Adobe CJKV Character Collections and CMaps for CID-Keyed Fonts

Adobe Developer Support

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Adobe Systems Incorporated

Adobe Developer Technologies
345 Park Avenue
San Jose, CA 95110
http://partners.adobe.com/

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Contents

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1 Introduction

This technical note provides detailed information on the Adobe™ CJKV (*Chinese, Japanese, Korean, and Vietnamese*) character collections for CID-keyed fonts (so far, no Vietnamese character collection has been defined). It includes complete listings and descriptions of CMap files, information on supported character set standards, and supported encodings.

This technical note covers the following CJKV character collections and their supplements, some of which are currently in draft form or proposed:

- **Adobe-GB1** (Supplements 0, 1, 2, 3, 4, and 5 final)
- **Adobe-CNS1** (Supplements 0, 1, 2, 3, 4, and 5 final)
- **Adobe-Japan1** (Supplements 0, 1, 2, 3, 4, 5, and 6 final)
- **Adobe-Japan2** (Supplement 0 final—*deprecated*)
- **Adobe-Korea1** (Supplements 0, 1, and 2 final)

Specific supplements of all but one of these character collections, specifically Adobe-GB1-3, Adobe-CNS1-2, Adobe-Japan1-3, and Adobe-Korea1-2, were designed to add pre-rotated instances of all proportional- and half-width glyphs found in earlier supplements. Their purpose is to significantly improve the vertical handling of such glyphs in the context of OpenType.

Unless otherwise noted, all CJKV character collections include three sets of Latin glyphs: half-width, full-width, and proportional-width. Because half- and proportional-width Latin glyphs are easily confused, this document will provide the corresponding CID ranges for each in each character collection. One character collection, specifically Adobe-Japan1-4 (and Adobe-Japan1-5 and Adobe-Japan1-6), also includes a full set of proportional-width italic Latin glyphs.

Detailed information on CID-keyed font technology can be found in Technical Notes #5092, “CID-Keyed Font Technology Overview” and #5014, “Adobe CMap and CIDFont Files Specification.” These documents are available at:

http://partners.adobe.com/public/developer/font/

For information on character sets and encodings, *CJKV Information Processing* (ISBN: 1-56592-224-7) by Ken Lunde is published by O'Reilly. Some of the files (CMap files and related materials) mentioned in this technical note can be obtained from the following URL:

ftp://ftp.oreilly.com/pub/examples/nutshell/cjkv/adobe/

1.1 Conventions

While reading through this document, please be aware of the following conventions:

- References to code points and code space ranges are expressed in hexadecimal notation, and use a leading "0x."
- Every two hexadecimal digits indicate one byte.
- The encodings described in this document range from one- to four-byte.
- Character collections marked as (*DRAFT*) are currently going through development and an internal/external review process, and their specifications are subject to change.
- Character collection supplements marked as (*PROPOSED*) indicate extensions to existing character collections to be developed in the near future (at least 6 months). This does not represent a commitment on the part of Adobe Systems to develop them.
- Whenever a horizontal CMap file is modified to support a newer supplement, its corresponding vertical CMap file is also modified to reflect the same supplement, regardless of whether mappings were added or not.
- Although still listed, the UCS-2 CMap files are now considered obsolete, and are no longer being maintained. They have been replaced, for all character collections, with a suite of UTF-8, UTF-16, and UTF-32 CMap files.

2 The Adobe-GB1 Character Collection

The purpose of this Simplified Chinese character collection is to provide support for the GB 1988-89, GB 2312-80, GB/T 12345-90, GB 13000.1-93, and GB 18030-2005 character set standards. Supported encodings include ISO-2022, EUC-CN, GBK, UCS-2, UTF-8, UTF-16, UTF-32, and the mixed one, two- and four-byte encoding as published in GB 18030-2005.

Following is a list of supported encoding methods and the code space ranges for each:

- ISO-2022 0x2121–0x7E7E
- EUC-CN 0x00–0x80, 0xFD–0xFF (only in GBpc and GBTpc), and 0xA1A1–0xFEFE (0xA1A1–0xFCFE in GBpc and GBTpc)

- GBK 0x00–0x80 and 0x8140–0xFEFE
- UCS-2 0x0000–0xD7FF and 0xE000–0xFFFF
- UTF-8 0x00–0x7F, 0xC080–0xDFBF, 0xE08080–0xEFBFBF, and 0xF0808080–0xF7BFBFBF
- UTF-16 0x0000–0xD7FF, 0xE000–0xFFFF, and 0xD800DC00–0xDBFFDFFF
- UTF-32 0x00000000–0x0010FFFF
- GB18030 0x00–0x80, 0x8140–0xFEFE, and 0x81308130–0xFE39FE39

More information on the Adobe-GB1 character collection can be found in Technical Note #5079, "Adobe-GB1-5 Character Collection for CID-Keyed Fonts," available at:

http://partners.adobe.com/public/developer/en/font/5079.Adobe-GB1-5.pdf

2.1 Adobe-GB1-0

Supplement 0 (zero) of Adobe-GB1 enumerates 7,717 glyphs (CIDs 0 through 7716), provides support for the GB 2312-80 and GB 1988-89 character set standards, incorporates corrections and additions specified in GB 6345.1-86, and includes vertical glyphs specified in GB/T 12345-90. CIDs 1–95 and 7712–7715 are proportional-width Latin glyphs; and CIDs 814–907 and 7716 are half-width Latin glyphs.

The following is a list of the CMap files defined by the Adobe-GB1-0 character collection, with a brief description of use:

- GB-H GB 2312-80 character set, ISO-2022 encoding
- GB-V Vertical version of GB-H
- GB-EUC-H GB 2312-80 character set, EUC-CN encoding, half-width GB 1988-89 character set (nearly identical with ASCII) in one-byte range
- GB-EUC-V Vertical version of GB-EUC-H
- GBpc-EUC-H Apple Macintosh Simplified Chinese character set, EUC-CN encoding, proportional-width ASCII character set in one-byte range
- GBpc-EUC-V Vertical version of GBpc-EUC-H
- Adobe-GB1-0 Identity CMap

2.2 Adobe-GB1-1

Supplement 1 of Adobe-GB1 adds 2,180 glyphs (CIDs 7717 through 9896), and provides support for the GB/T 12345-90 character set standard. These 2,180 glyphs appended to the character collection are traditional forms of Chinese characters that are already a part of Adobe-GB1-0.

The following is a list of the CMap files added for the Adobe-GB1-1 character collection supplement, with a brief description of use:

- GBT-H — *New*: GB/T 12345-90 character set, ISO-2022 encoding
- GBT-V — *New*: Vertical version of GBT-H
- GBT-EUC-H — *New*: GB/T 12345-90 character set, EUC-CN encoding, half-width GB 1988-89 character set (nearly identical with ASCII) in one-byte range
- GBT-EUC-V — *New*: Vertical version of GBT-EUC-H
- GBTpc-EUC-H — *New*: GB/T 12345-90 character set for Apple Macintosh, EUC-CN encoding, proportional-width ASCII character set in one-byte range
- GBTpc-EUC-V — *New*: Vertical version of GBTpc-EUC-H
- Adobe-GB1-1 — *New*: Identity CMap

2.3 Adobe-GB1-2

Supplement 2 of Adobe-GB1 adds 12,230 glyphs (CIDs 9897 through 22,126), and provides support for the GBK character set standard (GB 13000.1-93). These 12,230 glyphs appended to the character collection are the Chinese characters necessary to completely support both the GBK character set standard and the complete set of 20,902 Chinese characters in Unicode.

The following is a list of the CMap files added for the Adobe-GB1-2 character collection supplement, with a brief description of use:

- GBK-EUC-H — *New*: GBK character set, GBK encoding
- GBK-EUC-V — *New*: Vertical version of GBK-EUC-H
- UniGB-UCS2-H — *New*: ISO 10646-1:1993 (Unicode), UCS-2 encoding
- UniGB-UCS2-V — *New*: Vertical version of UniGB-UCS2-H
- UniGB-UTF8-H — *New*: ISO 10646-1:1993 (Unicode), UTF-8 encoding
- UniGB-UTF8-V — *New*: Vertical version of UniGB-UTF8-H
- Adobe-GB1-2 — *New*: Identity CMap

2.4 Adobe-GB1-3

This supplement was designed to add pre-rotated instances of all proportional- and half-width glyphs found in earlier supplements. Their purpose is to significantly improve the handling of vertical glyphs in the context of OpenType.

Supplement 3 of Adobe-GB1 adds 226 glyphs (CIDs 22127 through 22352, all pre-rotated). CIDs 22127 through 22225 provide additional proportional Latin glyphs (99) and CIDs 22226 through 22352 additional half-width Latin glyphs (127).

The following is a list of the CMap files added for the Adobe-GB-3 character collection supplement, with a brief description of use:

- Adobe-GB1-3 *New*: Identity CMap

2.5 Adobe-GB1-4

Supplement 4 of Adobe-GB1 adds 6,711 glyphs (CIDs 22353 through 29063; CIDs 29059 through 29063 are pre-rotated to improve their vertical handling in the context of OpenType). CIDs 22353 through 22356 provide additional currency symbols with proportional and half-width properties, CID 22357 provides the ideographic half fill space, CID 22358 provides the full-width Euro, CIDs 22359 through 22397 provide additional Hiragana and Katakana glyphs and symbols, some of them are adjusted for vertical use, CIDs 22398 through 22400 provide the so-called “Hangzhou” or “Suzhou” numerals ten, twenty, and thirty, and CIDs 22401 through 22427 provide the extended Bopomofo glyphs.

The major part of Supplement 4, CIDs 22428 through 29058, provides glyphs to cover the CJK Unified Ideographs Extension A, as listed in Unicode Version 3.0 and ISO 10646-1:2000.

As mentioned above, CIDs 29059 through 29063 complete Supplement 4 to provide the pre-rotated forms of CIDs 22353 through 22357.

The following is a list of the CMap files modified or added for the Adobe-GB1-4 character collection supplement, with a brief description of use:

- GBK2K-H *New*: GB 18030-2005 character set, encoding according to GB 18030-2005
- GBK2K-V *New*: Vertical version of GBK2K-H
- UniGB-UCS2-H *Modified*: ISO 10646-1:2000 (Unicode 3.0), UCS-2 encoding
- UniGB-UCS2-V *Modified*: Vertical version of UniGB-UCS2-H
- UniGB-UTF8-H *Modified*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-8 encoding
- UniGB-UTF8-V *Modified*: Vertical version of UniGB-UTF8-H
- UniGB-UTF16-H *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-16 encoding
- UniGB-UTF16-V *New*: Vertical version of UniGB-UTF16-H
- UniGB-UTF32-H *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-32 encoding

- UniGB-UTF32-V *New*: Vertical version of UniGB-UTF32-H
- Adobe-GB1-4 *New*: Identity CMap

Note *The UniGB-UCS2-H and UniGB-UCS2-V CMap files are deprecated, and their use is strongly discouraged. These two CMap files are no longer being maintained. Developers who are making use of these CMap files are strong encouraged to use the UniGB-UTF16-H and UniGB-UTF16-V CMap files instead.*

2.6 Adobe-GB1-5

Supplement 5 of Adobe-GB1 adds 1,220 glyphs (CIDs 29064 through 30283) to support Yi, which is one of the six regional scripts referenced in the GB 18030-2005 standard.

The following is a list of the CMap files modified or added for the Adobe-GB1-5 character collection supplement, with a brief description of use:

- GBK2K-H *Modified*: GB 18030-2005 character set, encoding according to GB 18030-2005
- UniGB-UTF8-H *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-8 encoding
- UniGB-UTF16-H *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-16 encoding
- UniGB-UTF32-H *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-32 encoding
- Adobe-GB1-5 *New*: Identity CMap

3 The Adobe-CNS1 Character Collection

The purpose of this Traditional Chinese character collection is to provide support for the Big Five and CNS 11643-1992 character set standards. It also includes support for a number of extensions to Big Five, which contain characters used mainly in the Hong Kong locale. The largest among these extensions was defined by the government of the Hong Kong Special Administrative Region (SAR) in 1999 under the name Hong Kong Supplementary Character Set (Hong Kong SCS). Hong Kong SCS, in its first version, encodes 4,702 characters and is a code-compatible superset of the Hong Kong Government Chinese Character Set (Hong Kong GCCS), published earlier, that contained 3,049 characters. The latest Hong Kong SCS has 116 additional characters, added in 2001.

Supported encodings include ISO-2022, EUC-TW, Big Five, UCS-2, UTF-8, UTF-16, and UTF-32.

Note *Adobe has taken into account the fact that the ordering of Chinese characters in Big Five and CNS 11643-1992 Planes 1 and 2 differ slightly, and that several Chinese characters are duplicately encoded (187 of the 213 classical radicals plus 2 Big Five hanzi).*

Following is a list of supported encoding methods and the code space ranges for each:

- ISO-2022 0x2121–0x7E7E
- EUC-TW 0x00–0x80, 0xA1A1–0xFEFE, 0x8EA1A1A1–0x8EA1FEFE, 0x8EA2A1A1–0x8EA2FEFE, and 0x8EA3A1A1–0x8EA3FEFE
- Big Five 0x00–0x80, 0xFD–0xFF (only in B5pc), and 0x8140–0xFEFE (0xA140–0xFCFE in B5pc; 0x8140–0xFEFE in HKscs)
- UCS-2 0x0000–0xD7FF and 0xE000–0xFFFF
- UTF-8 0x00–0x7F, 0xC080–0xDFBF, 0xE08080–0xEFBFBF, and 0xF0808080–0xF7BFBFBF
- UTF-16 0x0000–0xD7FF, 0xE000–0xFFFF, and 0xD800DC00–0xDBFFDFFF
- UTF-32 0x00000000–0x0010FFFF

More information on the Adobe-CNS1 character collection can be found in Technical Note #5080, "Adobe-CNS1-5 Character Collection for CID-Keyed Fonts," which is available at:

http://partners.adobe.com/public/developer/en/font/5080.Adobe-CNS1-5.pdf

3.1 Adobe-CNS1-0

Supplement 0 (zero) of Adobe-CNS1 enumerates 14,099 glyphs (CIDs 0 through 14098), and provides support for the Big Five and CNS 11643-1992 (Planes 1 and 2 only) character set standards, and the ETen extensions to Big Five. CIDs 1–98 are proportional-width Latin glyphs; and CIDs 13648–13742 are half-width Latin glyphs.

The following is a list of the CMap files defined by the Adobe-CNS1-0 character collection, with a brief description of use:

- CNS1-H CNS 11643-1992 character set, Plane 1, ISO-2022 encoding
- CNS1-V Vertical version of CNS1-H
- CNS2-H CNS 11643-1992 character set, Plane 2, ISO-2022 encoding
- CNS2-V Vertical version of CNS2-H
- CNS-EUC-H CNS 11643-1992 character set, Planes 1 and 2, EUC-TW encoding, half-width ASCII character set in one-byte range

- CNS-EUC-V — Vertical version of CNS-EUC-H
- B5-H — Big Five character set, Big Five encoding, half-width ASCII character set in one-byte range
- B5-V — Vertical version of B5-H
- B5pc-H — Apple Macintosh Traditional Chinese character set, Big Five encoding, proportional-width ASCII character set in one-byte range
- B5pc-V — Vertical version of B5pc-H
- ETen-B5-H — Big Five character set with ETen extensions, Big Five encoding, half-width ASCII character set in one-byte range
- ETen-B5-V — Vertical version of ETen-B5-H
- ETenms-B5-H — *New*: Big Five character set with ETen extensions, Big Five encoding, proportional ASCII character set in one-byte range
- ETenms-B5-V — *New*: Vertical version of ETenms-B5-H
- Adobe-CNS1-0 — Identity CMap

3.2 Adobe-CNS1-1

Supplement 1 of Adobe-CNS1 enumerates 3,309 glyphs (CIDs 14099 through 17407), and provides support for the Hong Kong Government Chinese Character Set (Hong Kong GCCS), its extension and several vendor-specific character sets from Monotype and Dynalab. CIDs 14099–14122 are punctuation and line-drawing glyphs, included to completely support the needs of a combined vertical and horizontal settings.

The following is a list of the CMap files added for the Adobe-CNS1-1 character collection supplement, with a brief description of use:

- HKgccs-B5-H — *New*: Hong Kong GCCS, plus 145 characters added, Big Five encoding (0x8A40–0x8B5A and 0x8E40–0xA0E6 and 0xFA40–0xFEFE)
- HKgccs-B5-V — *New*: Vertical version of HKgccs-B5-H
- HKm471-B5-H — *New*: Monotype's larger Hong Kong-specific character set containing 471 Chinese characters, Big Five encoding (0xFA40–0xFCFE)
- HKm471-B5-V — *New*: Vertical version of HKm471-B5-H
- HKm314-B5-H — *New*: Monotype's smaller Hong Kong–specific character set containing 314 Chinese characters, being a complete subset of the larger set, Big Five encoding (0xC740–0xC8FE)
- HKm314-B5-V — *New*: Vertical version of HKm314-B5-H
- HKdla-B5-H — *New*: Dynalab's larger Hong Kong–specific character set containing 784 Chinese characters, Big Five encoding (0xFA41–0xFEFE)

- HKdla-B5-V — *New*: Vertical version of HKdla-B5-H
- HKdlb-B5-H — *New*: Dynalab's smaller Hong Kong–specific character set containing 665 Chinese characters, Big Five encoding (0x8E40–0x9265)
- HKdlb-B5-V — *New*: Vertical version of HKdlb-B5-H
- UniCNS-UCS2-H — *New*: ISO 10646-1:1993 (Unicode), UCS-2 encoding
- UniCNS-UCS2-V — *New*: Vertical version of UniCNS-UCS2-H
- UniCNS-UTF8-H — *New*: ISO 10646-1:1993 (Unicode), UTF-8 encoding
- UniCNS-UTF8-V — *New*: Vertical version of UniCNS-UTF8-H
- Adobe-CNS1-1 — *New*: Identity CMap

3.3 Adobe-CNS1-2

This supplement was designed to add pre-rotated instances of all proportional- and half-width glyphs found in earlier supplements. Their purpose is to significantly improve the handling of vertical glyphs in the context of OpenType.

Supplement 2 of Adobe-CNS1 adds 193 glyphs (CIDs 17408 through 17600, all pre-rotated). CIDs 17408 through 17505 provide additional proportional Latin glyphs (98), CIDs 17506 through 17600 additional half-width Latin glyphs (95).

The following is a list of the CMap files added for the Adobe-CNS1-2 character collection supplement, with a brief description of use:

- Adobe-CNS1-2 — *New*: Identity CMap

3.4 Adobe-CNS1-3

Supplement 3 of Adobe-CNS1 adds 1245 glyphs (CIDs 17601 through 18845). It supports the Euro character by providing CIDs 17601 through 17605 (proportional, full-width, and half-width Euro glyphs, pre-rotated proportional and half-width Euro glyphs). Supplement 3 also adds those glyphs necessary to fully support the Hong Kong Supplementary Character Set (Hong Kong SCS) as published by the government of the Hong Kong Special Administrative Region of the People's Republic of China; Chinese characters that were not already part of Supplement 1 of Adobe-CNS1 are allocated at CIDs 17606 through 18784. The CIDs 18785 through 18845 complete the support for Hong Kong SCS by allocating positions for Latin or Latin-like glyphs with diacritic marks and additional symbols.

The following is a list of the CMap files modified or added for the Adobe-CNS1-3 character collection supplement, with a brief description of use:

- ETHK-B5-H — *New*: Hong Kong SCS plus ETen extensions, Big Five encoding
- ETHK-B5-V — *New*: Vertical version of ETHK-B5-H
- HKscs-B5-H — *New*: Hong Kong SCS, Big Five encoding
- HKscs-B5-V — *New*: Vertical version of HKscs-B5-H
- UniCNS-UCS2-H — *Modified*: ISO 10646-1:2000 (Unicode 3.0), UCS-2 encoding
- UniCNS-UCS2-V — *Modified*: Vertical version of UniCNS-UCS2-H
- UniCNS-UTF8-H — *Modified*: ISO 10646-1:2000 (Unicode 3.0), UTF-8 encoding
- UniCNS-UTF8-V — *Modified*: Vertical version of UniCNS-UTF8-H
- Adobe-CNS1-3 — *New*: Identity CMap

Note *The UniCNS-UCS2-H and UniCNS-UCS2-V CMap files are deprecated, and their use is strongly discouraged. These two CMap files are no longer being maintained. Developers who are making use of these CMap files are strong encouraged to use the UniCNS-UTF16-H and UniCNS-UTF16-V CMap files instead (see Section 3.5).*

3.5 Adobe-CNS1-4

Supplement 4 of Adobe-CNS1 adds 119 new CIDs ranging from 18846 through 18964. 116 of these CIDs (CIDs 18849 through 18964) have been added to reflect the recent addition of 116 characters to Hong Kong SCS in 2001.

The addition of the three CIDs 18846, 18847, and 18848 became necessary to reflect the differences between the designs of three Hong Kong SCS characters (0xC8E0, 0xC8E9, 0xC8F1) and the designs of three core Big Five characters (0xA4EB, 0xA8A4, 0xF0E8). In the past, the former three were rendered using the CIDs 732, 1289, and 2550, because they were considered to be identical with the latter. However, the purpose of three Hong Kong SCS characters is to represent three Unicode CJK radicals (U+2E9D, U+2EC6, U+2EE3). This led to design adjustments that necessitated the addition of the three CIDs, 18846, 18847, and 18848.

Important changes from earlier Adobe-CNS1 supplements

1. The glyphs representing CIDs 8142 and 8788 (in Supplement 0) have been exchanged. This change was implemented to correctly represent the Big Five code points 0xD6CC and 0xDADF in those CMaps that are mapping those code points to the CIDs mentioned.

2. Some glyphs underwent design modifications to better reflect their intended purpose to represent characters in Unicode's CJK Radicals Supplement section (U+2E80 through U+2EFF).

Note *The list of all glyphs affected by these modifications is contained in the Adobe Technical Note #5080 "Adobe-CNS1-5 Character Collection for CID-Keyed Fonts."*

3. During the transition from Hong Kong GCCS (supported through Adobe-CNS1-1) to Hong Kong SCS, the Hong Kong government identified 22 so-called "unverifiable" characters that had been included in Hong Kong GCCS. These characters were removed from Hong Kong SCS. However, the formerly occupied code points remain reserved. The CIDs used to represent these 22 characters will remain included in Supplement 1of Adobe-CNS1 for reasons of backward compatibility. Their future use is not recommended.

Note *A complete list of CIDs and code points of the 22 "unverifiable" characters is contained in the Adobe Technical Note #5080 "Adobe-CNS1-5 Character Collection for CID-Keyed Fonts."*

4. The Hong Kong government also identified 84 pairs of duplicated characters that had existed in Hong Kong GCCS. The approach was chosen to "unify" one instance of each pair (usually the second or later appearance) with the character that had existed earlier. The code points formerly occupied by the disappearing, "unified" characters remain reserved for reasons of backward compatibility. Again, the CIDs used to represent the two characters of the "unified" pairs remain in the character collection Adobe-CNS1 for reason of backward compatibility.

Note *A complete list of CIDs and code points of the 84 "unified" characters as well as recommendations how to use them are contained in the Adobe Technical Note #5080 "Adobe-CNS1-4 Character Collection for CID-Keyed Fonts."*

The following is a list of the CMap files modified or added for the Adobe-CNS1-4 character collection supplement, with a brief description of use:

- ETHK-B5-H — *Modified*: Added 113 additional Hong Kong SCS characters, as well as "unified" and "not verifiable" characters
- ETHK-B5-V — *Modified*: Vertical version of ETHK-B5-H
- HKscs-B5-H — *Modified*: Added 113 additional Hong Kong SCS characters, as well as "unified" and "not verifiable" characters
- HKscs-B5-V — *Modified*: Vertical version of HKscs-B5-H
- UniCNS-UTF8-H — *Modified*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-8 encoding
- UniCNS-UTF8-V — *Modified*: Vertical version of UniCNS-UTF8-H
- UniCNS-UTF16-H — *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-16 encoding
- UniCNS-UTF16-V — *New*: Vertical version of UniCNS-UTF16-H

- UniCNS-UTF32-H — *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-32 encoding
- UniCNS-UTF32-V — *New*: Vertical version of UniCNS-UTF32-H
- Adobe-CNS1-4 — *New*: Identity CMap

3.6 Adobe-CNS1-5

Supplement 5 of Adobe-CNS1 adds 123 new CIDs ranging from 18965 through 19087. All of these glyphs have been added to reflect the recent addition of 123 characters, all of which are hanzi, to Hong Kong SCS in 2004.

The following is a list of the CMap files modified or added for the Adobe-CNS1-5 character collection supplement, with a brief description of use:

- ETHK-B5-H — *Modified*: Added 123 additional Hong Kong SCS characters
- HKscs-B5-H — *Modified*: Added 123 additional Hong Kong SCS characters
- UniCNS-UTF8-H — *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-8 encoding
- UniCNS-UTF16-H — *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-16 encoding
- UniCNS-UTF32-H — *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-32 encoding
- Adobe-CNS1-5 — *New*: Identity CMap

4 The Adobe-Japan1 Character Collection

The purpose of this Japanese character collection is to provide support for the JIS X 0201-1997, JIS X 0208:1997, JIS X 0212-1990, and JIS X 0213:2004 character set standards, and select corporate variations thereof. Supported encodings include ISO-2022-JP, EUC-JP, Shift-JIS, UCS-2, UTF-8, UTF-16, and UTF-32.

Following is a list of supported encoding methods and the code space ranges for each:

- ISO-2022-JP — 0x2121–0x7E7E
- EUC-JP — 0x00–0x80, 0x8EA0–0x8EDF, and 0xA1A1–0xFEFE
- Shift-JIS — 0x00–0x80, 0xA0–0xDF, 0xFD–0xFF (only in 83pv and 90pv), 0x8140–0x9FFC, and 0xE040–0xFCFC
- UCS-2 — 0x0000–0xD7FF and 0xE000–0xFFFF
- UTF-8 — 0x00–0x7F, 0xC080–0xDFBF, 0xE08080–0xEFBFBF, and 0xF0808080–0xF7BFBFBF

- UTF-16 — 0x0000–0xD7FF, 0xE000–0xFFFF, and 0xD800DC00–0xDBFFDFFF
- UTF-32 — 0x00000000–0x0010FFFF
- Other — 0x00–0xFF (Hankaku, Hiragana, Katakana, Roman, and WP-Symbol)

Adobe-Japan1 has one officially registered subset, namely the kana subset, useful for creating kana CID-keyed fonts. In addition to full-width hiragana and katakana glyphs, this subset includes the punctuation and symbols necessary for a stand-alone font. Such kana fonts are also designed to be used with the Adobe Type Composer™ application.

More information on the Adobe-Japan1 character collection can be found in Technical Note #5078, "Adobe-Japan1-6 Character Collection for CID-Keyed Fonts," available at:

http://partners.adobe.com/public/developer/en/font/5078.Adobe-Japan1-6.pdf

4.1 Adobe-Japan1-0

Supplement 0 (zero) of Adobe-Japan1 enumerates 8,284 glyphs (CIDs 0 through 8283), and provides support for the JIS X 0208-1983 (JIS83), JIS C 6226-1978 (JIS78), and JIS X 0201-1997 character set standards. Apple®, NEC®, and Fujitsu® corporate character sets are also supported.

CIDs 1–230 are proportional-width Latin glyphs. CIDs 231–325, 390, 501–503, and 599–632 are half-width Latin glyphs.

The following is a list of the CMap files defined by the Adobe-Japan1-0 character collection, with a brief description of use:

- H — JIS X 0208-1983 character set, ISO-2022-JP encoding
- V — Vertical version of H
- 78-H — JIS C 6226-1978 character set, ISO-2022-JP encoding
- 78-V — Vertical version of 78-H
- RKSJ-H — JIS X 0208-1983 character set, Shift-JIS encoding, half-width JIS-Roman character set (nearly identical with ASCII) in one-byte range
- RKSJ-V — Vertical version of RKSJ-H
- 78-RKSJ-H — JIS C 6226-1978 character set, Shift-JIS encoding, half-width JIS-Roman character set (nearly identical with ASCII) in one-byte range
- 78-RKSJ-V — Vertical version of 78-RKSJ-H

• EUC-H	JIS X 0208-1983 character set, EUC-JP encoding, half-width JIS-Roman character set (nearly identical with ASCII) in one-byte range (code set 0), half-width katakana character set in two-byte range (code set 2)
• EUC-V	Vertical version of EUC-H
• 78-EUC-H	JIS C 6226-1978 character set, EUC-JP encoding, half-width JIS-Roman character set (nearly identical with ASCII) in one-byte range (code set 0), half-width katakana character set in two-byte range (code set 2)
• 78-EUC-V	Vertical version of 78-EUC-H
• 83pv-RKSJ-H	Apple Macintosh® KanjiTalk® Version 6.*x* character set, Shift-JIS encoding, proportional-width ASCII character set in one-byte range
• Ext-H	NEC character set, ISO-2022-JP encoding
• Ext-V	Vertical version of Ext-H
• Ext-RKSJ-H	NEC character set, Shift-JIS encoding, half-width JIS-Roman character set (nearly identical with ASCII) in one-byte range
• Ext-RKSJ-V	Vertical version of Ext-RKSJ-H
• NWP-H	NEC Bungo character set, ISO-2022-JP encoding
• NWP-V	Vertical version of NWP-H
• Add-H	Fujitsu FMR character set, ISO-2022-JP encoding
• Add-V	Vertical version of Add-H
• Add-RKSJ-H	Fujitsu FMR character set, Shift-JIS encoding, half-width JIS-Roman character set (nearly identical with ASCII) in one-byte range
• Add-RKSJ-V	Vertical version of Add-RKSJ-H
• Hankaku	Half-width Latin, hiragana, and katakana in one-byte range
• Hiragana	Half-width hiragana in one-byte range
• Katakana	Half-width katakana in one-byte range
• Roman	Half-width Latin in one-byte Range
• WP-Symbol	Miscellaneous symbols in one-byte range
• Adobe-Japan1-0	Identity CMap

4.2 Adobe-Japan1-1

Supplement 1 of Adobe-Japan1 adds 75 glyphs (CIDs 8284 through 8358), and provides support for the JIS X 0208-1990 (JIS90) character set standard. It also updates the corporate character sets to JIS90, when applicable.

The following is a list of the CMap files modified or added for the Adobe-Japan1-1 character collection supplement, with a brief description of use:

- H — *Modified:* JIS90 support (0x7425 and 0x7426) added
- V — *Modified*: Vertical version of H
- RKSJ-H — *Modified*: JIS90 support (0xEAA3 and 0xEAA4) added
- RKSJ-V — *Modified*: Vertical version of RKSJ-H
- EUC-H — *Modified*: JIS90 support (0xF4A5 and 0xF4A6) added
- EUC-V — *Modified*: Vertical version of EUC-H
- 83pv-RKSJ-H — *Modified*: JIS90 support (0xEAA3 and 0xEAA4) added
- Ext-H — *Modified*: “heisei” glyph (0x2D5F) added
- Ext-V — *Modified*: Vertical version of Ext-H
- Ext-RKSJ-H — *Modified*: “heisei” glyph (0x877E) added
- Ext-RKSJ-V — *Modified*: Vertical version of Ext-RKSJ-H
- Add-H — *Modified*: JIS90 support (0x7425 and 0x7426) added
- Add-V — *Modified*: Additional vertical glyphs
- Add-RKSJ-H — *Modified*: JIS90 support (0xEAA3 and 0xEAA4) added
- Add-RKSJ-V — *Modified*: Additional vertical glyphs
- 90pv-RKSJ-H — *New*: Apple Macintosh KanjiTalk Version 7.*x* character set, Shift-JIS encoding, proportional-width ASCII character set in one-byte range
- 90pv-RKSJ-V — *New*: Vertical version of 90pv-RKSJ-H
- Adobe-Japan1-1 — *New*: Identity CMap

4.3 Adobe-Japan1-2

Supplement 2 of Adobe-Japan1 adds 361 glyphs (CIDs 8359 through 8719), and provides support for the Microsoft® Windows® 3.1J character set. CIDs 8718 and 8719 are additional half-width Latin glyphs specified in Supplement 2.

The Microsoft Windows 3.1J character set is a combination of the JIS X 0208:1997 character set, the NEC extensions, and the IBM® extensions.

The following is a list of the CMap files modified or added for the Adobe-Japan1-2 character collection supplement, with a brief description of use:

- Ext-H — *Modified*: IBM extensions (Rows 0x79 through 0x7C) added
- Ext-V — *Modified*: Vertical version of Ext-H
- Ext-RKSJ-H — *Modified*: IBM extensions (Rows 0xED through 0xEE) added

- Ext-RKSJ-V — *Modified*: Vertical version of Ext-RKSJ-H
- 90ms-RKSJ-H — *New*: Microsoft Windows 3.1J and Windows 95J character set, Shift-JIS encoding; half-width JIS-Roman character set (nearly identical with ASCII) in one-byte range
- 90ms-RKSJ-V — *New*: Vertical version of 90ms-RKSJ-H
- 90msp-RKSJ-H — *New*: identical to 90ms-RKSJ-H, but using a proportional JIS-Roman character set (nearly identical with ASCII) in one-byte range, Shift-JIS encoding
- 90msp-RKSJ-V — *New*: Vertical version of 90msp-RKSJ-H
- 78ms-RKSJ-H — *New*: identical to 90ms-RKSJ-H, except that JIS C 6226-1978 forms are used, Shift-JIS encoding; half-width JIS-Roman character set (nearly identical with ASCII) in one-byte range
- 78ms-RKSJ-V — *New*: Vertical version of 78ms-RKSJ-H
- UniJIS-UCS2-H — *New*: ISO 10646-1:1993 (Unicode), UCS-2 encoding
- UniJIS-UCS2-V — *New*: Vertical version of UniJIS-UCS2-H
- UniJIS-UCS2-HW-H — *New*: Same as UniJIS-UCS2-H, but with half-width Latin glyphs in the ASCII/JIS-Roman range (0x20–0x7E and 0xA5)
- UniJIS-UCS2-HW-V — *New*: Vertical version of UniJIS-UCS2-HW-H
- UniJIS-UTF8-H — *New*: ISO 10646-1:1993 (Unicode), UTF-8 encoding
- UniJIS-UTF8-V — *New*: Vertical version of UniJIS-UTF8-H
- Adobe-Japan1-2 — *New*: Identity CMap

4.4 Adobe-Japan1-3

This supplement was designed to add pre-rotated instances of all proportional- and half-width glyphs found in earlier supplements. Their purpose is to significantly improve the handling of vertical glyphs in the context of OpenType.

Supplement 3 of Adobe-Japan1 adds 634 glyphs (CIDs 8720 through 9353, all pre-rotated). CIDs 8720 through 8949 provide additional proportional Latin glyphs (230), CIDs 8950 through 9083 additional half-width Latin glyphs (134), CIDs 9084 through 9262 additional half-width hiragana and katakana (179), CIDs 9263 through 9275 additional half-width symbols (13), and CIDs 9276 through 9353 additional line-drawing glyphs (78).

The following is a list of the CMap files added for the Adobe-Japan1-3 character collection supplement, with a brief description of use:

- Adobe-Japan1-3 — *New*: Identity CMap

4.5 Adobe-Japan1-4

Supplement 4 of Adobe-Japan1 adds 6,090 glyphs (CIDs 9354 through 15443). The purpose of this character collection supplement is to provide professional and commercial publishers with most of the glyphs that they require. This includes a complete set of proportional-width italic Latin glyphs, annotated glyphs, additional punctuation and symbols, third- and quarter-width numerals and punctuation, horizontal- and vertically-optimized kana glyphs, ruby glyphs, and kanji. The kanji include additional JIS78 (JIS C 6226-1978) variants, JIS83 (JIS X 0208-1983) variants, traditional forms, JIS X 0221-1995 Ideographic Supplement 1 (918 kanji), K-JIS, and other kanji variants.

The following is a list of the CMap files modified or added for the Adobe-Japan1-4 character collection supplement, with a brief description of use:

- UniJIS-UCS2-H — *Modified*: ISO 10646-1:2000 (Unicode 3.0), UCS-2 encoding
- UniJIS-UCS2-V — *Modified*: Vertical version of UniJIS-UCS2-H
- UniJISPro-UCS2-V — *New*: Vertical version of UniJIS-UCS2-H with references to verticals forms added in Adobe-Japan1-4
- UniJIS-UCS2-HW-H — *Modified*: Same as UniJIS-UCS2-H, but with half-width Latin glyphs in the ASCII/JIS-Roman range (0x20–0x7E and 0xA5)
- UniJIS-UCS2-HW-V — *Modified*: Vertical version of UniJIS-UCS2-HW-H
- UniJISPro-UCS2-HW-V — *New*: Vertical version of UniJIS-UCS2-HW-H with references to verticals forms added in Adobe-Japan1-4
- UniJIS-UTF8-H — *Modified*: ISO 10646-1:2000 (Unicode 3.0), UTF-8 encoding
- UniJIS-UTF8-V — *Modified*: Vertical version of UniJIS-UTF8-H
- UniJISPro-UTF8-V — *New*: Vertical version of UniJIS-UTF8-H with references to verticals forms added in Adobe-Japan1-4
- Adobe-Japan1-4 — *New*: Identity CMap

Note *The UniJIS-UCS2-H, UniJIS-UCS2-HW-H, UniJIS-UCS2-V, UniJIS-UCS2-HW-V, UniJISPro-UCS2-V, and UniJISPro-UCS2-HW-V CMap files are deprecated, and their use is strongly discouraged. These six CMap files are no longer being maintained. Developers who are making use of these CMap files are strong encouraged to use the UniJIS-UTF16-H and UniJIS-UTF16-V CMap files instead (see Section 4.6).*

4.6 Adobe-Japan1-5

Supplement 5 of Adobe-Japan1 adds 4,873 glyphs (CIDs 15444 through 20316). The purpose of this character collection is to support the new JIS X 0213:2004 standard (originally published as JIS X 0213:2000), and to be compatible with the Mac OS X Version 10.2 fonts.

The following is a list of the CMap files modified or added for the Adobe-Japan1-5 character collection supplement, with a brief description of use:

- UniJIS-UTF8-H — *Modified*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-8 encoding
- UniJIS-UTF8-V — *Modified*: Vertical version of UniJIS-UTF8-H
- UniJIS-UTF16-H — *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-16 encoding
- UniJIS-UTF16-V — *New*: Vertical version of UniJIS-UTF16-H
- UniJIS-UTF32-H — *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-32 encoding
- UniJIS-UTF32-V — *New*: Vertical version of UniJIS-UTF32-H
- UniJISX0213-UTF32-H — *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-32 encoding, Mac OS X Version 10.2 compatible
- UniJISX0213-UTF32-V — *New*: Vertical version of UniJISX0213-UTF32-H
- Adobe-Japan1-5 — *New*: Identity CMap

4.7 Adobe-Japan1-6

Supplement 6 of Adobe-Japan1 adds 2,741 glyphs (CIDs 20317 through 23057). The purpose of this character collection is to complete the support for the JIS X 0212-1990 standard (thus deprecating the Adobe-Japan2-0 character collection), and to support Kyodo News' U-PRESS character set.

The following is a list of the CMap files modified or added for the Adobe-Japan1-6 character collection supplement, with a brief description of use:

- UniJIS-UTF8-H — *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-8 encoding
- UniJIS-UTF16-H — *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-16 encoding
- UniJIS-UTF32-H — *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-32 encoding
- UniJIS2004-UTF8-H — *New*: ISO 10646:2003 (Unicode 4.1), UTF-8 encoding, JIS X 0213:2004 prototypical glyphs are default
- UniJIS2004-UTF16-H — *New*: ISO 10646:2003 (Unicode 4.1), UTF-16 encoding, JIS X 0213:2004 prototypical glyphs are default

- UniJIS2004-UTF32-H — *New*: ISO 10646:2003 (Unicode 4.1), UTF-32 encoding, JIS X 0213:2004 prototypical glyphs are default
- UniJISX0213-UTF32-H — *Modified*: ISO 10646:2003 (Unicode 4.1), UTF-32 encoding, Mac OS X Version 10.2 compatible
- UniJISX02132004-UTF32-H — *New*: ISO 10646:2003 (Unicode 4.1), UTF-32 encoding, Mac OS X Version 10.2 compatible, JIS X 0213:2004 prototypical glyphs are default
- Adobe-Japan1-6 — *New*: Identity CMap

5 The Adobe-Japan2 Character Collection—DEPRECATED

The purpose of the Adobe-Japan2 character collection is to provide support for the JIS X 0212-1990 character set standard. Supported encodings include ISO-2022 and EUC-JP (code set 3).

Note *The Adobe-Japan2-0 character collection is now considered to be in a deprecated state due to the fact that the Adobe-Japan1-6 character collection completely supports the JIS X 0212-1990 character set. It is recommended that any Adobe-Japan2-0 fonts be rebuilt as Adobe-Japan1-6 subset fonts.*

Note *The three standard sets of Latin glyphs are not included in the Adobe-Japan2 character collection because they are not defined in JIS X 0212-1990, which is the scope of this character collection. If you use a CID-keyed font with a CMap defined by the Adobe-Japan2 character collection, you must also use a CID-keyed font and CMap from Adobe-Japan1 for any Latin glyphs that you need.*

Following is a list of supported encoding methods and the code space ranges for each:

- ISO-2022 — 0x2121–0x7E7E
- EUC-JP — 0x8FA1A1–0x8FFEFE
- UCS-2 — 0x0000–0xD7FF and 0xE000–0xFFFF
- UTF-8 — 0x00–0x7F, 0xC080–0xDFBF, 0xE08080–0xEFBFBF, and 0xF0808080–0xF7BFBFBF
- UTF-16 — 0x0000–0xD7FF, 0xE000–0xFFFF, and 0xD800DC00–0xDBFFDFFF
- UTF-32 — 0x00000000–0x0010FFFF

More information on the Adobe-Japan2 character collection can be found in Technical Note #5097, “Adobe-Japan2-0 Character Collection for CID-Keyed Fonts,” available at:

http://partners.adobe.com/public/developer/en/font/5097.Adobe-Japan2-0.pdf

5.1 Adobe-Japan2-0

Supplement 0 (zero) of Adobe-Japan2 enumerates 6,068 glyphs (CIDs 0 through 6067), and provides support for the JIS X 0212-1990 character set standard. Supported encodings include ISO-2022, EUC-JP, UCS-2, and UTF-8.

Note *There are 309 kanji glyphs in Adobe-Japan2-0 that are identical to those in the Adobe-Japan1-2 character collection supplement. They are duplicated because Adobe-Japan1 and Adobe-Japan2 are independent character collections. Of these duplicate glyphs, 279 are IBM Selected Kanji, 28 are JIS C 6226-1978 (JIS78) kanji, and two are miscellaneous. The remaining Adobe-Japan2-0 glyphs can be found throughout Adobe-Japan1-4 through Adobe-Japan1-6.*

The following is a list of the CMap files defined by the Adobe-Japan2-0 character collection, with a brief description of use:

- Hojo-H — JIS X 0212-1990 character set, ISO-2022 encoding
- Hojo-V — Vertical version of Hojo-H
- Hojo-EUC-H — JIS X 0212-1990 character set, EUC-JP encoding (code set 3)
- Hojo-EUC-V — Vertical version of Hojo-EUC-H
- UniHojo-UCS2-H — *New*: ISO 10646-1:1993 (Unicode), UCS-2 encoding
- UniHojo-UCS2-V — *New*: Vertical version of UniHojo-UCS2-H
- UniHojo-UTF8-H — *Modified*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-8 encoding
- UniHojo-UTF8-V — *Modified*: Vertical version of UniHojo-UTF8-H
- UniHojo-UTF16-H — *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-16 encoding
- UniHojo-UTF16-V — *New*: Vertical version of UniHojo-UTF16-H
- UniHojo-UTF32-H — *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-32 encoding
- UniHojo-UTF32-V — *New*: Vertical version of UniHojo-UTF32-H
- Adobe-Japan2-0 — Identity CMap

6 The Adobe-Korea1 Character Collection

The purpose of this Korean character collection is to provide support for the KS X 1001:1992 and KS X 1003:1992 character set standards, and select corporate variations thereof. The original designations of these character set standards, KS C 5601-1992 and KS C 5636-1993, were changed on August 20, 1997. Supported encodings include ISO-2022-KR, EUC-KR, Johab, UHC, UCS-2, UTF-8, UTF-16, and UTF-32 encodings.

Following is a list of supported encoding methods and the code space ranges for each:

- ISO-2022 0x2121–0x7E7E
- EUC-KR 0x00–0x80 (0x00–0x83 in KSCpc), 0xFE–0xFF (only in KSCpc), and 0xA1A1–0xFEFE (0xA141–0xFDFE in KSCpc)
- Johab 0x00–0x80, 0x8441–0xD3FE, 0xD831–0xDEFE, and 0xE031–0xF9FE
- UHC 0x00–0x80 and 0x8141–0xFEFE
- UCS-2 0x0000–0xD7FF and 0xE000–0xFFFF
- UTF-8 0x00–0x7F, 0xC080–0xDFBF, 0xE08080–0xEFBFBF, and 0xF0808080–0xF7BFBFBF
- UTF-16 0x0000–0xD7FF, 0xE000–0xFFFF, and 0xD800DC00–0xDBFFDFFF
- UTF-32 0x00000000–0x0010FFFF

Adobe-Korea1 has one officially registered subset, namely the hangul subset, useful for creating hangul CID-keyed fonts. In addition to hangul characters, this subset includes the punctuation and symbols necessary for a stand-alone font. It contains every glyph except for the Chinese characters (*hanja*).

More information on the Adobe-Korea1 character collection can be found in Technical Note #5093, "Adobe-Korea1-2 Character Collection for CID-Keyed Fonts," available at:

http://partners.adobe.com/public/developer/en/font/5093.Adobe-Korea1-2.pdf

6.1 Adobe-Korea1-0

Supplement 0 (zero) of Adobe-Korea1 enumerates 9,333 glyphs (CIDs 0 through 9332), and provides support for KS X 1001:1992, KS X 1003:1993, and the Apple Macintosh extensions. CIDs 1–100 are proportional-width Latin glyphs; and CIDs 8094–8190 are half-width Latin glyphs.

Note *The 268 duplicate hanja in KS X 1001:1992 are not included in Adobe-Korea1-0, but are provided through the CMap files.*

The following is a list of the CMap files defined by the Adobe-Korea1-0 character collection, with a brief description of use:

- KSC-H KS X 1001:1992 character set, ISO-2022-KR encoding
- KSC-V Vertical version of KSC-H
- KSC-EUC-H KS X 1001:1992 character set, EUC-KR encoding, half-width KS X 1003:1993 character set (nearly identical with ASCII) in one-byte range
- KSC-EUC-V Vertical version of KSC-EUC-H

- KSCpc-EUC-H — Apple Macintosh Korean character set, Modified EUC-KR encoding, proportional-width ASCII character set in one-byte range
- KSCpc-EUC-V — Vertical version of KSCpc-EUC-H
- Adobe-Korea1-0 — Identity CMap

6.2 Adobe-Korea1-1

Supplement 1 of Adobe-Korea1 adds 8,822 glyphs (CIDs 9333 through 18154), and provides support for the Johab extension described in the KS X 1001:1992 character set standard and for Microsoft Windows 95 extensions called Unified Hangul Code (UHC). Johab is a two-byte encoding that can encode KS X 1001:1992 plus all possible pre-combined hangul characters (a total of 11,172 hangul glyphs).

The following is a list of the CMap files added for the Adobe-Korea1-1 character collection supplement, with a brief description of use:

- KSC-Johab-H — *New*: KS X 1001:1992 character set plus Johab extensions, Johab encoding
- KSC-Johab-V — *New*: Vertical version of KSC-Johab-H
- KSCms-UHC-H — *New*: KS X 1001:1992 character set plus Microsoft extensions (Unified Hangul Code), UHC encoding
- KSCms-UHC-V — *New*: Vertical version of KSCms-UHC-H
- UniKS-UCS2-H — *New*: ISO 10646-1:1993 (Unicode), UCS-2 encoding
- UniKS-UCS2-V — *New*: Vertical version of UniKS-UCS2-H
- UniKS-UTF8-H — *New*: ISO 10646-1:1993 (Unicode), UTF-8 encoding
- UniKS-UTF8-V — *New*: Vertical version of UniKS-UTF8-H
- Adobe-Korea1-1 — *New*: Identity CMap

Note *The UniKS-UCS2-H and UniKS-UCS2-V CMap files are deprecated, and their use is strongly discouraged. These two CMap files are no longer being maintained. Developers who are making use of these CMap files are strong encouraged to use the UniKS-UTF16-H and UniKS-UTF16-V CMap files instead (see Section 6.3).*

6.3 Adobe-Korea1-2

This supplement was designed to add pre-rotated instances of all proportional- and half-width glyphs found in earlier supplements. Their purpose is to significantly improve the handling of vertical glyphs in the context of OpenType.

Supplement 2 of Adobe-Korea1 adds 197 glyphs (CIDs 18155 through 18351, all pre-rotated). CIDs 18155 through 18254 provide additional proportional Latin glyphs (100), CIDs 18255 through 18351 additional half-width Latin glyphs (97).

The following is a list of the CMap files added for the Adobe-Korea1-2 character collection supplement, with a brief description of use:

- UniKS-UTF8-H — *Modified*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-8 encoding
- UniKS-UTF8-V — *Modified*: Vertical version of UniKS-UTF8-H
- UniKS-UTF16-H — *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-16 encoding
- UniKS-UTF16-V — *New*: Vertical version of UniKS-UTF16-H
- UniKS-UTF32-H — *New*: ISO 10646-1:2000/ISO 10646-2:2001 (Unicode 3.2), UTF-32 encoding
- UniKS-UTF32-V — *New*: Vertical version of UniKS-UTF32-H
- Adobe-Korea1-2 — *New*: Identity CMap