGN
	• intended for ECU, but not widely used		• Ghana
	• historical character; this is NOT the euro!		• glyph may look like '¢' or like C with a short vertical stroke through the upper arm
	→ 20AC € euro sign		→ 00A2 ¢ cent sign
20A1 ₡	COLON SIGN		→ 023B ¢ latin capital letter c with stroke
	• Costa Rica, El Salvador	20B6 ₣	LIVRE TOURNOIS SIGN
20A2 ₤	CRUZEIRO SIGN		• used in France from 13th-18th centuries
	• Brazil	20B7 ₧	SPESMILO SIGN
20A3 ₣	FRENCH FRANC SIGN		• historical international currency associated with Esperanto
	• France	20B8 ₸	TENGE SIGN
20A4 £	LIRA SIGN		• Kazakhstan
	• intended for lira, but not widely used		→ 2351 ₸ apl functional symbol up tack overbar
	• preferred character for lira is 00A3 £		→ 2564 ₸ box drawings down single and horizontal double
	→ 00A3 £ pound sign		→ 3012 ₸ postal mark
	→ 20BA ₺ turkish lira sign	20B9 ₹	INDIAN RUPEE SIGN
20A5 ¢	MILL SIGN		• official rupee currency sign for India
	• USA (1/10 cent)		• contrasts with script-specific rupee signs and abbreviations
20A6 ₦	NAIRA SIGN		→ 0930 ₹ devanagari letter ra
	• Nigeria	20BA ₺	TURKISH LIRA SIGN
20A7 ₪	PESETA SIGN		• official lira currency sign for Turkey
	• Spain	20BB ₧	NORDIC MARK SIGN
	→ 20B1 ₱ peso sign		• early representation of the Mark currency used in Denmark and Norway
20A8 ₹	RUPEE SIGN		→ 2133 ℳ script capital m
	• India, unofficial legacy practice	20BC ₼	MANAT SIGN
	→ 20B9 ₹ indian rupee sign		• Azerbaijan
	≈ 0052 ₨ 0073 ₨	20BD ₰	RUBLE SIGN
			• Russia
20A9 ₩	WON SIGN	20BE ₭	LARI SIGN
	• Korea		• Georgia
20AA ₪	NEW SHEQEL SIGN		
	• Israel		
20AB ₫	DONG SIGN		
	• Vietnam		
20AC €	EURO SIGN		
	• currency sign for the European Monetary Union		
	• euro, not ecu		
	→ 20A0 € euro-currency sign		

	230	231	232	233	234	235	236	237	238	239	23A	23B	23C	23D	23E	23F
0	 2300	 2310	 2320	 2330	 2340	 2350	 2360	 2370	 2380	 2390	 23A0	 23B0	 23C0	 23D0	 23E0	 23F0
1	 2301	 2311	 2321	 2331	 2341	 2351	 2361	 2371	 2381	 2391	 23A1	 23B1	 23C1	 23D1	 23E1	 23F1
2	 2302	 2312	 2322	 2332	 2342	 2352	 2362	 2372	 2382	 2392	 23A2	 23B2	 23C2	 23D2	 23E2	 23F2
3	 2303	 2313	 2323	 2333	 2343	 2353	 2363	 2373	 2383	 2393	 23A3	 23B3	 23C3	 23D3	 23E3	 23F3
4	 2304	 2314	 2324	 2334	 2344	 2354	 2364	 2374	 2384	 2394	 23A4	 23B4	 23C4	 23D4	 23E4	 23F4
5	 2305	 2315	 2325	 2335	 2345	 2355	 2365	 2375	 2385	 2395	 23A5	 23B5	 23C5	 23D5	 23E5	 23F5
6	 2306	 2316	 2326	 2336	 2346	 2356	 2366	 2376	 2386	 2396	 23A6	 23B6	 23C6	 23D6	 23E6	 23F6
7	 2307	 2317	 2327	 2337	 2347	 2357	 2367	 2377	 2387	 2397	 23A7	 23B7	 23C7	 23D7	 23E7	 23F7
8	 2308	 2318	 2328	 2338	 2348	 2358	 2368	 2378	 2388	 2398	 23A8	 23B8	 23C8	 23D8	 23E8	 23F8
9	 2309	 2319	 2329	 2339	 2349	 2359	 2369	 2379	 2389	 2399	 23A9	 23B9	 23C9	 23D9	 23E9	 23F9
A	 230A	 231A	 232A	 233A	 234A	 235A	 236A	 237A	 238A	 239A	 23AA	 23BA	 23CA	 23DA	 23EA	 23FA
B	 230B	 231B	 232B	 233B	 234B	 235B	 236B	 237B	 238B	 239B	 23AB	 23BB	 23CB	 23DB	 23EB	 23FB
C	 230C	 231C	 232C	 233C	 234C	 235C	 236C	 237C	 238C	 239C	 23AC	 23BC	 23CC	 23DC	 23EC	 23FC
D	 230D	 231D	 232D	 233D	 234D	 235D	 236D	 237D	 238D	 239D	 23AD	 23BD	 23CD	 23DD	 23ED	 23FD
E	 230E	 231E	 232E	 233E	 234E	 235E	 236E	 237E	 238E	 239E	 23AE	 23BE	 23CE	 23DE	 23EE	 23FE
F	 230F	 231F	 232F	 233F	 234F	 235F	 236F	 237F	 238F	 239F	 23AF	 23BF	 23CF	 23DF	 23EF	 23FF

Miscellaneous technical

- 2300 ∅ DIAMETER SIGN
→ 2205 ∅ empty set
- 2301 ↘ ELECTRIC ARROW
• from ISO 2047
• symbol for End of Transmission
- 2302 □ HOUSE
- 2303 ^ UP ARROWHEAD
→ 005E ^ circumflex accent
→ 02C4 ^ modifier letter up arrowhead
→ 2038 ^ caret
→ 2227 ^ logical and
- 2304 v DOWN ARROWHEAD
→ 02C5 v modifier letter down arrowhead
→ 2228 v logical or
→ 2335 v countersink
- 2305 ⊘ PROJECTIVE
→ 22BC ⊘ nand
- 2306 ≙ PERSPECTIVE
- 2307 ∷ WAVY LINE
→ 2E3E ∷ wiggly vertical line
→ 3030 ~ wavy dash

Ceilings and floors

These characters are tall and narrow mathematical delimiters, in contrast to the quine corners or half brackets. They are also distinct from CJK corner brackets, which are wide quotation marks.

- 2308 ⌈ LEFT CEILING
= APL upstile
→ 2E22 ⌈ top left half bracket
→ 300C ⌈ left corner bracket
- 2309 ⌋ RIGHT CEILING
→ 20E7 ⌋ combining annuity symbol
→ 2E23 ⌋ top right half bracket
- 230A ⌊ LEFT FLOOR
= APL downstile
→ 2E24 ⌊ bottom left half bracket
- 230B ⌋ RIGHT FLOOR
→ 300D ⌋ right corner bracket
→ 2E25 ⌋ bottom right half bracket

Crops

- 230C ⌞ BOTTOM RIGHT CROP
• set of four "crop" corners, arranged facing outward
- 230D ⌟ BOTTOM LEFT CROP
- 230E ⌠ TOP RIGHT CROP
- 230F ⌡ TOP LEFT CROP

Miscellaneous technical

- 2310 ⇐ REVERSED NOT SIGN
= beginning of line
→ 00AC ⇐ not sign
- 2311 ▣ SQUARE LOZENGE
= Kissen (pillow)
• used as a command delimiter in some very old computers
→ 2BCF ▣ rotated white four pointed cusp
- 2312 ⌒ ARC
= position of any line
→ 25E0 ⌒ upper half circle
- 2313 ⌒ SEGMENT
= position of a surface

- 2314 ◇ SECTOR
- 2315 ☎ TELEPHONE RECORDER
- 2316 ⊕ POSITION INDICATOR
= true position
→ 2BD0 ⊕ square position indicator
- 2317 ≡ VIEWDATA SQUARE
→ 22D5 ≡ equal and parallel to
- 2318 ⌘ PLACE OF INTEREST SIGN
= command key (1.0)
= operating system key (ISO 9995-7)
- 2319 ⊣ TURNED NOT SIGN
= line marker

User interface symbols

- 231A ⌚ WATCH
→ 23F0 ⌚ alarm clock
→ 1F550 ⌚ clock face one o'clock
~ 231A FE0E text style
~ 231A FE0F emoji style
- 231B ⌚ HOURGLASS
= alchemical symbol for hour
~ 231B FE0E text style
~ 231B FE0F emoji style

Quine corners

These form a set of four quine corners, for quincuncial arrangement. They are also used in upper and lower pairs in mathematic, or more rarely in editorial usage as alternatives to half brackets.

- 231C ⌞ TOP LEFT CORNER
→ 2E00 ⌞ right angle substitution marker
→ 2E22 ⌞ top left half bracket
- 231D ⌟ TOP RIGHT CORNER
- 231E ⌠ BOTTOM LEFT CORNER
- 231F ⌡ BOTTOM RIGHT CORNER

Integral pieces

- 2320 ∫ TOP HALF INTEGRAL
→ 23AE ∫ integral extension
- 2321 ∫ BOTTOM HALF INTEGRAL

Frown and smile

- 2322 ☹ FROWN
→ 2040 ☹ character tie
- 2323 ☺ SMILE
→ 203F ☺ undertie

Keyboard symbols

- 2324 ⌨ UP ARROWHEAD BETWEEN TWO HORIZONTAL BARS
= enter key
- 2325 ⌨ OPTION KEY
- 2326 ☒ ERASE TO THE RIGHT
= delete to the right key
- 2327 ☒ X IN A RECTANGLE BOX
= clear key
- 2328 ⌨ KEYBOARD
→ 1F5A6 ⌨ keyboard and mouse
→ 1F5AE ⌨ wired keyboard
~ 2328 FE0E text style
~ 2328 FE0F emoji style

Deprecated angle brackets

These characters are deprecated and are strongly discouraged for mathematical use because of their canonical equivalence to CJK punctuation.

- 2329 < LEFT-POINTING ANGLE BRACKET
 → 003C < less-than sign
 → 2039 < single left-pointing angle quotation mark
 → 27E8 < mathematical left angle bracket
 ≡ 3008 < left angle bracket
- 232A > RIGHT-POINTING ANGLE BRACKET
 → 003E > greater-than sign
 → 203A > single right-pointing angle quotation mark
 → 27E9 > mathematical right angle bracket
 ≡ 3009 > right angle bracket

Keyboard symbol

- 232B ☒ ERASE TO THE LEFT
 = delete to the left key

Chemistry symbol

- 232C ⬡ BENZENE RING

Drafting symbols

- 232D ⌘ CYLINDRICITY
 232E ⌘ ALL AROUND-PROFILE
 232F ⌘ SYMMETRY
 2330 ⌘ TOTAL RUNOUT
 2331 ⌘ DIMENSION ORIGIN
 2332 ⌘ CONICAL TAPER
 2333 ⌘ SLOPE
 → 25FA ⌘ lower left triangle
- 2334 ⌘ COUNTERBORE
 → 2423 ⌘ open box
- 2335 ⌘ COUNTERSINK
 → 2304 ⌘ down arrowhead

APL

- 2336 ⌘ APL FUNCTIONAL SYMBOL I-BEAM
 2337 ⌘ APL FUNCTIONAL SYMBOL SQUISH QUAD
 → 2395 ⌘ apl functional symbol quad
 → 25AF ⌘ white vertical rectangle
 → 2AFF ⌘ n-ary white vertical bar
- 2338 ⌘ APL FUNCTIONAL SYMBOL QUAD EQUAL
 2339 ⌘ APL FUNCTIONAL SYMBOL QUAD DIVIDE
 233A ⌘ APL FUNCTIONAL SYMBOL QUAD DIAMOND
 → 26CB ⌘ white diamond in square
- 233B ⌘ APL FUNCTIONAL SYMBOL QUAD JOT
 → 29C7 ⌘ squared small circle
- 233C ⌘ APL FUNCTIONAL SYMBOL QUAD CIRCLE
 233D ⌘ APL FUNCTIONAL SYMBOL CIRCLE STILE
 233E ⌘ APL FUNCTIONAL SYMBOL CIRCLE JOT
 → 229A ⌘ circled ring operator
 → 29BE ⌘ circled white bullet
- 233F ⌘ APL FUNCTIONAL SYMBOL SLASH BAR
 → 1019A ⌘ roman as sign
- 2340 ⌘ APL FUNCTIONAL SYMBOL BACKSLASH BAR
 → 29F7 ⌘ reverse solidus with horizontal stroke
- 2341 ⌘ APL FUNCTIONAL SYMBOL QUAD SLASH
 → 29C4 ⌘ squared rising diagonal slash
- 2342 ⌘ APL FUNCTIONAL SYMBOL QUAD BACKSLASH
 → 29C5 ⌘ squared falling diagonal slash
- 2343 ⌘ APL FUNCTIONAL SYMBOL QUAD LESS-THAN

- 2344 ⌘ APL FUNCTIONAL SYMBOL QUAD GREATER-THAN
 2345 ⌘ APL FUNCTIONAL SYMBOL LEFTWARDS VANE
 2346 ⌘ APL FUNCTIONAL SYMBOL RIGHTWARDS VANE
 2347 ⌘ APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW
 2348 ⌘ APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW
 2349 ⌘ APL FUNCTIONAL SYMBOL CIRCLE BACKSLASH
 → 29B0 ⌘ reversed empty set
- 234A ⌘ APL FUNCTIONAL SYMBOL DOWN TACK UNDERBAR
 = up tack underbar
 • preferred naming for APL tack symbols now follows the London Convention in ISO/IEC 13751:2000 (APL Extended)
 → 22A5 ⌘ up tack
- 234B ⌘ APL FUNCTIONAL SYMBOL DELTA STILE
 234C ⌘ APL FUNCTIONAL SYMBOL QUAD DOWN CARET
 234D ⌘ APL FUNCTIONAL SYMBOL QUAD DELTA
 234E ⌘ APL FUNCTIONAL SYMBOL DOWN TACK JOT
 = up tack jot
 → 22A5 ⌘ up tack
- 234F ⌘ APL FUNCTIONAL SYMBOL UPWARDS VANE
 2350 ⌘ APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW
 2351 ⌘ APL FUNCTIONAL SYMBOL UP TACK OVERBAR
 = down tack overbar
 → 22A4 ⌘ down tack
 → 3012 ⌘ postal mark
- 2352 ⌘ APL FUNCTIONAL SYMBOL DEL STILE
 2353 ⌘ APL FUNCTIONAL SYMBOL QUAD UP CARET
 → 28B9 ⌘ up arrowhead in a rectangle box
- 2354 ⌘ APL FUNCTIONAL SYMBOL QUAD DEL
 2355 ⌘ APL FUNCTIONAL SYMBOL UP TACK JOT
 = down tack jot
 → 22A4 ⌘ down tack
- 2356 ⌘ APL FUNCTIONAL SYMBOL DOWNWARDS VANE
 2357 ⌘ APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW
 2358 ⌘ APL FUNCTIONAL SYMBOL QUOTE UNDERBAR
 2359 ⌘ APL FUNCTIONAL SYMBOL DELTA UNDERBAR
 235A ⌘ APL FUNCTIONAL SYMBOL DIAMOND UNDERBAR
- 235B ⌘ APL FUNCTIONAL SYMBOL JOT UNDERBAR
 235C ⌘ APL FUNCTIONAL SYMBOL CIRCLE UNDERBAR
 235D ⌘ APL FUNCTIONAL SYMBOL UP SHOE JOT
 → 2A40 ⌘ intersection with dot
- 235E ⌘ APL FUNCTIONAL SYMBOL QUOTE QUAD
 235F ⌘ APL FUNCTIONAL SYMBOL CIRCLE STAR
 → 229B ⌘ circled asterisk operator
- 2360 ⌘ APL FUNCTIONAL SYMBOL QUAD COLON
 2361 ⌘ APL FUNCTIONAL SYMBOL UP TACK DIAERESIS
 = down tack diaeresis
 → 22A4 ⌘ down tack
- 2362 ⌘ APL FUNCTIONAL SYMBOL DEL DIAERESIS
 2363 ⌘ APL FUNCTIONAL SYMBOL STAR DIAERESIS
 2364 ⌘ APL FUNCTIONAL SYMBOL JOT DIAERESIS
 = hoot
- 2365 ⌘ APL FUNCTIONAL SYMBOL CIRCLE DIAERESIS
 = holler
- 2366 ⌘ APL FUNCTIONAL SYMBOL DOWN SHOE STILE

2367	⌘	APL FUNCTIONAL SYMBOL LEFT SHOE STILE
2368	˜	APL FUNCTIONAL SYMBOL TILDE DIAERESIS = smirk
2369	➤	APL FUNCTIONAL SYMBOL GREATER-THAN DIAERESIS
236A	̣	APL FUNCTIONAL SYMBOL COMMA BAR
236B	̸	APL FUNCTIONAL SYMBOL DEL TILDE
236C	̨	APL FUNCTIONAL SYMBOL ZILDE
236D	†	APL FUNCTIONAL SYMBOL STILE TILDE
236E	ː	APL FUNCTIONAL SYMBOL SEMICOLON UNDERBAR
236F	≠	APL FUNCTIONAL SYMBOL QUAD NOT EQUAL
2370	?	APL FUNCTIONAL SYMBOL QUAD QUESTION → 2BD1 ⚡ uncertainty sign
2371	⋈	APL FUNCTIONAL SYMBOL DOWN CARET TILDE
2372	⋈	APL FUNCTIONAL SYMBOL UP CARET TILDE
2373	ι	APL FUNCTIONAL SYMBOL IOTA
2374	ρ	APL FUNCTIONAL SYMBOL RHO
2375	ω	APL FUNCTIONAL SYMBOL OMEGA
2376	α	APL FUNCTIONAL SYMBOL ALPHA UNDERBAR
2377	ε	APL FUNCTIONAL SYMBOL EPSILON UNDERBAR
2378	ι	APL FUNCTIONAL SYMBOL IOTA UNDERBAR
2379	ω	APL FUNCTIONAL SYMBOL OMEGA UNDERBAR
237A	α	APL FUNCTIONAL SYMBOL ALPHA

Graphics for control codes

237B	✓	NOT CHECK MARK • from ISO 2047 • symbol for Negative Acknowledge
------	---	--

Miscellaneous technical

237C	⌵	RIGHT ANGLE WITH DOWNWARDS ZIGZAG ARROW
------	---	---

Graphics for control codes

237D	┌	SHOULDERED OPEN BOX • from ISO 9995-7 • keyboard symbol for No Break Space → 2423 ┌ open box
237E	⌚	BELL SYMBOL • from ISO 2047
237F	†	VERTICAL LINE WITH MIDDLE DOT • from ISO 2047 • symbol for End of Medium

Keyboard symbols from ISO 9995-7

2380	↵	INSERTION SYMBOL
2381	≡	CONTINUOUS UNDERLINE SYMBOL
2382	≡	DISCONTINUOUS UNDERLINE SYMBOL
2383	≡	EMPHASIS SYMBOL
2384	⌘	COMPOSITION SYMBOL
2385	⌘	WHITE SQUARE WITH CENTRE VERTICAL LINE = center
2386	⌘	ENTER SYMBOL
2387	⌘	ALTERNATIVE KEY SYMBOL
2388	⌘	HELM SYMBOL = control → 2638 ⌘ wheel of dharma
2389	⌘	CIRCLED HORIZONTAL BAR WITH NOTCH = pause
238A	⌘	CIRCLED TRIANGLE DOWN = interrupt, break

238B	⌘	BROKEN CIRCLE WITH NORTHWEST ARROW = escape
238C	⌘	UNDO SYMBOL

Electrotechnical symbols from IR 181

238D	⌘	MONOSTABLE SYMBOL
238E	⌘	HYSTERESIS SYMBOL
238F	⌘	OPEN-CIRCUIT-OUTPUT H-TYPE SYMBOL
2390	⌘	OPEN-CIRCUIT-OUTPUT L-TYPE SYMBOL
2391	⌘	PASSIVE-PULL-DOWN-OUTPUT SYMBOL
2392	⌘	PASSIVE-PULL-UP-OUTPUT SYMBOL
2393	⌘	DIRECT CURRENT SYMBOL FORM TWO
2394	⌘	SOFTWARE-FUNCTION SYMBOL

APL

2395	⌘	APL FUNCTIONAL SYMBOL QUAD → 2337 ⌘ apl functional symbol squish quad → 25AF ⌘ white vertical rectangle
------	---	---

Keyboard symbols from ISO 9995-7

2396	⌘	DECIMAL SEPARATOR KEY SYMBOL
2397	⌘	PREVIOUS PAGE → 1F519 ⌘ back with leftwards arrow above
2398	⌘	NEXT PAGE
2399	⌘	PRINT SCREEN SYMBOL
239A	⌘	CLEAR SCREEN SYMBOL → 20E2 ⌘ combining enclosing screen

Bracket pieces

239B	{	LEFT PARENTHESIS UPPER HOOK
239C	{	LEFT PARENTHESIS EXTENSION
239D	}	LEFT PARENTHESIS LOWER HOOK
239E	}	RIGHT PARENTHESIS UPPER HOOK
239F	}	RIGHT PARENTHESIS EXTENSION
23A0	}	RIGHT PARENTHESIS LOWER HOOK
23A1	[	LEFT SQUARE BRACKET UPPER CORNER
23A2	[	LEFT SQUARE BRACKET EXTENSION
23A3	[	LEFT SQUARE BRACKET LOWER CORNER
23A4	]	RIGHT SQUARE BRACKET UPPER CORNER
23A5	]	RIGHT SQUARE BRACKET EXTENSION
23A6	]	RIGHT SQUARE BRACKET LOWER CORNER
23A7	{	LEFT CURLY BRACKET UPPER HOOK
23A8	{	LEFT CURLY BRACKET MIDDLE PIECE
23A9	{	LEFT CURLY BRACKET LOWER HOOK
23AA	{	CURLY BRACKET EXTENSION
23AB	}	RIGHT CURLY BRACKET UPPER HOOK
23AC	}	RIGHT CURLY BRACKET MIDDLE PIECE
23AD	}	RIGHT CURLY BRACKET LOWER HOOK

Special character extensions

23AE		INTEGRAL EXTENSION → 2320 ∫ top half integral → 2321 ∫ bottom half integral
23AF	—	HORIZONTAL LINE EXTENSION • used for extension of arrows → 23D0 vertical line extension

Bracket pieces

23B0		UPPER LEFT OR LOWER RIGHT CURLY BRACKET SECTION = left moustache
23B1		UPPER RIGHT OR LOWER LEFT CURLY BRACKET SECTION = right moustache

Summation sign parts

- 23B2 Σ SUMMATION TOP
 23B3 Σ SUMMATION BOTTOM
 → 2211 Σ n-ary summation

Horizontal brackets

These characters are also used as delimiters of vertical text in non-CJK terminal emulation.

- 23B4 $\lceil$ TOP SQUARE BRACKET
 → FE47 $\lceil$ presentation form for vertical left square bracket
 23B5 $\rfloor$ BOTTOM SQUARE BRACKET
 → FE48 $\rfloor$ presentation form for vertical right square bracket
 23B6 $\lrcorner$ BOTTOM SQUARE BRACKET OVER TOP SQUARE BRACKET
 • only used for terminal emulation

Terminal graphic characters

- 23B7 $\downarrow$ RADICAL SYMBOL BOTTOM
 23B8 $|$ LEFT VERTICAL BOX LINE
 23B9 $|$ RIGHT VERTICAL BOX LINE

Scan lines for terminal graphics

The scan line numbers here refer to old, low-resolution technology for terminals, with only 9 scan lines per fixed-size character glyph. Even-numbered scan lines are unified with box-drawing graphics.

- 23BA $-$ HORIZONTAL SCAN LINE-1
 23BB $-$ HORIZONTAL SCAN LINE-3
 23BC $-$ HORIZONTAL SCAN LINE-7
 23BD $-$ HORIZONTAL SCAN LINE-9

Dentistry notation symbols

- 23BE $\lceil$ DENTISTRY SYMBOL LIGHT VERTICAL AND TOP RIGHT
 → 2308 $\lceil$ left ceiling
 23BF $\rfloor$ DENTISTRY SYMBOL LIGHT VERTICAL AND BOTTOM RIGHT
 → 230A $\rfloor$ left floor
 23C0 ϕ DENTISTRY SYMBOL LIGHT VERTICAL WITH CIRCLE
 23C1 ϕ DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL WITH CIRCLE
 23C2 $\oplus$ DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL WITH CIRCLE
 23C3 $\triangle$ DENTISTRY SYMBOL LIGHT VERTICAL WITH TRIANGLE
 23C4 $\triangle$ DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL WITH TRIANGLE
 23C5 $\triangle$ DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL WITH TRIANGLE
 23C6 $\nmid$ DENTISTRY SYMBOL LIGHT VERTICAL AND WAVE
 23C7 $\nmid$ DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL WITH WAVE
 23C8 $\pm$ DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL WITH WAVE
 23C9 $\top$ DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL
 → 22A4 $\top$ down tack
 → 252C $\top$ box drawings light down and horizontal

- 23CA $\perp$ DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL
 → 22A5 $\perp$ up tack
 → 2534 $\perp$ box drawings light up and horizontal
 23CB $\lceil$ DENTISTRY SYMBOL LIGHT VERTICAL AND TOP LEFT
 → 2309 $\lceil$ right ceiling
 23CC $\rfloor$ DENTISTRY SYMBOL LIGHT VERTICAL AND BOTTOM LEFT
 → 230B $\rfloor$ right floor

Miscellaneous technical

- 23CD $\square$ SQUARE FOOT

Keyboard and UI symbols

- 23CE $\rightrightarrows$ RETURN SYMBOL
 • may be shown with either hollow or filled glyph
 → 21B5 $\rightrightarrows$ downwards arrow with corner leftwards
 → 2B90 $\rightrightarrows$ return left
 23CF $\blacktriangle$ EJECT SYMBOL
 • UI symbol to eject media
 ~ 23CF FE0E text style
 ~ 23CF FE0F emoji style

Special character extension

- 23D0 $|$ VERTICAL LINE EXTENSION
 • used for extension of arrows
 → 23AF $-$ horizontal line extension

Metrical symbols

- 23D1 $\cup$ METRICAL BREVE
 23D2 $\cup$ METRICAL LONG OVER SHORT
 23D3 $\cup$ METRICAL SHORT OVER LONG
 23D4 $\cup$ METRICAL LONG OVER TWO SHORTS
 23D5 $\cup$ METRICAL TWO SHORTS OVER LONG
 23D6 $\cup$ METRICAL TWO SHORTS JOINED
 23D7 $\cup$ METRICAL TRISEME
 → 1D242 $\cup$ combining greek musical triseme
 23D8 $\cup$ METRICAL TETRASEME
 → 1D243 $\cup$ combining greek musical tetraseme
 23D9 $\cup$ METRICAL PENTASEME
 → 1D244 $\cup$ combining greek musical pentaseme

Electrotechnical symbols

- 23DA $\perp$ EARTH GROUND
 23DB $\equiv$ FUSE

Horizontal brackets

These are intended for bracketing terms of mathematical expressions where their glyph extends to accommodate the width of the bracketed expression

- 23DC $\frown$ TOP PARENTHESIS
 → FE35 $\frown$ presentation form for vertical left parenthesis
 23DD $\smile$ BOTTOM PARENTHESIS
 → FE36 $\smile$ presentation form for vertical right parenthesis
 23DE $\frown$ TOP CURLY BRACKET
 → FE37 $\frown$ presentation form for vertical left curly bracket
 23DF $\smile$ BOTTOM CURLY BRACKET
 → FE38 $\smile$ presentation form for vertical right curly bracket

- 23E0  TOP TORTOISE SHELL BRACKET
→ FE39  presentation form for vertical left tortoise shell bracket
- 23E1  BOTTOM TORTOISE SHELL BRACKET
→ FE3A  presentation form for vertical right tortoise shell bracket

Miscellaneous technical

- 23E2  WHITE TRAPEZIUM

Chemistry symbol

- 23E3  BENZENE RING WITH CIRCLE

Miscellaneous technical

- 23E4  STRAIGHTNESS
- 23E5  FLATNESS
- 23E6  AC CURRENT
- 23E7  ELECTRICAL INTERSECTION
- 23E8  DECIMAL EXPONENT SYMBOL
• Algol-60 token for scientific notation literals

User interface symbols

- 23E9  BLACK RIGHT-POINTING DOUBLE TRIANGLE
= fast forward
- 23EA  BLACK LEFT-POINTING DOUBLE TRIANGLE
= fast rewind
- 23EB  BLACK UP-POINTING DOUBLE TRIANGLE
- 23EC  BLACK DOWN-POINTING DOUBLE TRIANGLE
- 23ED  BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR
~ 23ED FE0E text style
~ 23ED FE0F emoji style
- 23EE  BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR
~ 23EE FE0E text style
~ 23EE FE0F emoji style
- 23EF  BLACK RIGHT-POINTING TRIANGLE WITH DOUBLE VERTICAL BAR
~ 23EF FE0E text style
~ 23EF FE0F emoji style
- 23F0  ALARM CLOCK
→ 231A  watch
→ 1F550  clock face one o'clock
→ 1F570  mantelpiece clock
- 23F1  STOPWATCH
~ 23F1 FE0E text style
~ 23F1 FE0F emoji style
- 23F2  TIMER CLOCK
~ 23F2 FE0E text style
~ 23F2 FE0F emoji style
- 23F3  HOURGLASS WITH FLOWING SAND
→ 231B  hourglass
- 23F4  BLACK MEDIUM LEFT-POINTING TRIANGLE
= reverse, back
• preferred to 25C0  black left-pointing triangle
→ 1F780  black left-pointing isosceles right triangle
- 23F5  BLACK MEDIUM RIGHT-POINTING TRIANGLE
= forward
• preferred to 25B6  black right-pointing triangle
→ 1F782  black right-pointing isosceles right triangle

- 23F6  BLACK MEDIUM UP-POINTING TRIANGLE
= increase
• preferred to 25B2  black up-pointing triangle
→ 1F781  black up-pointing isosceles right triangle
- 23F7  BLACK MEDIUM DOWN-POINTING TRIANGLE
= decrease
• preferred to 25BC  black down-pointing triangle
→ 1F783  black down-pointing isosceles right triangle
- 23F8  DOUBLE VERTICAL BAR
= pause
→ 2016  double vertical line
~ 23F8 FE0E text style
~ 23F8 FE0F emoji style
- 23F9  BLACK SQUARE FOR STOP
= stop
→ 25FC  black medium square
~ 23F9 FE0E text style
~ 23F9 FE0F emoji style
- 23FA  BLACK CIRCLE FOR RECORD
= record
→ 26AB  medium black circle
~ 23FA FE0E text style
~ 23FA FE0F emoji style

Power symbols from ISO 7000:2012

- 23FB  POWER SYMBOL
- 23FC  POWER ON-OFF SYMBOL
- 23FD  POWER ON SYMBOL
• use 2B58  for power off symbol
→ 2B58  heavy circle

Power symbol from IEEE 1621-2004

- 23FE  POWER SLEEP SYMBOL
→ 263E  last quarter moon

	2E0	2E1	2E2	2E3	2E4	2E5	2E6	2E7
0	 2E00	 2E10	 2E20	 2E30	 2E40			
1	 2E01	 2E11	 2E21	 2E31	 2E41			
2	 2E02	 2E12	 2E22	 2E32	 2E42			
3	 2E03	 2E13	 2E23	 2E33	 2E43			
4	 2E04	 2E14	 2E24	 2E34	 2E44			
5	 2E05	 2E15	 2E25	 2E35				
6	 2E06	 2E16	 2E26	 2E36				
7	 2E07	 2E17	 2E27	 2E37				
8	 2E08	 2E18	 2E28	 2E38				
9	 2E09	 2E19	 2E29	 2E39				
A	 2E0A	 2E1A	 2E2A	 2E3A				
B	 2E0B	 2E1B	 2E2B	 2E3B				
C	 2E0C	 2E1C	 2E2C	 2E3C				
D	 2E0D	 2E1D	 2E2D	 2E3D				
E	 2E0E	 2E1E	 2E2E	 2E3E				
F	 2E0F	 2E1F	 2E2F	 2E3F				

New Testament editorial symbols

- 2E00 ∟ RIGHT ANGLE SUBSTITUTION MARKER
→ 231C ∟ top left corner
- 2E01 ∟ RIGHT ANGLE DOTTED SUBSTITUTION MARKER
- 2E02 ∟ LEFT SUBSTITUTION BRACKET
- 2E03 ∟ RIGHT SUBSTITUTION BRACKET
- 2E04 ∟ LEFT DOTTED SUBSTITUTION BRACKET
- 2E05 ∟ RIGHT DOTTED SUBSTITUTION BRACKET
- 2E06 ∟ RAISED INTERPOLATION MARKER
→ 22A4 ∟ down tack
- 2E07 ∟ RAISED DOTTED INTERPOLATION MARKER
- 2E08 ∟ DOTTED TRANSPOSITION MARKER
- 2E09 ∟ LEFT TRANSPOSITION BRACKET
- 2E0A ∟ RIGHT TRANSPOSITION BRACKET
- 2E0B □ RAISED SQUARE
• used as an opening raised omission bracket
- 2E0C ∟ LEFT RAISED OMISSION BRACKET
• used as an opening or closing raised omission bracket
- 2E0D ∟ RIGHT RAISED OMISSION BRACKET
• used as a closing or opening raised omission bracket

Ancient Greek textual symbols

- 2E0E ∟ EDITORIAL CORONIS
→ 1FBD ∟ greek koronis
- 2E0F — PARAGRAPHOS
- 2E10 — FORKED PARAGRAPHOS
- 2E11 — REVERSED FORKED PARAGRAPHOS
- 2E12 ∟ HYPODIASTOLE
= ypodiastoli
- 2E13 ∟ DOTTED OBELOS
• glyph variants may look like '∟' or '∟'
→ 2052 ∟ commercial minus sign
- 2E14 ∟ DOWNWARDS ANCORA
• contrary to its formal name this symbol points upwards
- 2E15 ∟ UPWARDS ANCORA
• contrary to its formal name this symbol points downwards
- 2E16 ∟ DOTTED RIGHT-POINTING ANGLE
= diplo peristigmene

Ancient Near-Eastern linguistic symbol

- 2E17 ∟ DOUBLE OBLIQUE HYPHEN
• used in ancient Near-Eastern linguistics
• hyphen in Fraktur text uses 002D - or 2010 - , but with a '∟' glyph in Fraktur fonts
→ 002D - hyphen-minus
→ 003D = equals sign
→ 2010 - hyphen
→ 2E40 = double hyphen

General punctuation

- 2E18 ∟ INVERTED INTERROBANG
= gnaborretni
→ 203D ∟ interrobang
- 2E19 ∟ PALM BRANCH
• used as a separator

Dictionary punctuation

These punctuation marks are used mostly in German dictionaries, to indicate umlaut or case changes with abbreviated stems.

- 2E1A ∟ HYPHEN WITH DIAERESIS
• indicates umlaut of the stem vowel of a plural form
- 2E1B ∟ TILDE WITH RING ABOVE
• indicates change in case for derived form

Brackets

- 2E1C ∟ LEFT LOW PARAPHRASE BRACKET
- 2E1D ∟ RIGHT LOW PARAPHRASE BRACKET
• used in N'Ko

Dictionary punctuation

- 2E1E ∟ TILDE WITH DOT ABOVE
• indicates derived form changes to uppercase
- 2E1F ∟ TILDE WITH DOT BELOW
• indicates derived form changes to lowercase

Brackets

- 2E20 ∟ LEFT VERTICAL BAR WITH QUILL
- 2E21 ∟ RIGHT VERTICAL BAR WITH QUILL

Half brackets

These form a set of four corner brackets and are used editorially. They are distinguished from mathematical floor and ceiling characters. Occasionally quine corners are substituted for half brackets.

- 2E22 ∟ TOP LEFT HALF BRACKET
→ 2308 ∟ left ceiling
→ 231C ∟ top left corner
→ 300C ∟ left corner bracket
- 2E23 ∟ TOP RIGHT HALF BRACKET
- 2E24 ∟ BOTTOM LEFT HALF BRACKET
- 2E25 ∟ BOTTOM RIGHT HALF BRACKET

Brackets

- 2E26 ∟ LEFT SIDEWAYS U BRACKET
→ 2282 ∟ subset of
- 2E27 ∟ RIGHT SIDEWAYS U BRACKET
→ 2283 ∟ superset of
- 2E28 ∟ LEFT DOUBLE PARENTHESIS
→ 2985 ∟ left white parenthesis
→ FF5F ∟ fullwidth left white parenthesis
- 2E29 ∟ RIGHT DOUBLE PARENTHESIS

Historic punctuation

- 2E2A ∟ TWO DOTS OVER ONE DOT PUNCTUATION
- 2E2B ∟ ONE DOT OVER TWO DOTS PUNCTUATION
- 2E2C ∟ SQUARED FOUR DOT PUNCTUATION
- 2E2D ∟ FIVE DOT MARK
- 2E2E ∟ REVERSED QUESTION MARK
= punctus percontativus
→ 003F ∟ question mark
→ 00BF ∟ inverted question mark
→ 061F ∟ arabic question mark
- 2E2F ∟ VERTICAL TILDE
• used for Cyrillic yerik
→ 033E ∟ combining vertical tilde
→ A67F ∟ cyrillic payerok

- 2E30 ◦ RING POINT
- used in Avestan
 - 2218 ◦ ring operator
 - 25E6 ◦ white bullet
- 2E31 · WORD SEPARATOR MIDDLE DOT
- used in Avestan, Samaritan, ...
 - 00B7 · middle dot

Palaeotype transliteration symbol

- 2E32 ˆ TURNED COMMA
- indicates nasalization
 - 060C ˆ arabic comma

Historic punctuation

- 2E33 . RAISED DOT
- glyph position intermediate between 002E . and 00B7 ·
 - 002E . full stop
 - 00B7 · middle dot
- 2E34 , RAISED COMMA
- 002C , comma

Palaeotype transliteration symbols

- 2E35 ː TURNED SEMICOLON
- indicates sudden glottal closure
 - 061B ː arabic semicolon
- 2E36 † DAGGER WITH LEFT GUARD
- indicates retracted pronunciation
- 2E37 ‡ DAGGER WITH RIGHT GUARD
- indicates advanced pronunciation
- 2E38 ‡ TURNED DAGGER
- indicates retroflex pronunciation
 - 2020 ‡ dagger
- 2E39 § TOP HALF SECTION SIGN
- indicates pronunciation on one side of the mouth only
 - 00A7 § section sign

Dashes

- 2E3A  TWO-EM DASH
- = omission dash
 - 2014 — em dash
- 2E3B  THREE-EM DASH

Alternate forms of punctuation

- 2E3C × STENOGRAPHIC FULL STOP
- used in shorthands and stenographies
 - 002E . full stop
 - 166E × canadian syllabics full stop
- 2E3D ⋮ VERTICAL SIX DOTS
- 205E ⋮ vertical four dots
 - 2999 ⋮ dotted fence
- 2E3E ⋈ WIGGLY VERTICAL LINE
- 2307 ⋈ wavy line
 - 299A ⋈ vertical zigzag line

Historic punctuation

- 2E3F ¶ CAPITULUM
- ancestor of the pilcrow sign
 - 00B6 ¶ pilcrow sign

Double hyphen

The double hyphen is used in transcription of old German manuscripts, and occasionally as a non-standard punctuation mark. It is not intended for the representation of normal hyphens, whose doubled forms in Fraktur text are considered glyphic variants.

- 2E40 = DOUBLE HYPHEN
- 003D = equals sign
 - 2010 - hyphen
 - 2E17 ≠ double oblique hyphen
 - 30A0 = katakana-hiragana double hyphen
 - A78A = modifier letter short equals sign

Reversed punctuation

- 2E41 ˘ REVERSED COMMA
- also used in Sindhi
 - 002C , comma
 - 060C ˘ arabic comma
- 2E42 „ DOUBLE LOW-REVERSED-9 QUOTATION MARK
- 201E „ double low-9 quotation mark

Dash

- 2E43 ⤵ DASH WITH LEFT UPTURN

Miscellaneous punctuation

- 2E44 ː DOUBLE SUSPENSION MARK

	300	301	302	303
0	 3000	 3010	 3020	 3030
1	 3001	 3011	 3021	 3031
2	 3002	 3012	 3022	 3032
3	 3003	 3013	 3023	 3033
4	 3004	 3014	 3024	 3034
5	 3005	 3015	 3025	 3035
6	 3006	 3016	 3026	 3036
7	 3007	 3017	 3027	 3037
8	 3008	 3018	 3028	 3038
9	 3009	 3019	 3029	 3039
A	 300A	 301A	 302A	 303A
B	 300B	 301B	 302B	 303B
C	 300C	 301C	 302C	 303C
D	 300D	 301D	 302D	 303D
E	 300E	 301E	 302E	 303E
F	 300F	 301F	 302F	 303F

CJK symbols and punctuation

- 3000  IDEOGRAPHIC SPACE
→ 0020  space
≈ <wide> 0020 
- 3001  IDEOGRAPHIC COMMA
• in Chinese, delimits items in a list or series
→ 002C , comma
→ FF0C , fullwidth comma
- 3002  IDEOGRAPHIC FULL STOP
→ 002E . full stop
- 3003  DITTO MARK
→ 2033 " double prime
- 3004  JAPANESE INDUSTRIAL STANDARD SYMBOL
- 3005  IDEOGRAPHIC ITERATION MARK
→ 16FE0 𐄎 tangut iteration mark
- 3006  IDEOGRAPHIC CLOSING MARK
- 3007  IDEOGRAPHIC NUMBER ZERO
→ 20DD ㊦ combining enclosing circle
→ 25CB 〇 white circle
→ 25EF ◯ large circle

CJK angle brackets

- 3008  LEFT ANGLE BRACKET
→ 003C < less-than sign
→ 2039 < single left-pointing angle quotation mark
→ 2329 𐄀 left-pointing angle bracket
→ 27E8 𐄠 mathematical left angle bracket
- 3009  RIGHT ANGLE BRACKET
→ 003E > greater-than sign
→ 203A > single right-pointing angle quotation mark
→ 232A 𐄁 right-pointing angle bracket
→ 27E9 𐄡 mathematical right angle bracket
- 300A  LEFT DOUBLE ANGLE BRACKET
→ 00AB « left-pointing double angle quotation mark
→ 27EA 𐄢 mathematical left double angle bracket
- 300B  RIGHT DOUBLE ANGLE BRACKET
→ 00BB » right-pointing double angle quotation mark
→ 27EB 𐄣 mathematical right double angle bracket

CJK corner brackets

The CJK corner brackets, which function as quotation marks, are not recommended for general-purpose corner brackets. See the ceiling and floor characters, instead.

- 300C  LEFT CORNER BRACKET
→ 2308 ㄱ left ceiling
- 300D  RIGHT CORNER BRACKET
• used as quotation marks
→ 230B ㄴ right floor
- 300E  LEFT WHITE CORNER BRACKET
- 300F  RIGHT WHITE CORNER BRACKET
• used as quotation marks

CJK brackets

- 3010  LEFT BLACK LENTICULAR BRACKET
- 3011  RIGHT BLACK LENTICULAR BRACKET

CJK symbols

- 3012  POSTAL MARK
→ 1F3E3 郵便 japanese post office

- 3013  GETA MARK
• substitute for ideograph not in font
• editorial convention to represent ideographic lacuna
→ 25A1 ◻ white square

CJK brackets

- 3014  LEFT TORTOISE SHELL BRACKET
- 3015  RIGHT TORTOISE SHELL BRACKET
- 3016  LEFT WHITE LENTICULAR BRACKET
- 3017  RIGHT WHITE LENTICULAR BRACKET
- 3018  LEFT WHITE TORTOISE SHELL BRACKET
→ 27EC 𐄤 mathematical left white tortoise shell bracket
- 3019  RIGHT WHITE TORTOISE SHELL BRACKET
→ 27ED 𐄥 mathematical right white tortoise shell bracket
- 301A  LEFT WHITE SQUARE BRACKET
= left abstract syntax bracket
→ 27E6 𐄦 mathematical left white square bracket
- 301B  RIGHT WHITE SQUARE BRACKET
= right abstract syntax bracket
→ 27E7 𐄧 mathematical right white square bracket

CJK symbols and punctuation

- 301C  WAVE DASH
This character was encoded to match JIS C 6226-1978 1-33 "wave dash".
→ 2053 〰 swung dash
→ 3030 〰 wavy dash
→ FF5E ˜ fullwidth tilde

- 301D  REVERSED DOUBLE PRIME QUOTATION MARK
• sometimes depicted as double prime quotation mark
→ 201C “ left double quotation mark
→ 2036 ” reversed double prime
- 301E  DOUBLE PRIME QUOTATION MARK
• this is a mistaken analogue to 201D ”;
301F 〃 is preferred
→ 201D ” right double quotation mark
→ 2033 ” double prime
- 301F  LOW DOUBLE PRIME QUOTATION MARK
• may be depicted as low inverse double prime quotation mark
- 3020  POSTAL MARK FACE

Suzhou numerals

The Suzhou numerals (Chinese su1zhou1ma3zi) are special numeric forms used by traders to display the prices of goods. The use of "HANGZHOU" in the names is a misnomer.

- 3021 一 HANGZHOU NUMERAL ONE
- 3022 二 HANGZHOU NUMERAL TWO
- 3023 三 HANGZHOU NUMERAL THREE
- 3024 四 HANGZHOU NUMERAL FOUR
- 3025 五 HANGZHOU NUMERAL FIVE
- 3026 六 HANGZHOU NUMERAL SIX
- 3027 七 HANGZHOU NUMERAL SEVEN
- 3028 八 HANGZHOU NUMERAL EIGHT
- 3029 九 HANGZHOU NUMERAL NINE

Diacritics

- 302A  IDEOGRAPHIC LEVEL TONE MARK
- 302B  IDEOGRAPHIC RISING TONE MARK

302C ◊ IDEOGRAPHIC DEPARTING TONE MARK

302D ◊ IDEOGRAPHIC ENTERING TONE MARK

302E ◌◌ HANGUL SINGLE DOT TONE MARK
= single dot Bangjeom

302F ◌◌◌ HANGUL DOUBLE DOT TONE MARK
= double dot Bangjeom

Other CJK symbols

3030 ~ WAVY DASH

→ 2307 〰 wavy line

→ 301C 〰 wave dash

~ 3030 FE0E text style

~ 3030 FE0F emoji style

3031 〰 VERTICAL KANA REPEAT MARK

3032 〰 VERTICAL KANA REPEAT WITH VOICED SOUND MARK

• the preceding two semantic characters are preferred to the following three glyphic forms

3033 / VERTICAL KANA REPEAT MARK UPPER HALF

3034 / VERTICAL KANA REPEAT WITH VOICED SOUND MARK UPPER HALF

• the preceding two are glyphs used in conjunction with the following glyph

3035 〰 VERTICAL KANA REPEAT MARK LOWER HALF

3036 ㊞ CIRCLED POSTAL MARK

≈ 3012 ㊞ postal mark

3037 XX IDEOGRAPHIC TELEGRAPH LINE FEED SEPARATOR SYMBOL

Additional Suzhou numerals

3038 十 HANGZHOU NUMERAL TEN

≈ 5341 十

3039 廿 HANGZHOU NUMERAL TWENTY

≈ 5344 廿

303A 卅 HANGZHOU NUMERAL THIRTY

≈ 5345 卅

Other CJK punctuation

303B 〰 VERTICAL IDEOGRAPHIC ITERATION MARK

303C ㊞ MASU MARK

• informal abbreviation for Japanese -masu ending

→ 29C4 ㊞ squared rising diagonal slash

303D 〰 PART ALTERNATION MARK

• marks the start of a song part in Japanese

~ 303D FE0E text style

~ 303D FE0F emoji style

Special CJK indicators

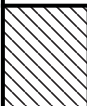
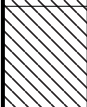
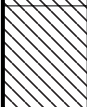
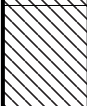
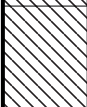
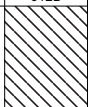
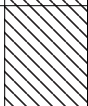
These are visibly displayed graphic characters, not invisible format control characters.

303E ㊞ IDEOGRAPHIC VARIATION INDICATOR

• visual indicator that the following ideograph is to be taken as a variant of the intended character

303F ㊞ IDEOGRAPHIC HALF FILL SPACE

• visual indicator of a screen space for half of an ideograph

	310	311	312
0		ㄌ 3110	ㄍ 3120
1		ㄎ 3111	ㄏ 3121
2		ㄒ 3112	ㄎ 3122
3		ㄗ 3113	ㄌ 3123
4		ㄘ 3114	ㄍ 3124
5	ㄣ 3105	ㄩ 3115	ㄥ 3125
6	ㄣ 3106	ㄩ 3116	ㄥ 3126
7	ㄣ 3107	ㄩ 3117	ㄥ 3127
8	ㄣ 3108	ㄩ 3118	ㄥ 3128
9	ㄣ 3109	ㄩ 3119	ㄥ 3129
A	ㄣ 310A	ㄩ 311A	ㄥ 312A
B	ㄣ 310B	ㄩ 311B	ㄥ 312B
C	ㄣ 310C	ㄩ 311C	ㄥ 312C
D	ㄣ 310D	ㄩ 311D	ㄥ 312D
E	ㄣ 310E	ㄩ 311E	
F	ㄣ 310F	ㄩ 311F	

See also the Bopomofo Extended block

Based on GB 2312

3105	ㄅ	BOPOMOFO LETTER B
3106	ㄆ	BOPOMOFO LETTER P
3107	ㄇ	BOPOMOFO LETTER M
3108	ㄈ	BOPOMOFO LETTER F
3109	ㄉ	BOPOMOFO LETTER D
310A	ㄊ	BOPOMOFO LETTER T
310B	ㄋ	BOPOMOFO LETTER N
310C	ㄌ	BOPOMOFO LETTER L
310D	ㄍ	BOPOMOFO LETTER G
310E	ㄎ	BOPOMOFO LETTER K
310F	ㄏ	BOPOMOFO LETTER H
3110	ㄐ	BOPOMOFO LETTER J
3111	ㄑ	BOPOMOFO LETTER Q
3112	ㄒ	BOPOMOFO LETTER X
3113	ㄗ	BOPOMOFO LETTER ZH
3114	ㄘ	BOPOMOFO LETTER CH
3115	ㄙ	BOPOMOFO LETTER SH
3116	ㄚ	BOPOMOFO LETTER R
3117	ㄛ	BOPOMOFO LETTER Z
3118	ㄜ	BOPOMOFO LETTER C
3119	ㄝ	BOPOMOFO LETTER S
311A	ㄞ	BOPOMOFO LETTER A
311B	ㄟ	BOPOMOFO LETTER O
311C	ㄠ	BOPOMOFO LETTER E
311D	ㄡ	BOPOMOFO LETTER EH
311E	ㄢ	BOPOMOFO LETTER AI
311F	ㄣ	BOPOMOFO LETTER EI
3120	ㄤ	BOPOMOFO LETTER AU
3121	ㄥ	BOPOMOFO LETTER OU
3122	ㄦ	BOPOMOFO LETTER AN
3123	ㄨ	BOPOMOFO LETTER EN
3124	ㄩ	BOPOMOFO LETTER ANG
3125	ㄚ	BOPOMOFO LETTER ENG
3126	ㄛ	BOPOMOFO LETTER ER

3127 一 BOPOMOFO LETTER I

- the vertical stroke form is considered a rendering variant

3128	ㄨ	BOPOMOFO LETTER U
3129	ㄩ	BOPOMOFO LETTER IU

Dialect (non-Mandarin) letters

312A	ㄩ	BOPOMOFO LETTER V
312B	ㄩ	BOPOMOFO LETTER NG
312C	ㄩ	BOPOMOFO LETTER GN

Miscellaneous addition

312D	ㄩ	BOPOMOFO LETTER IH
• for analytic representation of apical vowel		

3CED 水 85.7	淝 GKX-0627.21	淝 T3-3223	
3CEE 水 85.7	淝 G5-5565	淝 T3-317E	
3CEF 水 85.7	淝 GKX-0627.28	淝 K3-293B	淝 V0-3B3E
	淝 H-8DDB		
3CF0 水 85.7	淝 G7-2357		
3CF1 水 85.7	淝 G7-235C		
3CF2 水 85.7	淝 K3-293C		
3CF3 水 85.7	淝 T3-3175		
3CF4 水 85.8	淝 GKX-0628.06	淝 T4-3257	
3CF5 水 85.8	淝 GKX-0628.12	淝 T3-3671	淝 JA-2448
3CF6 水 85.8	淝 G3-5463	淝 T4-3263	淝 V0-3B44
3CF7 水 85.8	淝 G3-546A	淝 T4-3264	淝 K3-293F
3CF8 水 85.8	淝 GKX-0629.13	淝 T3-366E	
3CF9 水 85.8	淝 G3-5453	淝 T4-325E	淝 K3-2940
	淝 V2-894F		
3CFA 水 85.8	淝 GKX-0630.10	淝 T3-3722	淝 JA-2449
3CFB 水 85.8	淝 G5-5568	淝 T3-366D	淝 V0-3B46
3CFC 水 85.8	淝 GKX-0630.19	淝 T3-3C4F	
3CFD 水 85.8	淝 GKX-0631.02	淝 T3-367E	淝 K3-2941
3CFE 水 85.8	淝 G7-2358	淝 T4-3258	
3CFF 水 85.8	淝 G3-546D	淝 T4-3268	淝 K3-2942
3D00 水 85.8	淝 GKX-0633.04	淝 T5-395E	淝 JA-244A
3D01 水 85.8	淝 GKX-0633.06	淝 T4-325A	淝 K3-2944
3D02 水 85.8	淝 G3-544D	淝 T4-325C	
3D03 水 85.8	淝 GKX-0633.20	淝 T6-412B	源 K3-2948
3D04 水 85.8	淝 G3-543D	淝 T5-333D	
3D05 水 85.8	淝 GKX-0633.26	淝 T3-3C5E	
3D06 水 85.8	淝 GKX-0633.29	淝 T3-367B	
3D07 水 85.8	淝 GKX-0633.32	淝 T3-3C5F	
3D08 水 85.8	淝 GKX-0633.33	淝 T3-3673	
3D09 水 85.8	淝 GKX-0631.18	淝 T6-4141	淝 K3-293E
3D0A 水 85.8	淝 GHZ-31660.06	淝 T3-3678	
3D0B 水 85.8	淝 G7-2356		
3D0C 水 85.8	淝 K3-2945		
3D0D 水 85.8	淝 K3-2946		
3D0E 水 85.8	淝 G3-5456	淝 TF-3633	
3D0F 水 85.9	淝 G3-5541	淝 T4-3851	
3D10 水 85.9	淝 G3-5522	淝 T4-3856	淝 K3-294B
3D11 水 85.9	淝 GKX-0634.13	淝 T3-3C65	淝 J4-6E71
3D12 水 85.9	淝 G3-5535	淝 T4-3852	淝 H-8CEA
3D13 水 85.9	淝 GKX-0636.01	淝 T3-3C59	淝 H-8EAF
3D14 水 85.9	淝 G3-5533	淝 T4-3859	
3D15 水 85.9	淝 GKX-0636.18	淝 T3-3C6A	
3D16 水 85.9	淝 GKX-0637.06	淝 T3-3C67	
3D17 水 85.9	淝 GKX-0637.09	淝 T3-3C55	
3D18 水 85.9	淝 G3-5526	淝 T4-3857	
3D19 水 85.9	淝 G3-552C	淝 T4-385A	
3D1A 水 85.9	淝 G5-5636	淝 T3-3C53	
3D1B 水 85.9	淝 GKX-0638.24	淝 T3-3C57	
3D1C 水 85.9	淝 GKX-0638.36	淝 T3-3C61	淝 V2-8951
3D1D 水 85.9	梨 GKX-0639.09	梨 T3-422B	
3D1E 水 85.9	淝 GHZ-31681.09	淝 T6-4A6D	淝 JA4-6E7E
3D1F 水 85.9	淝 GS-235C		
3D20 水 85.9	淝 TF-3C43	淝 JA-244C	
3D21 水 85.9	淝 GS-2363	淝 TF-3C5A	
3D22 水 85.9	淝 K3-294C		
3D23 水 85.9	淝 K3-294E		
3D24 水 85.9	淝 K3-294F		
3D25 水 85.10	淝 G3-5553	淝 T4-3E37	淝 V2-7A55
3D26 水 85.10	淝 GKX-0639.29	淝 T3-422C	

4C7B 魚 195.10 鯢 G3-784D 鯢 T4-683A 鯢 H-8D57	4C8E 魚 195.12 鰻 GKX-1478.26 鰻 T3-6067	4CA2 魚 195.10 鰻 G7-2234
4C7C 魚 195.10 鯢 GHX-1476.18 鯢 T3-5F29	4C8F 魚 195.12 鰻 GHZ-74715.05 鰻 T3-6064	4CA3 魚 195.10 鰻 G7-224E
4C7D 魚 195.10 鯢 GHZ-74707.08 鯢 T3-5F2F 鯢 H-9DCE	4C90 魚 195.13 鰻 GKX-1478.36 鰻 T5-785B 鰻 K3-3665	4CA4 魚 195.10 鰻 GS-224D
4C7E 魚 195.11 鯢 G3-7854 鯢 T4-697D 鯢 V2-8A25	4C91 魚 195.13 鰻 GKX-1478.38 鰻 T5-7856 鰻 K3-3666	4CA5 鳥 196.2 鵠 G5-5B74 鵠 T3-4565
4C7F 魚 195.11 鰻 GKX-1476.38 鰻 T3-5F7D	4C92 魚 195.13 鰻 GKX-1478.39 鰻 T3-6130	4CA6 鳥 196.3 鵠 GKX-1482.05 鵠 T3-4A7A
4C80 魚 195.11 鰻 G3-776C 鰻 T4-6A21	4C93 魚 195.13 鰻 G3-782B 鰻 T4-6C4D	4CA7 鳥 196.3 鵠 GKX-1482.06 鵠 T3-4A7B 鵠 K3-366C
4C81 魚 195.11 鰻 G3-7866 鰻 T4-697C 鰻 H-8CD2	4C94 魚 195.13 鰻 G5-767C 鰻 T4-6C4E 鰻 K3-3667	4CA8 鳥 196.3 鵠 G5-354D 鵠 T3-4A7C 鵠 K3-366E
4C82 魚 195.11 鰻 GKX-1477.13 鰻 T3-5F7C	4C95 魚 195.13 鰻 GKX-1479.24 鰻 T5-7724 鰻 K3-3668	4CA9 鳥 196.3 鵠 GKX-1483.02 鵠 T3-4A7E 鵠 K3-366D
4C83 魚 195.11 鰻 G3-7869 鰻 T4-697E	4C96 魚 195.14 鰻 GKX-1479.31 鰻 T3-615A	4CAA 鳥 196.3 鵠 G3-352F 鵠 T5-4B6B
4C84 魚 195.11 鰻 GKX-1477.26 鰻 T3-6024	4C97 魚 195.14 鰻 G3-7863 鰻 T4-6D39	4CAB 鳥 196.3 鵠 GHZ-74615.11 鵠 T3-4A7D
4C85 魚 195.11 鰻 G3-7831 鰻 T4-697B 鰻 K3-3660	4C98 魚 195.14 鰻 G3-7876	4CAC 鳥 196.4 鵠 G3-5D26 鵠 T5-5338 鵠 JA-2829
4C86 魚 195.11 鰻 GHZ-74711.03 鰻 T3-6021	4C99 魚 195.15 鰻 GKX-1480.09 鰻 T3-6131 鰻 K3-3669	4CAD 鳥 196.4 鵠 G5-4F7E 鵠 T4-4F3F 鵠 K3-366F
4C87 魚 195.11 鰻 K3-3662	4C9A 魚 195.16 鰻 G3-7871 鰻 T4-6E2C 鰻 K3-366A	4CAE 鳥 196.4 鵠 GKX-1483.17 鵠 T3-5023 鵠 H-96B9
4C88 魚 195.11 鰻 TF-6A3F 鰻 K3-3661	4C9B 魚 195.16 鰻 G3-7877 鰻 T4-6E2D	4CAF 鳥 196.4 鵠 G3-5C76 鵠 T4-4F44
4C89 魚 195.12 鰻 G3-786D 鰻 T4-6B3C 鰻 K3-3663	4C9C 魚 195.33 鰻 GKX-1480.51 鰻 T4-6E5B	4CB0 鳥 196.4 鵠 G5-5B79 鵠 T4-4F3B 鵠 K3-3670
4C8A 魚 195.12 鰻 G3-7867 鰻 T4-6B3D	4C9D 魚 195.4 鰻 GS-224C	4CB1 鳥 196.4 鵠 GKX-1483.30 鵠 T7-2B6D 鵠 K3-3671
4C8B 魚 195.12 鰻 G3-786A 鰻 T4-6B40	4C9E 魚 195.5 鰻 GS-224E	4CB2 鳥 196.4 鵠 G3-5D23 鵠 T4-4F40
4C8C 魚 195.12 鰻 G3-786B 鰻 T4-6B3B	4C9F 魚 195.5 鰻 G7-2232	4CB3 鳥 196.4 鵠 GKX-1484.04 鵠 T3-5028 鵠 JA-282A
4C8D 魚 195.12 鰻 GKX-1478.17 鰻 T7-5E23 鰻 K3-3664	4CA0 魚 195.9 鰻 G7-2233	4CB4 鳥 196.4 鵠 GKX-1484.17 鵠 T3-5029 鵠 K3-3672

HEX	C	J	K	V	HEX	C	J	K	V
7920 石 112.14	礧 GE-3558	礧 T3-5A63	礧 J1-5043	礧 K2-4D5B	7934 石 112.16	礧 G0-6D67	礧 H-FEE8	礧 J13-7932	礧 K2-4D65
7921 石 112.14	礧 GE-3559	礧 HB2-F2A1	礧 T2-662B		7935 石 112.17	礧 G5-586A	礧 HB2-F6F6	礧 T2-6D64	礧 J1-504A
7922 石 112.15	礧 GE-355A	礧 T3-6576			7936 石 112.18	礧 G5-5869	礧 H-8EBF	礧 TF-6A66	礧 K2-4D67
7923 石 112.15	礧 G3-586C	礧 HB2-F47A	礧 T2-6949	礧 K2-4D5C	7937 石 112.18	礧 G5-5862	礧 T3-603C		
7924 石 112.15	礧 G0-6D65	礧 HB2-F47D	礧 T2-694C	礧 K2-4D5D	7938 石 112.19	礧 GE-355C	礧 HB2-F8B5	礧 T2-7043	礧 K2-4D68
7925 石 112.15	礧 G3-582F	礧 HB2-F479	礧 T2-6948	礧 J14-725F	7939 石 112.20	礧 G5-5830	礧 HB2-F8FA	礧 T2-712A	礧 K2-4D69
7926 石 112.15	礧 G1-3F73	礧 HB1-C471	礧 T1-797C	礧 J0-6268	793A 示 113.0	示 G0-4A3E	示 HB1-A5DC	示 T1-467C	示 J0-3C28
7927 石 112.15	礧 G3-586F	礧 HB2-F47B	礧 T2-694A	礧 J1-5045	793B 示 113.0	示 G0-6C6A	示 H-8BD8	示 J14-7260	示 K2-4D6A
7928 石 112.15	礧 G3-5870	礧 HB2-F47C	礧 T2-694B	礧 K2-4D60	793C 示 113.1	示 G0-4071	示 H-FEF7	示 T3-2433	示 J0-4E69
7929 石 112.15	礧 G3-5836	礧 HB2-F47E	礧 T2-694D	礧 J1-5046	793D 示 113.2	示 G5-574C	示 HB2-CB72	示 T2-2472	示 J1-504C
792A 石 112.15	礧 G1-6D42	礧 HB1-C472	礧 T1-797D	礧 J0-626A	793E 示 113.3	示 G0-4967	示 HB1-AA0C	示 T1-4F23	示 J0-3C52
792B 石 112.15	礧 G1-4079	礧 HB1-C474	礧 T1-7A21	礧 J0-632A	793F 示 113.3	示 G3-567A	示 HB2-CDA3	示 T2-2843	示 J1-504D
792C 石 112.15	礧 G1-372F	礧 HB1-C473	礧 T1-797E	礧 J0-6329	7940 示 113.3	示 G0-6C6B	示 HB1-AAC1	示 T1-4F24	示 J0-632B
792D 石 112.16	礧 G5-5868	礧 HB2-F5E1	礧 T2-6B6F	礧 J1-5047	7941 示 113.3	示 G0-466E	示 HB1-AAC2	示 T1-4F25	示 J0-3737
792E 石 112.16	礧 GE-355B	礧 H-FEE5	礧 T3-5E45	礧 J3-7930	7942 示 113.3	示 GE-355D	示 HB2-CDA2	示 T2-2842	
792F 石 112.16	礧 G5-5854	礧 HB2-F5E3	礧 T2-6B71	礧 K2-4D63	7943 示 113.3	示 G8-7D37			
7930 石 112.16	礧 G3-574E	礧 T3-5E43	礧 J4-725E	礧 K2-4D64	7944 示 113.4	示 G5-574E	示 HB2-CFF8	示 T2-2C5A	示 J1-504E
7931 石 112.16	礧 G1-6D43	礧 HB2-F5E2	礧 T2-6B70	礧 J13-7931	7945 示 113.4	示 GE-355E	示 HB2-CFF7	示 T2-2C59	示 J13-7935
7932 石 112.16	礧 G5-5822	礧 H-98FD	礧 T3-5E44		7946 示 113.4	示 G0-6C6C	示 HB1-ACE6	示 T1-5269	示 J13-7936
7933 石 112.16	礧 G3-5873	礧 H-98FB			7947 示 113.4	示 G8-7D38	示 HB1-ACE9	示 T1-526C	示 J0-3540

HEX	C	J	K	V	HEX	C	J	K	V
9FB8 小 42.2	𡗗				9FCC 水 85.9	涼			
	G9-FE6D					UTC-00867			
9FB9 八 12.4	𡗘				9FCD 土 32.6	埤			
	G9-FE7E					GGFZ-010800			
9FBA 十 24.6	卓				9FCE 石 112.6	碇			
	G9-FE90					GFC-022			
9FBB 言 149.12	𡗚				9FCF 𠂔 167.7	𠂔			
	G9-FA0					GFC-059			
9FBC 土 32.14	埤				9FD0 魚 195.10	𩺰			
	UTC-00836					H-9D73			
9FBD 火 86.11 魚 195.4	𩺰				9FD1 冫 15.5	冫			
	UTC-00835					UTC-00959			
9FBE 皮 107.8	𩺰				9FD2 艹 140.6	𩺰			
	UTC-00837					UTC-00958			
9FBF 艹 140.8	𩺰				9FD3 艹 140.9	𩺰			
	UTC-00838					UTC-00957			
9FC0 艹 140.18	𩺰				9FD4 𠂔 167.10	𠂔			
	UTC-00839					UTC-00953			
9FC1 言 149.6	𩺰				9FD5 魚 195.4	𩺰			
	UTC-00840					UTC-00954			
9FC2 車 159.11 鳥 196.7	𩺰								
	UTC-00841								
9FC3 目 109.7	𩺰								
	GKX-0809.02								
9FC4 木 75.6	梁								
	TC-4A76								
9FC5 示 113.13	梁								
	JARIB-754F								
9FC6 示 113.4	梁								
	JARIB-7621								
9FC7 人 9.6	𩺰								
	H-87C2								
9FC8 彳 60.4	𩺰								
	H-87D2								
9FC9 彳 60.4	𩺰								
	H-87D6								
9FCA 艹 140.7	𩺰								
	H-87DA								
9FCB 衣 145.12	𩺰								
	H-87DF								

	A72	A73	A74	A75	A76	A77	A78	A79	A7A	A7B	A7C	A7D	A7E	A7F
0	Ɔ A720	F A730	K A740	P A750	W A760	9 A770	Ƨ A780	N A790	Ɔ A7A0	Ƨ A7B0				
1	Ɔ A721	s A731	k A741	p A751	w A761	ɹ A771	l A781	n A791	g A7A1	L A7B1				
2	3 A722	AA A732	K A742	P A752	Ɔ A762	l A772	Ƨ A782	Ɔ A792	K A7A2	J A7B2				
3	3 A723	aa A733	k A743	p A753	Ɔ A763	m A773	Ƨ A783	Ɔ A793	k A7A3	X A7B3				
4	Ɔ A724	AO A734	K A744	Ɔ A754	Ɔ A764	n A774	Ƨ A784	Ɔ A794	N A7A4	Ɔ A7B4				
5	Ɔ A725	ao A735	k A745	Ɔ A755	Ɔ A765	Ƨ A775	Ƨ A785	h A795	n A7A5	Ɔ A7B5				
6	H A726	AJ A736	L A746	Q A756	P A766	R A776	Ɔ A786	B A796	R A7A6	Ɔ A7B6				
7	h A727	ai A737	l A747	q A757	p A767	t A777	Ƨ A787	Ɔ A797	Ƨ A7A7	Ɔ A7B7				Ɔ A7F7
8	Ɔ A728	A A738	L A748	Q A758	Ɔ A768	Ɔ A778	^ A788	f A798	s A7A8					H A7F8
9	t3 A729	a A739	l A749	q A759	Ɔ A769	Ɔ A779	:	f A799	s A7A9					œ A7F9
A	Ɔ A72A	A A73A	Ɔ A74A	Ɔ A75A	3 A76A	Ɔ A77A	=	Ɔ A79A	H A7AA					W A7FA
B	Ɔ A72B	æ A73B	Ɔ A74B	Ɔ A75B	3 A76B	Ƨ A77B	l A78B	a A79B	3 A7AB					Ɔ A7FB
C	4 A72C	A A73C	Ɔ A74C	Ɔ A75C	Ɔ A76C	Ƨ A77C	l A78C	Ɔ A79C	Ɔ A7AC					Ɔ A7FC
D	4 A72D	ay A73D	Ɔ A74D	Ɔ A75D	Ɔ A76D	Ɔ A77D	Ɔ A78D	Ɔ A79D	Ɔ A7AD					W A7FD
E	4 A72E	Ɔ A73E	∞ A74E	W A75E	9 A76E	Ɔ A77E	Ƨ A78E	Ɔ A79E	T A7AE					I A7FE
F	4 A72F	Ɔ A73F	∞ A74F	Ɔ A75F	9 A76F	Ɔ A77F	• A78F	Ɔ A79F						W A7FF