

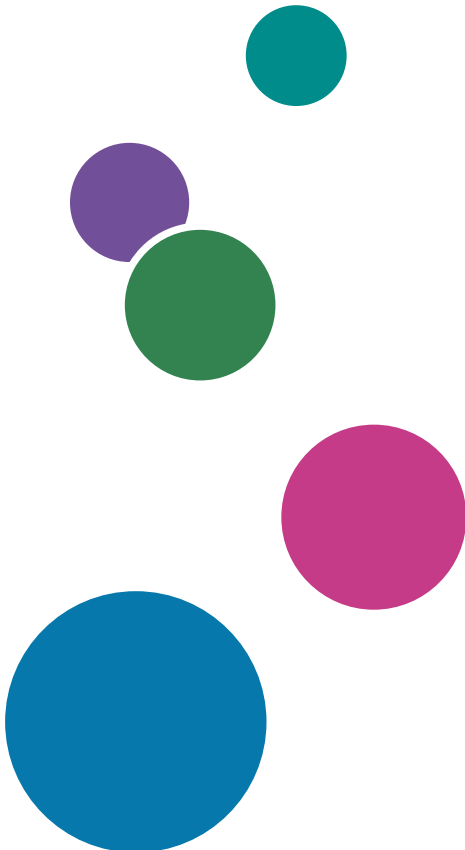


## Font Summary

### Version 3.8

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For information not in this manual, refer to the Help System in your product.





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# Introduction

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## Important

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To the maximum extent permitted by applicable laws, in no event will the manufacturer be liable for any damages whatsoever arising out of failures of this product, losses of documents or data, or the use or non-use of this product and operation manuals provided with it.

Make sure that you always copy or have backups of important documents or data. Documents or data might be erased due to your operational errors or malfunctions of the software. Also, you are responsible for taking protective measures against computer viruses, worms, and other harmful software.

In no event will the manufacturer be responsible for any documents created by you using this product or any results from the data executed by you.

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## Cautions regarding this guide

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- Some illustrations or explanations in this guide could differ from your product due to improvement or change in the product.
- The contents of this document are subject to change without notice.
- No part of this document may be duplicated, replicated, reproduced in any form, modified, or quoted without prior consent of the supplier.

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## Publications for this product

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### Instruction manuals

This instruction manuals is included:

- *Font Summary* in PDF format  
This guide explains font concepts and the different types of fonts in the InfoPrint Font Collection. The *Font Summary* is available only in English.

You can download English publications in PDF format from the [Ricoh Production Print Information Center](http://info.rpp.ricoh-usa.com/help/index.jsp) (<http://info.rpp.ricoh-usa.com/help/index.jsp>).

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## How to read the documentation

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### Before using InfoPrint Font Collection

This manual contains instructions and cautions for correct use of InfoPrint Font Collection. Before using InfoPrint Font Collection, read this manual thoroughly and completely. Keep this manual handy for future reference.

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## Related publications

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For more information about character sets, code pages, coded fonts, OpenType and TrueType fonts, see these publications:

- *Using OpenType Fonts in an AFP System, G544-5876*, which explains how to install and reference TrueType and OpenType fonts in Microsoft Unicode format on systems that use the Advanced Function Presentation™ Architecture to print or display data.
- *IBM AFP Fonts: Technical Reference for Code Pages, S544-3802*, which provides in-depth Expanded Core font information including character set attributes, tables that show all AFP characters and the language complements that contain them.
- *IBM Data Stream and Object Architectures: Font Object Content Architecture (FOCA) Reference, S544-3285*, which contains the architecture definition and describes the functions and elements that make up the Font Object Content Architecture (FOCA).
- *IBM Infoprint Fonts: Japanese Font Library Technical Reference, S544-5849*, which provides technical details for the Japanese character sets and code pages.
- *IBM Infoprint Fonts: Korean Font Library Technical Reference, S544-5850*, which provides technical details for the Korean character sets and code pages.
- *IBM Infoprint Fonts: Simplified Chinese Font Library Technical Reference, S544-5851*, which provides technical details for the Simplified Chinese character sets and code pages.
- *IBM Infoprint Fonts: Traditional Chinese Font Library Technical Reference, S544-5852*, which provides technical details for the Traditional Chinese character sets and code pages.

For more information about fonts, visit the Ricoh® Production Print Information Center:

<http://info.rpp.ricoh-usa.com/help/index.jsp>

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## Symbols

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The following symbols are used in this manual to help you to identify content quickly.

### ★ Important

- This symbol indicates points to pay attention to when using the product. Be sure to read these explanations.

### ↓ Note

- This symbol indicates helpful supplementary information that is not essential to completing a task.

### **Bold**

**Bold type** indicates the names of dialogs, menus, menu items, settings, field labels, buttons, and keys.

### *Italic*

*Italic type* indicates the titles of manuals and variables that you must replace with your own information.

### Monospace

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Monospace type indicates computer input and output.

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## Abbreviations

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### **AFP**

Advanced Function Presentation

### **BMP**

Basic Multilingual Plane

### **CJK**

Chinese, Japanese, and Korean

### **CPGID**

Code page global identifier

### **CPI**

Characters per inch

### **DBCS**

Double byte character set

### **ECPs**

Extended Code Pages

### **FGID**

Font typeface global identifier

### **FOCA**

Font Object Content Architecture

### **GCSGID**

Graphic character set global identifier

### **GUM**

Global identifier to Unicode mapping

### **HxV**

Height by vertical

### **HK**

Traditional Chinese Hong Kong

### **IB**

Italic Bold

### **IN**

Indic

---

**IM**

Italic Medium

**ISO**

International Organization for Standardization

**J**

Japanese

**K**

Korean

**MP**

Mixed pitch

**OCR**

Optical Character Recognition

**OCR-A**

Optical Character Recognition-A

**OCR-B**

Optical Character Recognition-B

**pel**

picture element

**PSF**

Print Services Facility

**RAT**

Resource Access Table

**RB**

Roman Bold

**RC**

Roman Condensed

**RL**

Roman Light

**RM**

Roman Medium

**RSL**

Roman Semi-Light

**SBCS**

Single-byte character set



---

**SC**

Simplified Chinese

**SEA**

Southeast Asian

**S/W**

Style and weight

**TTC**

TrueType Collection

**TW**

Traditional Chinese Taiwan

**HKSCS**

Traditional Chinese Hong Kong Supplemental Character Set

**WGL**

Windows Glyph List

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**Trademarks**

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These terms are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both:

- AIX
- APL2
- AS/400
- BookMaster
- IBM
- IBM i
- MVS
- OS/2
- Print Services Facility
- z/OS

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Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.

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## Font trademarks

<b>Trademark</b>	<b>Company</b>
Boutros Typing <sup>TM</sup>	Applied Arabic Limited
Courier <sup>TM</sup>	The Monotype Corporation
Helvetica <sup>TM</sup>	Linotype Library GmbH
IBM®	International Business Machines Corporation
InfoPrint®	Ricoh Co. Ltd
ITC Boutros Modern Rokaa <sup>TM</sup>	International Typeface Corporation
ITC Boutros Settings <sup>TM</sup>	International Typeface Corporation
Monotype <sup>TM</sup>	The Monotype Corporation
Shalom <sup>TM</sup>	International Business Machines Corporation
Times New Roman®	The Monotype Corporation
WorldType®	The Monotype Corporation
WT <sup>TM</sup>	The Monotype Corporation

# 1. Overview

## • Highlights

The RICOH InfoPrint Font Collection contains these fonts:

**AFP Outline Fonts, LCD4-5683**

**AFP Classic Fonts, LCD2–20029**

**AFP Asian Classic Fonts, LCD2–20055**

**WorldType Fonts, LCD4-5684**

### ↓ Note

The code pages for the AFP Outline Fonts, the AFP Classic Fonts, the AFP Asian Classic Fonts, and the WorldType Fonts are included on the media.

**AFP Raster Fonts, LCD4-5700**

### Extended Code Pages (ECPs)

ECPs are provided with InfoPrint Solutions products, and they are also provided as downloadable zip files. To download the zip files:

1. Access the Ricoh Production Print Company Web site at <http://rpp.ricoh-usa.com/>.
2. Click **SUPPORT**.
3. Click **Support**, and then click **Software**.
4. Click **Downloads and Drivers**, and from the pulldown, select **AFP Outline Fonts**, and the **Extended Code Pages (ECPs) zip files** download page displays.

### ↓ Note

1. The AFP Outline Fonts and WorldType Fonts replace Infoprint™ Fonts on AIX, Linux, and Windows.
2. You can use the Ricoh AFP Resource Installer with these fonts. AFP Resource Installer has consolidated interfaces for the installation and management of AFP color management, font object resources, image object resources, and code pages. You can find the Ricoh AFP Resource Installer here: [https://www.ricoh-usa.com/en/products/pd/software/commercial-industrial-printing-software/color-management/ricoh-afp-resource-installer/\\_/R-5639-EE2-0001](https://www.ricoh-usa.com/en/products/pd/software/commercial-industrial-printing-software/color-management/ricoh-afp-resource-installer/_/R-5639-EE2-0001)

## Highlights

The Infoprint™ Font Collection includes fonts that:

- Control the appearance of business communications
- Enhance the readability of business documents to increase impact and accessibility
- Draw attention to specific items, create emphasis, and improve responsiveness to business communications
- Apply industry-standard TrueType/OpenType font technology to support Unicode data for globalization of applications with a single font
- Improve print quality on high-resolution printers by using AFP or TrueType/OpenType outline fonts instead of raster fonts

**Note**

Each version of the WorldType fonts comes with a prebuilt Resource Access Table (RAT) that can be used for AFP printing. A detailed description of the WorldType fonts naming conventions is listed later in this document in [Naming conventions for the WorldType Fonts, p. 64](#).

**1****IBM Extended Code Pages (ECPs)**

ECPs are provided as downloadable zip files. To download the zip files, access the IBM® web site at: <http://www-01.ibm.com/support/docview.wss?uid=psd1P4000878>

## 2. Font concepts

- Font terminology
- Representation of characters
- Font spacing characteristics
- Point and pitch sizes

A font is a collection of graphic characters sharing type family, style, and weight. You can use a font for an entire data set or file, for an entire page, or for selected lines or fields of data on a page. Page printers can print fonts with various point sizes, styles, weights, and widths on a single line or on various lines on a page. Multiple fonts can be printed on a page. Before each page is printed, the fonts required for the page are sent to the printer (downloaded) if the printer does not already have them in its storage. The printer storage required for a font depends on the point size (for raster fonts), number of characters in the font, and whether the font is double-byte or single-byte.

To understand fonts, you should be familiar with basic font concepts, including font terminology, how font characters are represented, the characteristics of font spacing, and point and pitch sizes.

### Font terminology

Fonts are defined with this font terminology:

#### Type family

A *type family* is a group of typefaces that share basic design characteristics and encompass many size and style variations. Examples of type families include:

- Courier
- Helvetica
- Times New Roman

#### Typeface

A *typeface* is a collection of characters having the same style, weight, and width. Examples of these attributes are shown in [Font terminology, p. 11](#).

- *Style* is the inclination of a letter around a vertical axis; for example, roman (upright) or *italic* (slanted).
- *Weight* is the degree of boldness of a typeface; for example, medium or **bold**.
- *Width* is the horizontal variation in a character design; for example, normal or condensed.

#### Type font, type size, and complement

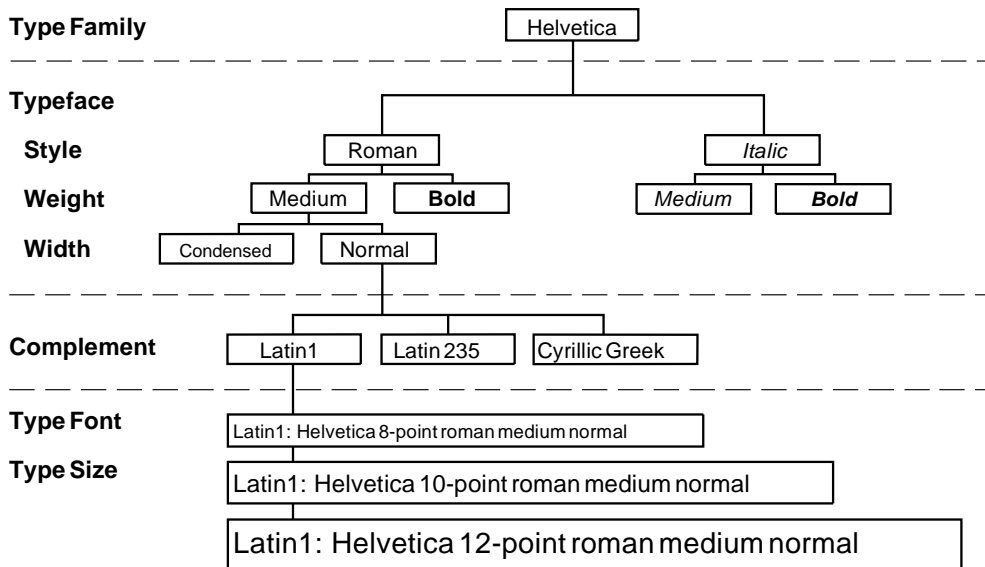
A *type font*, or font, is a collection of characters sharing type family, typeface, and type size. Collections of characters for expanded core fonts are referred to as *complements*.

#### Note

In Type Transformer, complements are called *character lists*.

The next figure shows the basic components of a Helvetica type family, including typeface, style, weight, width, complement, type font, and type size.

## Helvetica type family



## Representation of characters

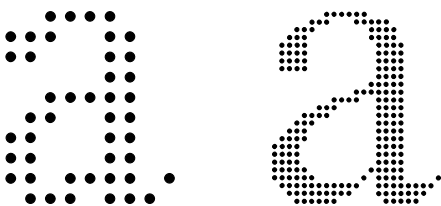
An important concept to understand is how fonts are represented. For the fonts printed by page printers using AFP licensed programs, characters are represented by data describing each dot to be printed (raster fonts) or by mathematical formulas (outline fonts).

### Raster fonts

A raster font is created by a sequence of dots, called *picture elements* (pels), that form a character called a *raster pattern*. The number of dots per inch that a printer generates is called the *print resolution*, or density. A resolution of 240 pels means that a printer prints 240 pels per inch both vertically and horizontally, or 57,600 pels per square inch (240 × 240).

The next figure shows two images of different print resolutions. The image with many small dots has more pels per inch and greater print resolution than the image with fewer large dots.

### Print resolution examples



The type of printer determines the printed pel density. Because raster fonts can have 240-pel or 300-pel formats, different fonts are available for printers with different resolutions (for example, 240-pel and 300-pel printers).

### Outline fonts

Characters in outline fonts are described by mathematical formulas rather than by pels. These formulas are used by rasterizing software to create bitmap characters based on two variables: resolution and point size. This means that a single outline font can offer many print resolutions and point sizes. "Hints" are also contained in the outline fonts to make sure that typographic

characteristics of the typeface are maintained in a consistent manner throughout all printed characters. Some of these characteristics include horizontal and vertical stroke widths, serifs, and curve radii.

TrueType and OpenType fonts are outline fonts that consist of tables for identifying the formatting information used to support Unicode encoding.

## Rotation of characters

The ability to print in different directions and with different character rotations is also determined by the type of printer. *Print direction* shows the direction in which characters are added to a line of text. *Character rotation* is the clockwise rotation of a character with respect to the character baseline. The *character baseline* is a reference on which characters are aligned as they are added to the page in the print direction. The character baseline is always parallel to the print direction.

The next table shows how print direction and character rotation can be combined to print in many orientations.

## Print direction and character rotation combinations for print orientations

Print Direction	Character Rotation (in degrees)			
	0	90	180	270
Across (0)	ABCD	A B C D	D C B A	A B C D
Down (90)	A B C D	A B C D	D C B A	A B C D
Back (180)	A B C D	A B C D	D C B A	A B C D
Up (270)	A B C D	D C B A	D C B A	D C B A

## Font spacing characteristics

Fonts can be classified according to their spacing characteristics and by their format.

### Uniformly spaced fonts

*Uniformly spaced fonts*, or monospaced fonts, are similar to typewriter fonts, for which each character increment is the same width. Thus, the lowercase *i* and the . (period) each occupy as much space as the uppercase *M*. Examples of uniformly spaced fonts include Courier and Letter Gothic.

i.M.i.M.i.M.i.M.i.M.i.M.i.M.i.M.

#### ↓ Note

A character increment is the distance that the current print position is increased for the particular character printed.

### Duospace fonts

Duospace fonts are similar to uniformly spaced fonts or monospaced fonts. Duospace fonts can be two character widths instead of a single character width. Ideographic characters are designed on

full-width increments while other characters can be designed for half-width increments. This concept allows the half-width and full-width characters in the box size examples in [Box size examples, p. 16](#) to be implemented in a single font.

#### ↓ Note

As more language support is implemented in duospace fonts, more character widths can be used. However, the characters widths are always a multiple of the half-width character increment. This function allows a monospaced appearance of the data using this font spacing.

2

## Typographic fonts

*Typographic fonts* are proportionally spaced fonts. The character increment is part of the design and varies on a character-by-character basis. Thus, the lowercase *i* and the `.` occupy narrow spaces. The uppercase *M* occupies a wide space. Examples of typographic fonts include Helvetica and Times New Roman.

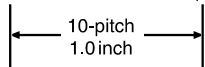
i.M.i.M.i.M.i.M.i.M.i.M.i.M.i.M.

## Pitch

Uniformly spaced fonts are often described or referred to in *pitch*, or the number of characters printed in one horizontal inch (Figure 4.). Pitch is also referred to as characters per inch (CPI).

## Type size in pitch

10-Pitch Type Width



## Points

All fonts are measured in *points*, the vertical size of the font. One inch is equal to approximately 72 points. Point size is a baseline-to-baseline measurement, which includes minimal white space. The *baseline* is the line upon which the characters rest. Thus, the actual height of the characters in an 18-point font is fewer than 18 points (Figure 5). The line spacing usually includes one or more extra points of white space between lines of type.

## Type size in points



## Box size

Double byte character set (DBCS) raster fonts were formerly measured in *box size*, the number of pels in the character box. Box size can be either a horizontal or a vertical measurement. Usually both dimensions are given, with the box width first. If only one dimension is given, it is the box height. In full-width fonts, the box width is usually equal to the box height. In half-width fonts, the box width is one-half the box height.

## Point and pitch sizes

Uniformly spaced single-byte character set (SBCS) fonts are measured horizontally in pitch and specified as points in the coded font or character set name. Proportionally spaced and mixed-pitch fonts



are measured vertically in points. Although the DBCS fonts are uniformly spaced, they are measured vertically in points.

This section shows examples of various point and pitch sizes.

---

## Point examples

---

Point size is a vertical measurement.

2

### Point size examples

This is 6 points.  
This is 7 points.  
This is 8 points.  
This is 9 points.  
This is 10 points.  
This is 11 points.  
This is 12 points.  
This is 14 points.  
This is 16 points.  
This is 18 points.  
This is 20 points.  
This is 24 points.  
This is 30 points.  
This is 36 points.

6 7 8 9 10 11 12 14 16 18 20 24 30 36

---

## Pitch examples

---

Pitch size is a horizontal measurement.

## Pitch size examples

1234567890

This is 10 pitch or 10 characters per inch.

123456789012

This is 12 pitch or 12 characters per inch.

1234567890123

This is 13.3 pitch or 13.3 characters per inch.

123456789012345

This is 15 pitch or 15 characters per inch.

123456789012345678

This is 18 pitch or 18 characters per inch.

12345678901234567890

This is 20 pitch or 20 characters per inch.

123456789012345678901234567

This is 27 pitch or 27 characters per inch.

## Box size examples

Box size is a 240-pel measurement.

### Box size examples

Full-Width a b c d e アイウオツ 1 2 3 4 5 A B C D E Z アイウオツ

Half-Width abcde アイウオツ 12345 A B C D E Z アイウオツ  
Box height of 48 or Point size of 14.4

Full-Width a b c d e アイウオツ 1 2 3 4 5 A B C D E Z アイウオツ

Half-Width abcde アイウオツ 12345 A B C D E Z アイウオツ  
Box height of 40 or Point size of 12.0

Full-Width a b c d e アイウオツ 1 2 3 4 5 A B C D E Z アイウオツ

Half-Width abcde アイウオツ 12345 A B C D E Z アイウオツ  
Box height of 32 or Point size of 9.6

Full-Width a b c d e アイウオツ 1 2 3 4 5 A B C D E Z アイウオツ

Half-Width abcde アイウオツ 12345 A B C D E Z アイウオツ  
Box height of 24 or Point size of 7.2

## 3. AFP Fonts

---

- AFP font structure
- AFP font naming conventions
- Format of AFP character sets

To understand fonts in the InfoPrint Font collection, you should be familiar with AFP fonts. AFP Fonts are Font Object Content Architecture (FOCA) raster and outline fonts, which are single-byte or double-byte, or WorldType fonts, which are TrueType and OpenType outline fonts. For more information about FOCA structures, see *Font Object Content Architecture Reference*, S544-3285.

This section describes AFP font structures, AFP font naming conventions, and formats of AFP character sets.

### AFP font structure

The font structure of FOCA outline and raster fonts is made up of these font components (see Figure 9):

#### Coded font

A coded font consists of a character set and a code page.

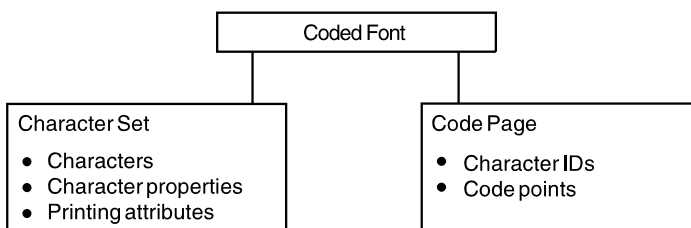
#### Character set

A character set specifies characters, character properties, and printing attributes.

#### Code page

A code page defines character IDs and code points.

#### Font components



WorldType outline fonts are organized by subsets and grouped by character blocks as defined by Microsoft Unicode format. Instead of using a character set, WorldType fonts map a code page to a Unicode point or use an extended code page that contains the Unicode point.

---

### Coded font

---

In FOCA font structure, a *coded font* pairs a specific code page with a specific character set and translates your request for type (for example, text you previously entered at a computer terminal) into characters for printing. A character must be included in the specified character set and listed on the specified code page before it can be printed.

## Character set

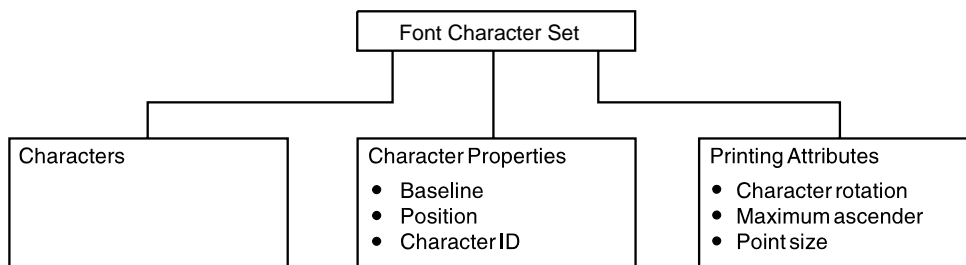
In FOCA font structure, a *character set* corresponds to the definition of a font; it contains the characters of a single type family, typeface, and type size. In addition, a character set specifies character properties and printing attributes (see Figure 10).

### Note

WorldType outline fonts are not defined with character sets.

## 3

### Composition of a character set



The character set components are:

#### Characters

Characters are the letters, numerals, punctuation marks, or other symbols of a font.

#### Character properties

Character properties detail how a character is positioned relative to the characters around it. Some character properties include:

- The baseline of a character showing its general alignment
- The dimensions of space in which the character is printed
- The position of the character in that space
- The identifier of the character

#### Printing attributes

The printing attributes define how the character set is printed. Some printing attributes include rotation of characters, maximum ascender, and point size.

One of the character properties is the *character ID* (or graphic character ID). Each character is assigned a character ID; for example, the character "A" (uppercase A) is assigned the character ID LA020000. The purpose of a character ID is to distinguish the character from similar characters. For example, these characters look similar; however, they are different and are assigned different character IDs:

**Minus sign (-):** Character ID SA000000

**Hyphen (-):** Character ID SP100000

**Em dash (—):** Character ID SM900000

For a list of character IDs, the character the ID represents, and the code pages where the characters are found, see the *IBM AFP Fonts: Technical Reference for Code Pages*, S544-5802.

## Code page

A *code page* maps each character of text to the characters in a character set for FOCA fonts or the characters associated to a Unicode point for WorldType fonts. Two types of code pages exist:

- A *traditional code page* contains the mapping information between a code point and a character ID. It can be used with FOCA character sets and TrueType and OpenType fonts.
- An *extended code page* contains the mapping information for a code point, a character ID, and a Unicode point. It can be used with TrueType and OpenType fonts.

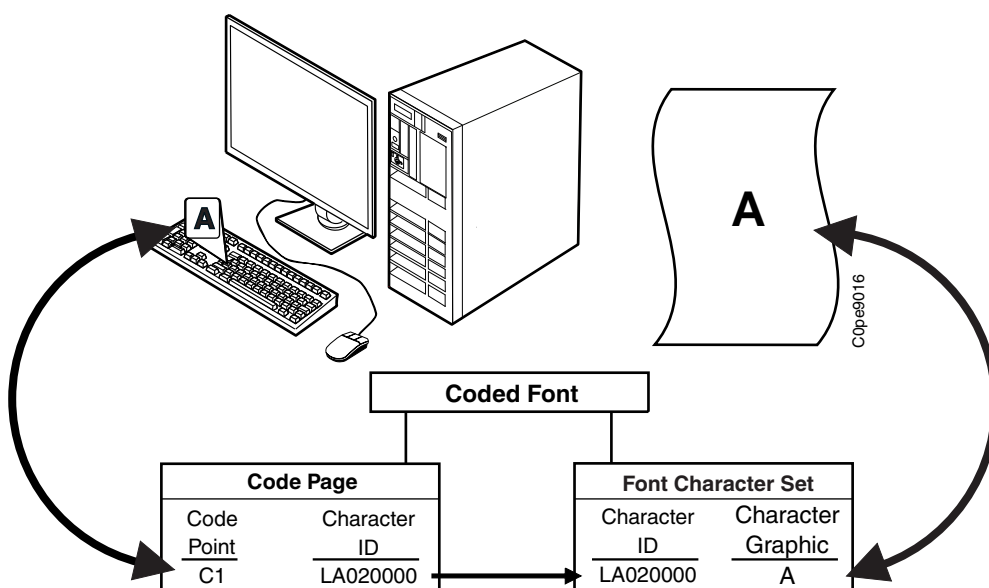
A *character ID* is an 8-byte character data string. A *code point* is an 8-bit binary number representing a character. Code points are usually shown as hexadecimal representations of their binary values.

### Code Point Representations

System	Value
Binary	11000001
Decimal	193
Hexadecimal	C1

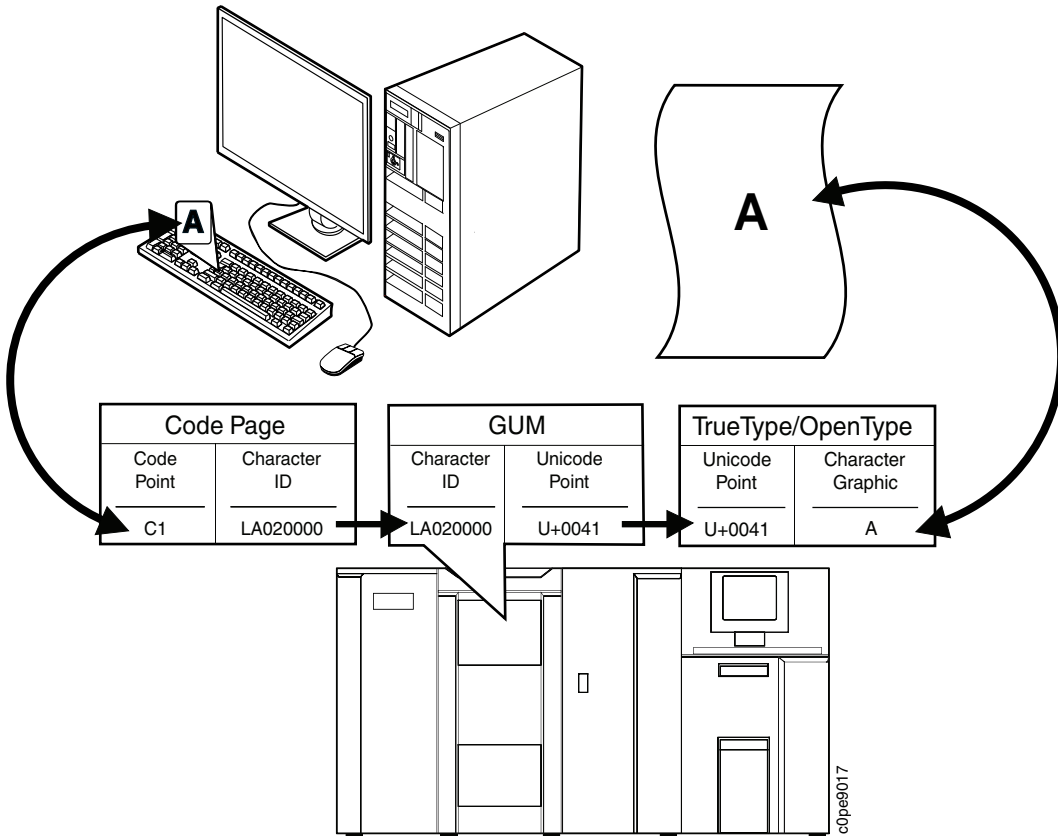
When a code page is used with a FOCA font character set, each keyboard character is translated into a code point. When the text is printed, each code point is matched to a character ID on the code page you specified. The character ID is then matched to the image (*raster pattern* or *outline pattern*) of the character in the character set you specified. The image in the character set is the image that is printed in your text. To be a valid code page for a particular character set, all character IDs in the code page must be included in that character set (Figure 11).

### Translation of a keyboard character into a printed character with a code page and FOCA font character set



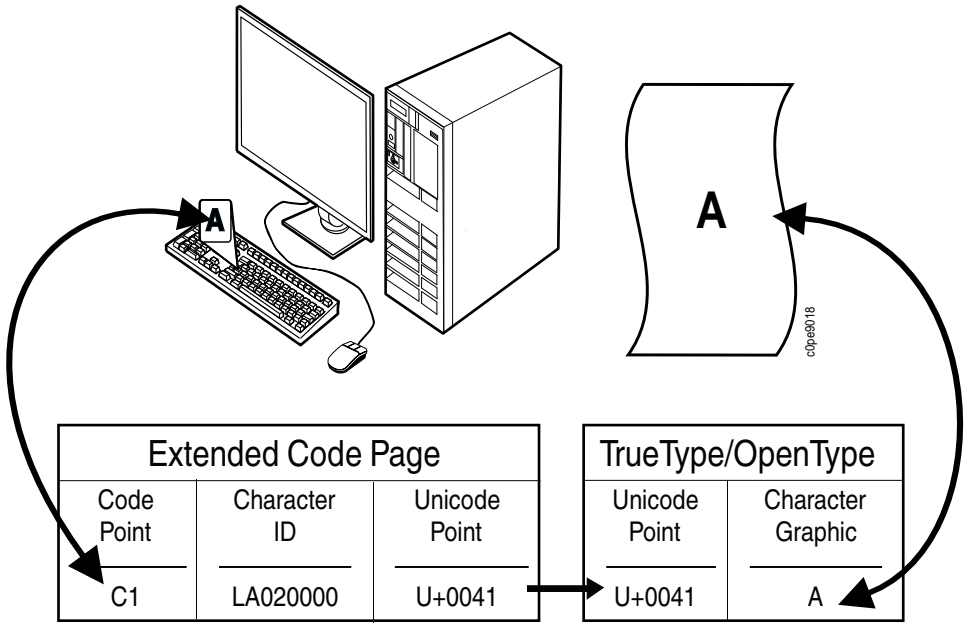
When a code page is used with a TrueType and OpenType font, each code point is matched to the character ID on the code page you specified. The character ID is matched to a Unicode point on the graphic character global identifier to Unicode mapping (GUM) table on your printer. The Unicode point is then matched to the image of the TrueType and OpenType font you specified (Figure 12).

### Translation of a keyboard character into a printed character using a code page and a TrueType and OpenType font



When an extended code page is used with a TrueType and Open Type font, each code point is matched to the Unicode point on the extended code page you specified without referring to the GUM on your printer. The Unicode point is then matched to the image of the TrueType and OpenType font you specified (see Figure 13).

**Translation of a keyboard character into a printed character using an extended code page and a TrueType and OpenType font**



The next figure shows an example of a code page. In the example, when the printer receives hexadecimal code point C1 for the code page T1V10037, it prints an uppercase A (character ID LA020000).

**Code page T1V10037**

T1V10037 Country Extended: United States, Canada

CPGID	GCSGID
37	697

Hex Codes 1st→ 2nd↓	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0	SP010000	SM030000 &	SP100000 -	LO610000 ø	LO620000 Ø	SM190000 °	SM170000 μ	SD150000 ^	SM110000 {	SM140000 }	SM070000 \	ND100000 0
-1	SP300000	LE110000 é	SP120000 /	LE120000 É	LA010000 a	LJ010000 j	SD190000 ~	SC020000 §	LA020000 A	LJ020000 J	SA060000 ÷	ND010000 1
-2	LA150000 â	LA150000 ê	LA160000 Â	LE160000 Ê	LB010000 b	LK010000 k	LS010000 s	SC050000 ¥	LB020000 B	LK020000 K	LS020000 S	ND020000 2
-3	LA170000 ä	LE170000 ë	LA180000 Ä	LE180000 Ë	LC010000 c	LL010000 l	LT010000 t	SD630000 ·	LC020000 C	LL020000 L	LT020000 T	ND030000 3
-4	LA130000 à	LE130000 è	LA140000 À	LE140000 È	LD010000 d	LM010000 m	LU010000 u	SM520000 ©	LD020000 D	LM020000 M	LU020000 U	ND040000 4
-5	LA110000 á	LI110000 í	LA120000 Á	LI120000 Í	LE010000 e	LN010000 n	LV010000 v	SM240000 §	LE020000 E	LN020000 N	LV020000 V	ND050000 5
-6	LA190000 ã	LI150000 î	LA200000 Ã	LI160000 Î	LF010000 f	LO010000 o	LW010000 w	SM250000 ¶	LF020000 F	LO020000 O	LW020000 W	ND060000 6

## Code pages for different languages

Code pages accommodate various national languages by using characters and special symbols appropriate to the language. Different code pages can have identical character IDs assigned to different code points. For example, the character é (lowercase e accent acute, character ID LE110000) has these code point assignments in two different code pages:

- Hexadecimal code point 51 in code page T1V10037 (Country Extended: United States, Canada)
- Hexadecimal code point 5A in code page T1V10280 (Country Extended: Italy)

## Single- and double-byte code pages

A *single-byte code page* contains 256 or fewer 1-byte code points. Single-byte code pages are large enough for languages with alphabetic writing systems, such as English, Greek, and Arabic. A single-byte character set (SBCS) is used with a single-byte code page.

A *double-byte code page* can contain as many as 65,536 two-byte code points. Languages with non-alphabetic writing systems, such as Chinese, Japanese, and Korean, require double-byte code pages. A double-byte character set (DBCS) is used with a double-byte code page.

DBCSs contain some single-byte characters, usually romaji (Western characters) and katakana. Single-byte code pages are used with these characters. Because the characters are either half width ([Font spacing characteristics, p. 13](#)) or proportionally spaced, these code pages are sometimes called *half-width* code pages.

## Code page sections

If you think of a double-byte code page as a collection of single-byte code pages, a double-byte character code has two parts: the first byte indicates a section of the code page, and the second byte indicates a code point in the section.

Raster coded fonts treat double-byte code pages this way: the coded font is divided into sections, each with its own single-byte code page. Each character in the section has a single-byte code point.

Outline coded fonts treat double-byte code pages as single, large code pages. Each character has a double-byte code point.

## AFP font naming conventions

Font naming conventions identify a specific font and its characteristics. Each type of font has its own naming convention:

- WorldType fonts follow the naming conventions in [Naming conventions for the WorldType Fonts, p. 64](#).
- FOCA outline and raster fonts follow this convention for the names of each font component: The first character in the name defines the font component:

**C**

Character set

**T**

Code page

**X**



## Coded font

After the first character, the remainder of the name depends on the type of component:

- If the component is a code page, see [Naming conventions for code pages, p. 117](#).
- If the component is a character set or coded font, the remainder of the name is based on the conventions for these font libraries:
  - ◆ General Library fonts (see [Naming convention for General Library Fonts, p. 25](#))
  - ◆ Chinese, Japanese, and Korean (CJK) fonts (see [Naming conventions for CJK fonts, p. 32](#))
  - ◆ CJK simulation fonts (see [Naming conventions for CJK simulation fonts, p. 40](#))
  - ◆ AFP raster fonts (see [AFP Raster Fonts, p. 79](#))

Character set and coded font names are distinctive and can be used to determine whether a font is a General Library font, a CJK font, or a raster font. For example, character sets and coded fonts are only six characters for outline fonts rather than eight characters for raster fonts. Code page names are not distinctive enough to determine for which font group the code page is supplied.

## Format of AFP character sets

The InfoPrint Font Collection supplies character sets in these formats:

### 240-pel raster

240-pel raster fonts are bounded-box fonts used on 240-pel printers. The resolution of these fonts is 240 dots per inch. All character positioning metrics in these fonts are expressed in whole-pel (fixed-metric) values.

### 300-pel raster

300-pel raster fonts are used on printers where the resolution is 300 dots per inch. The character positioning values are expressed in *relative metrics* and the exact pel count is determined at print time.

### Type 1 outline

Type 1 outline is the format used with Type Transformer for General Library fonts. This format includes outlines of the various type families, which can be transformed for use by AFP printers in sizes from 1–999 points (AFP outline fonts) or from 1–72 points (raster fonts).

### CID-Keyed outline

CID-Keyed outline is the format used with Type Transformer for CJK fonts. This format includes outlines of the various type families, which can be transformed for use by AFP printers in sizes from 1–999.9 points (AFP outline fonts) or from 1–72 points (raster fonts).

### AFP outline

AFP outline is the format by which Print Services Facility (PSF) and other AFP applications can identify Type 1 outline fonts. The Type 1 or CID-Keyed outlines are encapsulated in FOCA wrappers that allow them to be accessed as AFP resources. AFP outlines utilize *relative metrics* in the same way as 300-pel fonts.

### Fixed metrics

*Fixed-metric* fonts have all character positioning metrics expressed in whole-pel values. All 240-pel fonts are fixed-metric fonts. For example, the character increment of the 'A' in 240-pel Helvetica

Latin1 roman medium 10 pt is 22 pels. When 240-pel fonts are created, any fractional pels found are eliminated by rounding up or down to whole-pel values.

### Relative metrics

*Relative metrics* were developed for scalable outline fonts where a single metric value could be used to determine a pel value given a desired resolution and point size. Relative metrics are based on 1000 units per "em space," which means the fonts are designed for a hypothetical 1000 dpi, 72-point font where each side of the bounding box is 1000 pels. All AFP outlines and 300-dpi fonts contain relative metrics. The exact pel values are determined when the font is used, such as during document formatting or printing. For example, the character increment for A in 300-pel Helvetica Latin1 roman medium is 667 relative units. In the hypothetical 1000 dpi, 72-point font, the A would have a character increment of 667 pels, but at 10 points and 300-dpi resolution, the character increment of the A is 27.8 pels. The fractional pel (.8 in this case) is accumulated by the printer and a whole white pel is inserted when the accumulator = 1. Constantly adjusting the character increments in this way makes sure that the output text is as close to the original outline specification as possible.

## 4. AFP Outline Fonts

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- **General Library Fonts**
- **CJK Fonts**
- **CJK simulation fonts**

The AFP outline fonts that are included with the InfoPrint Font Collection are:

- General Library fonts
- Chinese, Japanese, and Korean (CJK) fonts
- CJK simulation fonts

### General Library Fonts

General Library fonts contain various typefaces and font sizes (including typographic and uniformly spaced typeface families) suitable for printing various documents. General Library fonts combine the IBM Core Interchange Fonts, IBM Coordinated Fonts, and IBM BookMaster Fonts. All General Library fonts are derived from Adobe Type 1 font technology and are provided in the AFP outline format supported by AFP software for SBCS fonts.

The next table shows the formats for the General Library Fonts that are provided in InfoPrint Fonts Collection:

#### Format and operating systems for General Library Fonts

Format	Operating systems
AFP outline fonts	z/OS, IBM i, Linux, AIX, Windows
Type 1	AIX, Windows

[Summary table for the General Library Fonts, p. 26](#) lists General Library fonts by font type and language group.

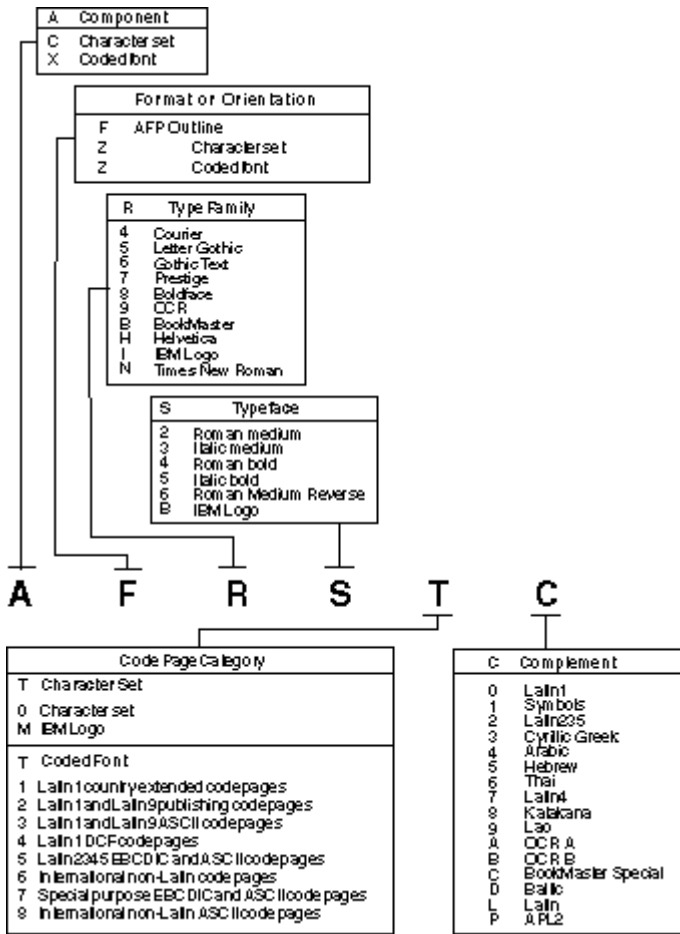
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### Naming convention for General Library Fonts

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The next figure illustrates the naming convention for General Library fonts.

## Naming convention for the General Library fonts



4

## Summary table for the General Library Fonts

This section lists General Library fonts by font type and language group.

These language groups identify supported languages:

1. The Arabic language group (International Organization for Standardization (ISO) 8859-6) includes Latin and Arabic scripts.
2. The Cyrillic language group (ISO 8859-5) includes Bulgarian, Byelorussian, English, Macedonian, Russian, Serbo-Croatian, and Ukrainian.
3. The Greek language group (ISO 8859-7) includes Latin and Greek scripts.
4. The Hebrew language group (ISO 8859-8) includes Latin and Hebrew scripts.
5. Katakana contains phonetic syllabic characters used for writing non-Japanese words, such as foreign names, borrowed words, or company names.
6. The Lao language group supports the Lao language.
7. The Latin language group includes Latin 1 through Latin 5 and Vietnamese.

8. The Latin1 language group (ISO 8859-1) includes Danish, Dutch, English, Faroese, Finnish, French, German, Icelandic, Irish, Italian, Norwegian, Portuguese, Spanish, and Swedish. The Latin1 language group also provides the euro currency symbol and all Latin9 (ISO 8859-15) characters.
9. The Latin2 language group (ISO 8859-2) includes Albanian, Czech, English, German, Hungarian, Polish, Romanian, Serbo-Croatian, Slovak, and Slovenian.
10. The Latin3 language group (ISO 8859-3) includes Afrikaans, Catalan, Dutch, English, Esperanto, French, German, Italian, Maltese, Spanish, and Turkish.
11. The Latin4 language group (ISO 8859-4) includes Danish, English, Finnish, French, German, Greenlandic, Lap, Latvian, Lithuanian, Estonian, and Norwegian.
12. The Latin5 language group (ISO 8859-9) includes Danish, Dutch, English, Finnish, French, Irish, Italian, Norwegian, Portuguese, Spanish, Swedish, and Turkish.
13. The Thai language group supports the Thai language.

The next table provides this information:

### AFP typeface name

The IBM name for the typeface. Courier, Helvetica, and Times New Roman fonts contain characters for the ISO language groups.

### Style and weight

The style and weight of the font. Possible values are:

#### **IB**

Italic Bold

#### **IM**

Italic Medium

#### **RB**

Roman Bold

#### **RM**

Roman Medium

### Character set identifier

A six-character name, with "CZ" as the prefix, that identifies an AFP outline character set.

### Type 1 file name

The name of a Type 1 font that is used to create the AFP outline font. The file extensions are AFM, INF, and PFB.

### GCSGID

The graphic character set global identifier (GCSGID) is a collection of characters registered with a unique number and sometimes used for font and code page selection.

### FGID

The font typeface global identifier (FGID) is a number assigned to each typeface and is sometimes used for font selection.

## Summary of General Library Fonts

AFP typeface name	Style and weight	Character set identifier	Type 1 file name	GCSGID	FGID
<b>APL</b>					
Courier APL2	RM RB	CZ420P CZ440P	APL APLB	1364	307 322
<b>Arabic</b>					
Boutros Typing Arabic	RM RB IM IB	CZ4204 CZ4404 CZ4304 CZ4504	COU_A COU_ AB COU_AI COU_ABI	1506	416 420 424 428
ITC Boutros Modern Roka Arabic	RM RB IM IB	CZH204 CZH404 CZH304 CZH504	HEL_A HEL_AB HEL_AI HEL_ ABI	1506	2304 2305 2306 2307
ITC Boutros Setting Arabic	RM RB IM IB	CZN204 CZN404 CZN304 CZN504	TNR_A TNR_ AB TNR_AI TNR_ABI	1506	2308 2309 2310 2311
<b>BookMaster Specials</b>					
BookMaster Specials	RM RB IM IB	CZB20C CZB40C CZB30C CZB50C	EDFBS EDFBSB EDFBSI EDFBSBI	1241	335 336 337 338
BookMaster Specials Reverse	RM	CZB60C	EDFBSR	1241	339
<b>Cyrillic</b>					
Courier Cyrillic Greek	RM RB IM IB	CZ4203 CZ4403 CZ4303 CZ4503	COU_CG COU_CGB COU_CGI COU_CGBI	1504	416 420 424 428
Helvetica Cyrillic Greek	RM RB IM IB	CZH203 CZH403 CZH303 CZH503	HEL_CG HEL_ CGB HEL_CGI HEL_CGBI	1504	2304 2305 2306 2307
Times New Roman Cyrillic Greek	RM RB IM IB	CZN203 CZN403 CZN303 CZN503	TNR_CG TNR_ CGB TNR_CGI TNR_CGBI	1504	2308 2309 2310 2311
<b>Greek</b>					
Courier Cyrillic Greek	RM RB IM IB	CZ4203 CZ4403 CZ4303 CZ4503	COU_CG COU_CGB COU_CGI COU_CGBI	1504	416 420 424 428

AFP typeface name	Style and weight	Character set identifier	Type 1 file name	GCSGID	FGID
Helvetica Cyrillic Greek	RM RB IM IB	CZH203 CZH403 CZH303 CZH503	HEL_CG HEL_ CGB HEL_CGI HEL_CGBI	1504	2304 2305 2306 2307
Times New Roman Cyrillic Greek	RM RB IM IB	CZN203 CZN403 CZN303 CZN503	TNR_CG TNR_ CGB TNR_CGI TNR_CGBI	1504	2308 2309 2310 2311
<b>Hebrew</b>					
Shalom Hebrew	RM RB IM IB	CZ4205 CZ4405 CZ4305 CZ4505	COU_H COU_HB COU_HI COU_HBI	1362	416 420 424 428
Narkiss Tam Hebrew	RM RB IM IB	CZH205 CZH405 CZH305 CZH505	HEL_H HEL_ HB HEL_HI HEL_HBI	1362	2304 2305 2306 2307
Narkissim Hebrew	RM RB IM IB	CZN205 CZN405 CZN305 CZN505	TNR_H TNR_ HB TNR_HI TNR_HBI	1362	2308 2309 2310 2311
<b>IBM Logo</b>					
IBM Logo	RM	CZIBM0	LOGOIBM	2040	51767
<b>Katakana</b>					
Gothic Katakana	RM	CZ6208	GOT_K	1306	304
<b>Lao</b>					
Courier Lao	RM RB IM IB	CZ4209 CZ4409 CZ4309 CZ4509	COU_L COU_ LB COU_LI COU_LBI	1341	416 420 424 428
Pusuwan	RM RB IM IB	CZH209 CZH409 CZH309 CZH509	HEL_L HEL_LB HEL_LI HEL_LBI	1341	2304 2305 2306 2307
Kaewfah	RM RB IM IB	CZN209 CZN409 CZN309 CZN509	TNR_L TNR_LB TNR_LI TNR_ LBI	1341	2308 2309 2310 2311
<b>Latin</b>					
Courier Latin	RM RB IM IB	CZ420L CZ440L	COU COUB COUI COUBI	1503	416 420 424 428

AFP typeface name	Style and weight	Character set identifier	Type 1 file name	GCSGID	FGID
		CZ430L CZ450L			
Helvetica Latin	RM RB IM IB	CZH20L CZH40L CZH30L CZH50L	HEL HELB HELI HELBI	1503	2304 2305 2306 2307
Times New Roman Latin	RM RB IM IB	CZN20L CZN40L CZN30L CZN50L	TNR TNRB TNRI TNRBI	1503	2308 2309 2310 2311
<b>Latin 1</b>					
Boldface Latin 1	RB	CZ8400	BFC	2041	20224
BookMaster Latin 1	RM RB IM IB	CZB200 CZB400 CZB300 CZB500	EDFBL EDFBLB EDFBLI EDFBLBI	2041	335 336 337 338
BookMaster Latin 1 Reverse	RM	CZB600	EDFBLR	2041	339
Courier Latin 1	RM RB IM IB	CZ4200 CZ4400 CZ4300 CZ4500	COU COUB COUI COUBI	2041	416 420 424 428
Gothic Text Latin 1	RM	CZ6200	GOT	2041	304
Helvetica Latin 1	RM RB IM IB	CZH200 CZH400 CZH300 CZH500	HEL HELB HELI HELBI	2041	2304 2305 2306 2307
Letter Gothic Latin 1	RM RB	CZ5200 CZ5400	LGO LGOB	2041	400 404
Prestige Latin 1	RM RB IM	CZ7200 CZ7400 CZ7300	PRS PRSB PRSI	2041	432 318 319
Times New Roman Latin 1	RM RB IM IB	CZN200 CZN400 CZN300 CZN500	TNR TNRB TNRI TNRBI	2041	2308 2309 2310 2311
<b>Latin2, Latin3, Latin5</b>					
Courier Latin235	RM RB IM IB	CZ4202 CZ4402 CZ4302 CZ4502	COU COUB COUI COUBI	1261	416 420 424 428
Helvetica Latin235	RM RB IM IB	CZH202 CZH402	HEL HELB HELI HELBI	1261	2304 2305 2306 2307



AFP typeface name	Style and weight	Character set identifier	Type 1 file name	GCSGID	FGID
		CZH302 CZH502			
Times New Roman Latin235	RM RB IM IB	CZN202 CZN402 CZN302 CZN502	TNR TNRB TNRI TNRBI	1261	2308 2309 2310 2311
<b>Latin4</b>					
Courier Latin4	RM RB IM IB	CZ4207 CZ4407 CZ4307 CZ4507	COU COUB COUI COUBI	1268	416 420 424 428
Helvetica Latin4	RM RB IM IB	CZH207 CZH407 CZH307 CZH507	HEL HELB HELI HELBI	1268	2304 2305 2306 2307
Times New Roman Latin4	RM RB IM IB	CZN207 CZN407 CZN307 CZN507	TNR TNRB TNRI TNRBI	1268	2308 2309 2310 2311
<b>Optical Character Recognition (OCR)</b>					
OCRA	RM	CZ920A	OCR_A	968	305
OCRB	RM	CZ920B	OCR_B	1502	306
<b>Symbols</b>					
Courier Symbols	RM RB	CZ4201 CZ4401	COU_S COU_ SB	1275	416 420
Helvetica Symbols	RM RB	CZH201 CZH401	HEL_S HEL_SB	1275	2304 2305
Times New Roman Symbols	RM RB	CZN201 CZN401	TNR_S TNR_ SB	1275	2308 2309
<b>Thai</b>					
Courier Thai	RM RB IM IB	CZ4206 CZ4406 CZ4306 CZ4506	COU_T COU_ TB COU_TI COU_TBI	1505	416 420 424 428

AFP typeface name	Style and weight	Character set identifier	Type 1 file name	GCSGID	FGID
Thonburi	RM RB IM	CZH206	HEL_T HEL_TB	1505	2304 2305
	IB	CZH406	HEL_TI HEL_		2306 2307
		CZH306	TBI		
		CZH506			
Burirum	RM RB IM	CZN206	TNR_T TNR_TB	1505	2308 2309
	IB	CZN406	TNR_TI TNR_		2310 2311
		CZN306	TBI		
		CZN506			

## CJK Fonts

### 4

Chinese, Japanese, and Korean (CJK) fonts are derived from the Adobe CID-Keyed font technology and are available in AFP outline format. CJK fonts contain different typefaces that are suitable for printing various Chinese, Japanese, and Korean documents.

## Naming conventions for CJK fonts

This section shows the naming conventions for CJK outline font character sets, CJK full-width fonts, and CJK half-width fonts.

### CJK outline font character sets

The naming convention format for CJK outline font character sets is CZxxx, where:

#### CZ

AFP outline character set prefix

xxx

Language and typeface:

#### JHKG

Japanese Heisei Kaku Gothic

#### JHMG

Japanese Heisei Maru Gothic

#### JHMN

Japanese Heisei Mincho

#### HKG2

Korean Gothic

#### HSM2

Korean Myengjo

#### SFSG

Simplified Chinese Fang Song (GB)

**SHEI**

Simplified Chinese Hei (GB18030)

**SKAI**

Simplified Chinese Kai (GB)

**SSNG**

Simplified Chinese Song (GB18030)

**TKAI**

Traditional Chinese Kai

**TSNG**

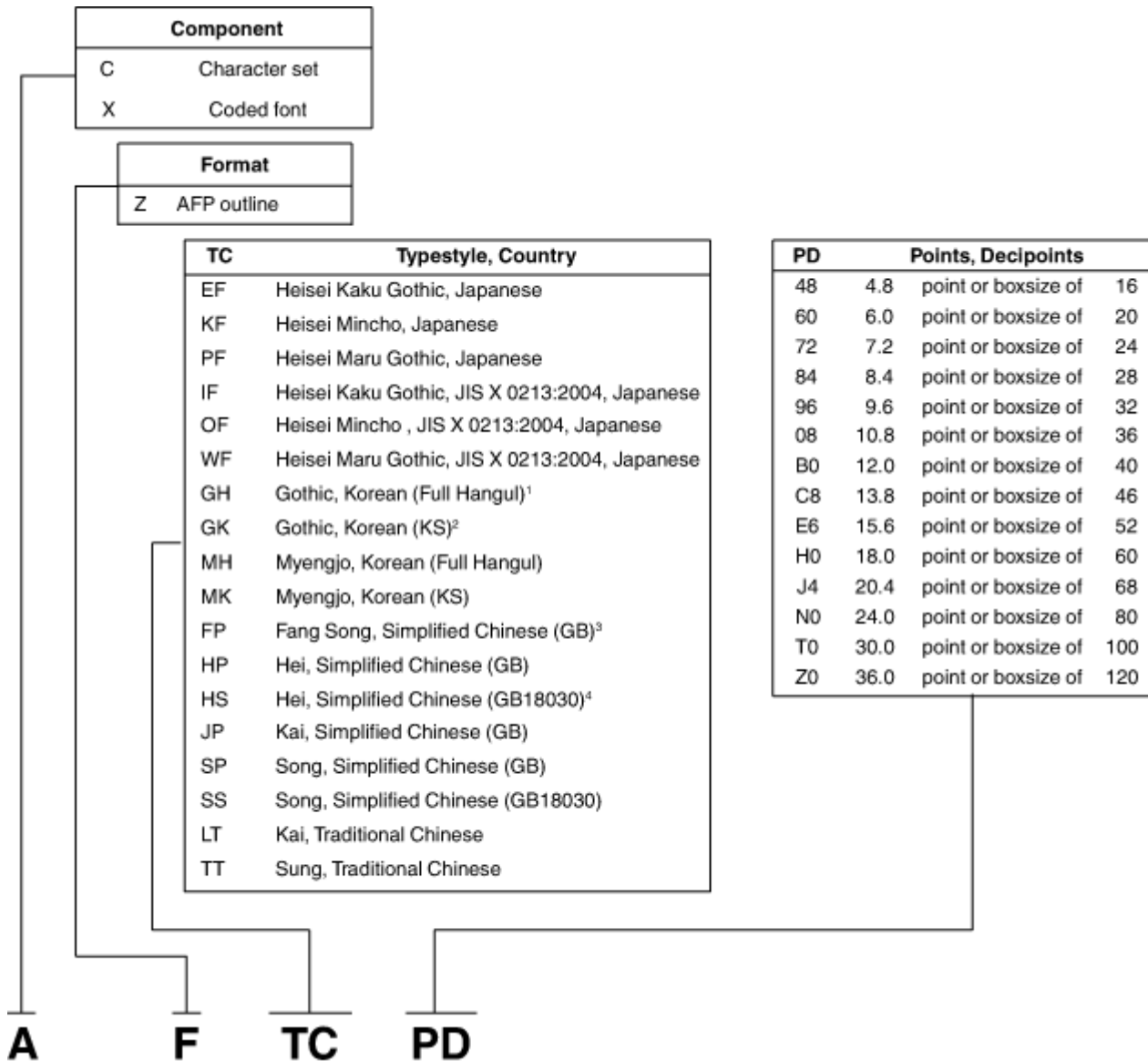
Traditional Chinese Sung

4

**CJK full-width fonts**

The next table illustrates the naming convention for CJK full-width fonts.

## Naming convention for CJK full-width fonts



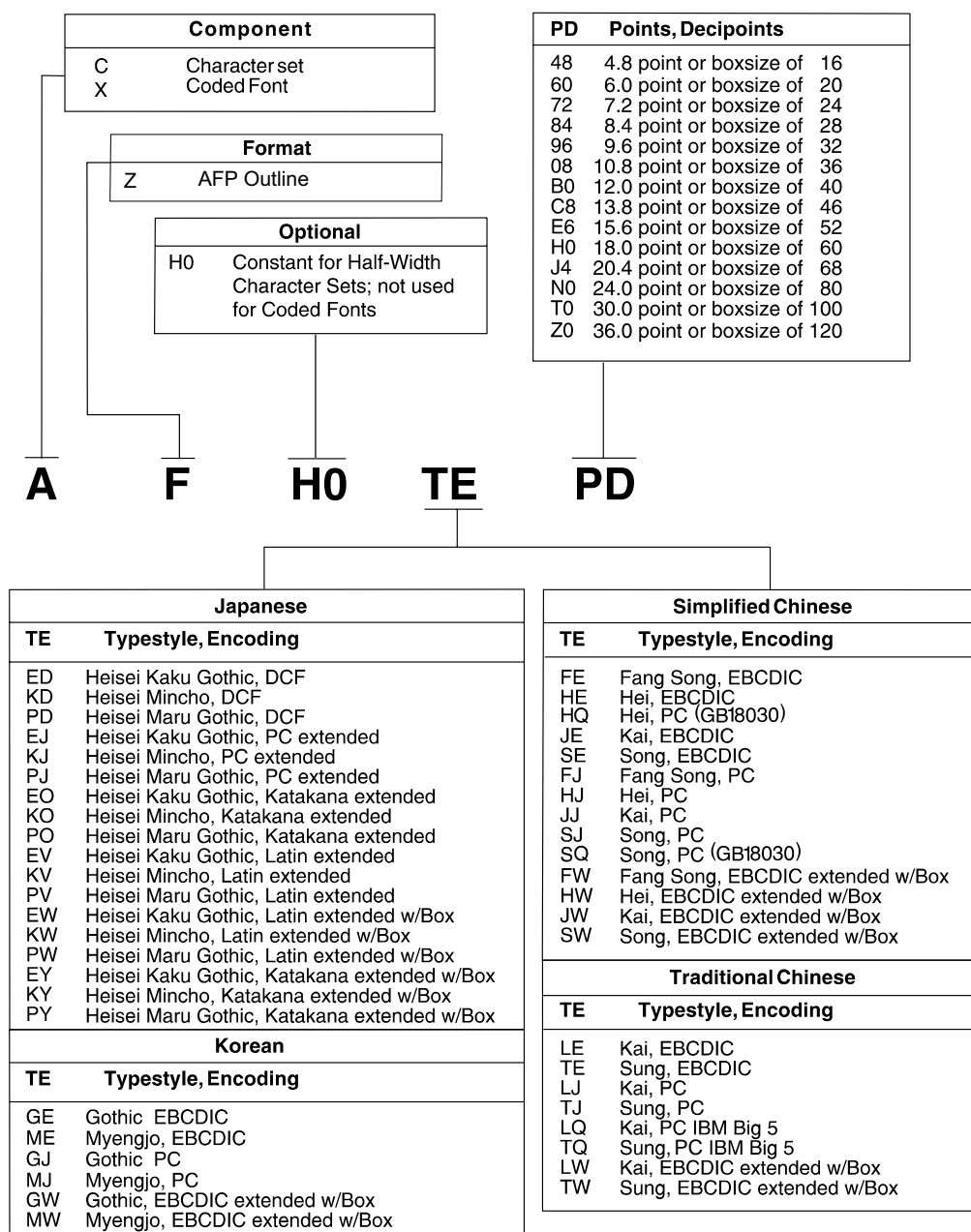
### Notes

1. **Full Hangul**: Korean Industrial Standard Code for information interchange (Hangul and Hanja) KSC 5700-199.
2. **KS**: Korean Industrial Standard Code for information interchange (Hangul and Hanja) KSC 5601-1989.
3. **GB**: Code of Chinese Graphic Character Set for Information Interchange GB 2312-80.
4. **GB18030**: Code of Chinese Graphic Character Set for Information Interchange GB 18030-2000.

## CJK half-width fonts

The next figure illustrates the naming convention for the CJK half-width fonts.

## Naming convention for CJK half-width fonts



## Summary tables for the CJK fonts

This section lists CJK fonts for these typefaces:

- Chinese:
  - Simplified Chinese:
    - ◆ Fang Song (GB)
    - ◆ Hei (GB18030)
    - ◆ Kai (GB)

- ◆ Song (GB18030)
  - Traditional Chinese:
    - ◆ Kai
    - ◆ Sung
- Japanese:
  - Japanese Heisei Kaku Gothic
  - Japanese Heisei Maru Gothic
  - Japanese Heisei Mincho
- Korean:
  - Korean Gothic
  - Korean Myengjo

## 4

The summary tables for CJK fonts provide this information:

### AFP/CID typeface name

The IBM name for the typeface.

### CID file name

The name of the CID-Keyed font file used to create the AFP outline font. The file extensions are CID and CMP.

### Weight

The font weight. Possible values are:

**L**

Light

**M**

Medium

**SB**

Semi-bold

**SL**

Semi-light

### Width

The width of the font. Possible values are:

**Full**

Full-width

**Half**

Half-width

### Coded font

A six-character name of the outline coded font, with "XZ" as the prefix, that identifies the combination of code page and character set.

### Character set

A six-character name, with "CZ" as the prefix, that identifies an AFP outline character set.

### Code page

A six-character name, with "T1" as the prefix, that identifies the code page.

### GCSGID

The graphic character set global identifier (GCSGID) is a collection of characters registered with a unique number and sometimes used for font and code page selection.

### FGID

The font typeface global identifier (FGID) is a number assigned to each typeface and is sometimes used for font selection.

## Summary of CJK fonts for Chinese (Simplified)

CJK fonts are grouped by Simplified Chinese typefaces.

Typeface name	Width	Coded font	Character set	Code page	GCSGID	FGID
<b>Simplified Chinese - GB Fang Song – IBSFSGW4 (SL)</b>						
Fang Song	FullHalf-	XZFPpd	CZSFSG	T10837	1020 1174	54566
	HalfHalf	XZFEpd XZFJpd	CZSFSG	T1H00836	1240 1366	
		XZFWpd	CZSFSG	T1H01115		
			CZSFSG	T1H01151		
<b>Simplified Chinese - GB18030 Hei – ILSHEIW6 (SL)</b>						
Hei	FullFull-	XZHPpd	CZSHEI	T10837	1020 2103	54565
	HalfHalf-	XZHSpd	CZSHEI	T1K837	1174 1240	
	HalfHalf	XZHEpd	CZSHEI	T1H00836	0103 1366	
		XZHJpd	CZSHEI	T1H01115		
		XZHQpd	CZSHEI	T1H01252		
		XZHWpd	CZSHEI	T1H01151		
<b>Simplified Chinese - GB Kai – IBSKAIW5 (M)</b>						
Kai	FullHalf-	XZJPpd XZJEpd	CZSKAI	T10837	1020 1174	54568
	HalfHalf	XZJJpd	CZSKAI	T1H00836	1240 1366	
		XZJWpd	CZSKAI	T1H01115		
			CZSKAI	T1H01151		
<b>Simplified Chinese - GB18030 Song – ILSSNGW5 (M)</b>						
Song	FullFull-	XZSPpd	CZSSNG	T10837	1020 2103	54567
	HalfHalf-	XZSSpd	CZSSNG	T1K837	1174 1240	
	HalfHalf	XZSEpd	CZSSNG	T1H00836	0103 1366	
		XZSJpd	CZSSNG	T1H01115		
		XZSQpd	CZSSNG	T1H01252		
		XZSWpd	CZSSNG	T1H01151		

## Summary of CJK fonts for Chinese (Traditional)

CJK fonts are grouped by Traditional Chinese typefaces.

Type-face name	Width	Coded font	Character set	Code page	GCSCID	FGID
<b>Traditional Chinese Kai – IBTKAIW5 (M)</b>						
Kai	FullHalf-	XZLTpd XZLEpd	CZTKAI	T10835	2074 1175	54568
	HalfHalf-	XZLJpd XZLQpd	CZTKAI	T1H00037	1189 1500	
	HalfHalf	XZLVpd	CZTKAI	T1H01043	13991367	
		XZLWpd	CZTKAI	T1H01114		
			CZTKAI	T1H01159		
			CZTKAI	T1H01152		
<b>Traditional Chinese Sung – IBTSNGW3 (L)</b>						
Sung	FullHalf-	XZTtpd XZTEpd	CZTSNG	T10835	2074 1175	54563
	HalfHalf-	XZTJpd	CZTSNG	T1H00037	1189 1500	
	HalfHalf	XZTQpd	CZTSNG	T1H01043	1399 1367	
		XZTVpd	CZTSNG	T1H01114		
		XZTWpd	CZTSNG	T1H01159		
			CZTSNG	T1H01152		

## Summary of CJK fonts for Japanese

CJK fonts are grouped by Japanese typefaces.

Type-face name	Width	Coded font	Character set	Code page	GCSCID	FGID
<b>Japanese Heisei Kaku Gothic – IBJHKGW5 (M)</b>						
Heisei Kaku Gothic	FullHalf-	XZEFpd	CZJHKG	T10300	2093 1132	53249
	HalfHalf-	XZEDpd XZEJpd	CZJHKG	T1H01002	1187 1398	
	HalfHalf-	XZEOpd	CZJHKG	T1H01041	1398 1363	
	Half	XZEVpd	CZJHKG	T1H00290	1363	
		XZEWpd	CZJHKG	T1H01027		
		XZEYpd	CZJHKG	T1H01031		
		CZJHKG	T1H01030			
<b>Japanese Heisei Kaku Gothic JIS X 0213:2004 – IBJHKGW5 (M)</b>						
Heisei Kaku Gothic	Full	XZIFpd	CZJHKG	T1K300	2093	53249
<b>Japanese Heisei Maru Gothic – IBJHMGW4 (SL)</b>						
Heisei Maru Gothic	FullHalf-	XZPFpd	CZJHMG	T10300	2093 1132	53250
	HalfHalf-	XZPDpd XZPJpd	CZJHMG	T1H01002	1187 1398	
	HalfHalf-	XZPOpd	CZJHMG	T1H01041	1398 1363	
	Half	XZPVpd	CZJHMG	T1H00290	1363	



Typeface name	Width	Coded font	Character set	Code page	GCSCID	FGID
		XZPWpd XZPYpd	CZJHMG CZJHMG CZJHMG	T1H01027 T1H01031 T1H01030		
<b>Japanese Heisei Maru Gothic JIS X 0213:2004 – IBJHMGW4 (SL)</b>						
Heisei Maru Gothic	Full	XZWFpd	CZJHMG	T1K300	2093	53250
<b>Japanese Heisei Mincho – IBJHMNW3 (L)</b>						
Heisei Mincho	FullHalf- HalfHalf- HalfHalf- Half	XZKFpd XZKDpd XZKJpd XZKOpd XZKVpd XZKWpd XZKYpd	CZJHMN CZJHMN CZJHMN CZJHMN CZJHMN CZJHMN CZJHMN	T10300 T1H01002 T1H01041 T1H00290 T1H01027 T1H01031 T1H01030	2093 1132 1187 1398 1398 1363 1363	53248
<b>Japanese Heisei Mincho JIS X 0213:2004 – IBJHMNW3 (L)</b>						
Heisei Mincho	Full	XZOFpd	CZJHMN	T1K300	2093	53248

## Summary of CJK fonts for Korean

CJK fonts are grouped by Korean typefaces.

Typeface name	Width	Coded font	Character set	Code page	GCSCID	FGID
<b>Korean Gothic – IBHKG2W5 (M)</b>						
Gothic	FullFull- HalfHalf- Half	XZGKpd XZGHpd XZGEpd XZGJpd XZGWpd	CZHKG2 CZHKG2 CZHKG2 CZHKG2 CZHKG2	T10834 T1K834 T1H00833 T1H01126 T1H01150	1010 1098 1173 1267 1365	53816
<b>Korean Myengjo – IBHSM2W5 (M)</b>						
Myengjo	FullFull- HalfHalf- Half	XZMKpd XZMHpd XZMEpd XZMJpd XZMWpd	CZHSM2 CZHSM2 CZHSM2 CZHSM2 CZHSM2	T10834 T1K834 T1H00833 T1H01126 T1H01150	1010 1098 1173 1267 1365	53560

## CJK simulation fonts

Chinese, Japanese, and Korean (CJK) simulation fonts are available in AFP outline format that simulates raster font products.

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### Naming conventions for CJK simulation fonts

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This section shows the naming conventions for CJK simulated outline font character sets and coded fonts.

#### CJK simulation outline font character sets

The naming convention format for CJK simulation outline font character sets is `CZxxxx`, where:

##### **CZ**

AFP outline character set prefix

xxxx

Language and typeface:

##### **JHKG**

Japanese Heisei Kaku Gothic

##### **JHMG**

Japanese Heisei Maru Gothic

##### **JHMN**

Japanese Heisei Mincho

##### **HKG2**

Korean Gothic

##### **HSM2**

Korean Myengjo

##### **SHEI**

Simplified Chinese Hei

##### **SSNG**

Simplified Chinese Song

##### **TSNG**

Traditional Chinese Sung

#### CJK simulation outline coded fonts

The naming convention format for CJK simulation outline coded fonts is `XZTBXE`, where:

##### **T**

Typestyle

**BX**

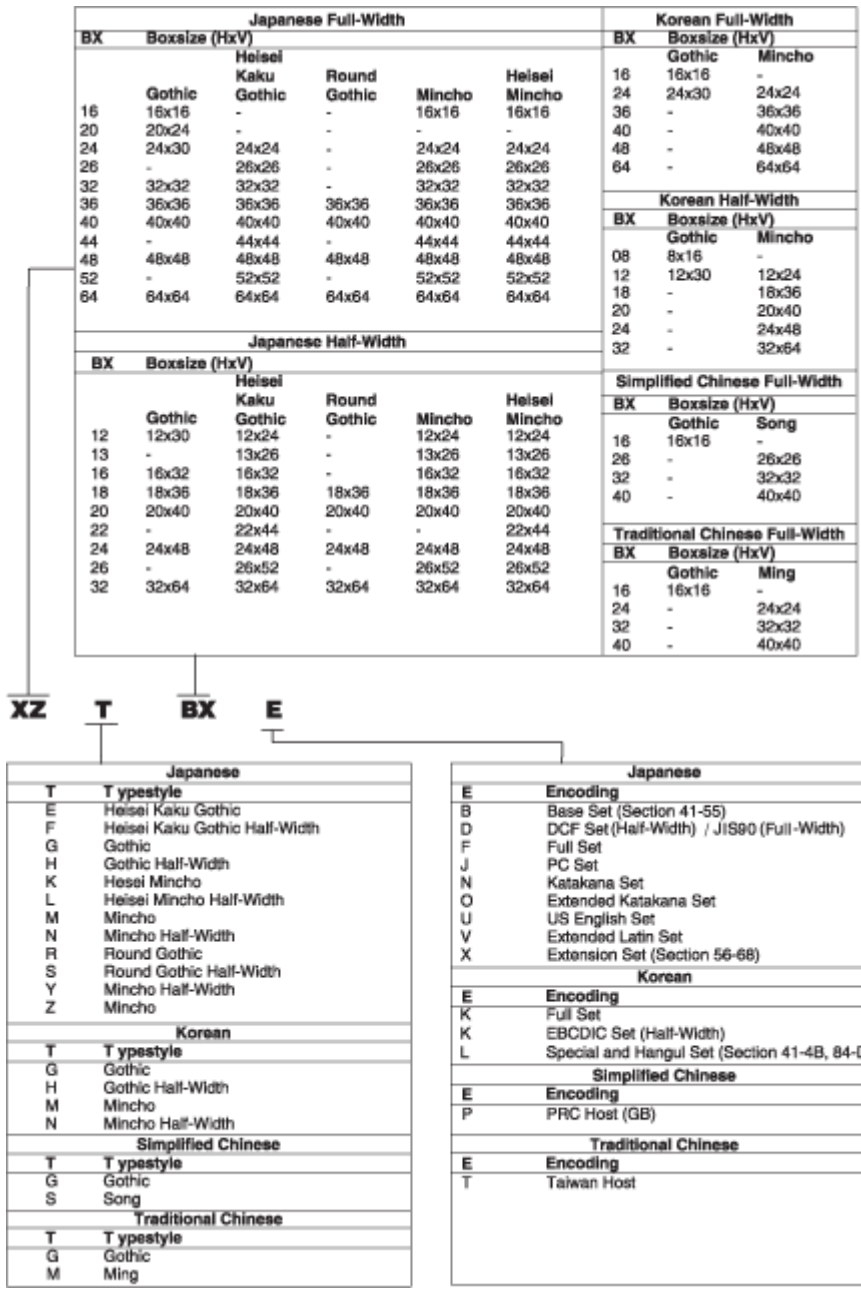
Box size

**E**

Encoding

The next figure illustrates the naming convention for CJK simulation outline coded fonts.

**Naming convention for CJK simulation outline coded fonts**



## Summary table for the CJK simulation fonts

This section lists CJK simulation fonts for these typefaces:

- Chinese:
  - Simplified Chinese:
    - ◆ Gothic simulated by Hei
    - ◆ Song simulated by Song
  - Traditional Chinese:
    - ◆ Gothic simulated by Sung
    - ◆ Ming simulated by Sung
- Japanese:
  - Gothic and Heisei Kaku Gothic simulated by Heisei Kaku Gothic
  - Round Gothic simulated by Heisei Maru Gothic
  - Mincho and Heisei Mincho simulated by Heisei Mincho
- Korean:
  - Gothic simulated by Gothic
  - Mincho simulated by Myengjo

The summary of the CJK simulation fonts provides this information:

### CID file name

The name of the CID-Keyed font file used to create the AFP outline font. The file extensions are CID and CMP.

### Weight

The font weight. Possible values are:

**L**

Light

**M**

Medium

**SB**

Semi-bold

**SL**

Semi-light

### Width

The font width. Possible values are:

**Full**

Full-Width

## Half

Half-Width

### Coded font

A six-character name of the outline coded font, with "XZ" as the prefix, that identifies the combination of code page and character set.

### Character set

A six-character name, with "CZ" as the prefix, that identifies an AFP outline character set.

### Code page

A six-character name, with "T1" as the prefix, that identifies the code page.

### GCSGID

The graphic character set global identifier (GCSGID) is a collection of characters registered with a unique number and sometimes used for font and code page selection.

### FGID

The font typeface global identifier (FGID) is a number assigned to each typeface and is sometimes used for font selection.

### Box size

The box size of the 240-pel fonts shown numerically as height by vertical (HxV) size.

## Summary of CJK simulation fonts

CJK simulation fonts are grouped by Chinese, Japanese, and Korean typefaces. The **CID** file name and the **font weight** appear after each typeface name.

Coded font	Width	Code page	GCSGID	Box size
<b>Simplified Chinese Gothic simulated by Hei – ILSHEIW6 (SB)</b>				
XZGbxP	Full	T10837	1020	16x16
<b>Simplified Chinese Song simulated by Song – ILSSNGW5 (M)</b>				
XZSbxP	Full	T10837	1020	26x26 32x32 40x40
<b>Traditional Chinese Gothic simulated by Sung – IBTSNGW3 (L)</b>				
XZGbxT	Full	T10835	2074	16x16
<b>Traditional Chinese Ming simulated by Sung – IBTSNGW3 (L)</b>				
XZMbxT	Full	T10835	2074	24x24 32x32 40x40
<b>Japanese Gothic simulated by Heisei Kaku Gothic – IBJHKGW5 (M)</b>				
XZGbxB	Full Full	T11300	20932093-	16x16 20x24 24x30 32x32 36x36
XZGbxF	Full Half	T11300	20931132-	40x40 48x48 64x64 16x16 20x24
XZGbxX	Half Half	T11300		24x30 32x32 36x36 40x40 48x48
XZHbxD		T1H01002		64x64 48x48 64x64 12x30 16x32

Coded font	Width	Code page	GCSGID	Box size
XZHbxJ	Half Half	T1H01041	11873321-	18x36 20x40 24x48 32x64 12x30
XZHbxN	Half	T1HK0290	39810113-	16x32 18x36 20x40 24x48 32x64
XZHbxO		T1H00290	98	12x30 16x32 18x36 20x40 24x48
XZHbxU		T1HK0037		32x64 12x30 16x32 18x36 20x40
XZHbxV		T1H10027		24x48 32x64 12x30 16x32 18x36 20x40 24x48 32x64 12x30 16x32 18x36 20x40 24x48 32x64
<b>Japanese Gothic (JIS90) simulated by Heisei Kaku Gothic – IBJHKGW5 (M)</b>				
XZGbxD	Full	T1J300	2093	16x16 20x24 24x30 32x32 36x36 40x40 48x48 64x64
<b>Japanese Heisei Kaku Gothic simulated by Heisei Kaku Gothic – IBJHKGW5 (M)</b>				
XZExB	Full Full	T10300	20932093-	24x24 26x26 32x32 36x36 40x40
XZExF	Half Half	T10300	11321187-	44x44 48x48 52x52 64x64 24x24
XZFbxD	Half Half	T1H01002	33213981-	26x26 32x32 36x36 40x40 44x44
XZFbxJ	Half Half	T1H01041	011398	48x48 52x52 64x64 12x24 13x26
XZFbxN		T1HK0290		16x32 18x36 20x40 22x44 24x48
XZFbxO		T1H00290		26x52 32x64 12x24 13x26 16x32
XZFbxU		T1HK0037		18x36 20x40 22x44 24x48 26x52
XZFbxV		T1H01027		32x64 12x24 13x26 16x32 18x36 20x40 22x44 24x48 26x52 32x64 12x24 13x26 16x32 18x36 20x40 22x44 24x48 26x52 32x64 12x24 13x26 16x32 18x36 20x40 22x44 24x48 26x52 32x64 12x24 13x26 16x32 18x36 20x40 22x44 24x48 26x52 32x64
<b>Japanese Round Gothic simulated by Heisei Maru Gothic – IBJHMGW4 (SL)</b>				
XZRbxB	Full Full	T1I300	2093 2093	36x36 40x40 48x48 64x64 36x36
XZRbxF	Full Half	T1I300	2093 1132	40x40 48x48 64x64 48x48 64x64
XZRbxX	Half Half	T1I300	1187 332	18x36 20x40 24x48 32x64 18x36
XZSbxD	Half Half	T1H01002	1398 101	20x40 24x48 32x64 18x36 20x40
XZSbxJ	Half	T1H01041	1398	24x48 32x64 18x36 20x40 24x48
XZSbxN		T1HK0290		32x64 18x36 20x40 24x48 32x64
XZSbxO		T1H00290		18x36 20x40 24x48 32x64
XZSbxU		T1HK0037		
XZSbxV		T1H01027		
<b>Japanese Round Gothic (JIS90) simulated by Heisei Maru Gothic – IBJHMGW4 (SL)</b>				
XZRbxD	Full	T1J300	2093	36x36 40x40 48x48 64x64
<b>Japanese Mincho simulated by Heisei Mincho – IBJHMNW3 (L)</b>				
XZMbxB	Full Full	T1I300	2093 2093	16x16 24x24 26x26 32x32 36x36
XZMbxF	Full Full	T1I300	2093 2093	40x40 44x44 48x48 52x52 64x64
XZMbxX	Full Half	T1I300	2093 1132	16x16 24x24 26x26 32x32 36x36
XZZbxB	Half Half	T1I300	1187 332	40x40 44x44 48x48 52x52 64x64
XZZbxF	Half Half	T1I300	1398 101	48x48 64x64 24x24 24x24 12x24

Coded font	Width	Code page	GCSGID	Box size
XZNBxD	Half Half	T1H01002	1398 1132	13x26 16x32 18x36 20x40 24x48
XZNBxJ	Half Half	T1H01041	1187 332	26x52 32x64 12x24 13x26 16x32
XZNBxN	Half Half	T1HK0290	1398 101	18x36 20x40 24x48 26x52 32x64
XZNBxO	Half	T1H00290	1398	12x24 13x26 16x32 18x36 20x40
XZNBxU		T1HK0037		24x48 26x52 32x64 12x24 13x26
XZNBxV		T1H01027		16x32 18x36 20x40 24x48 26x52
XZYbxD		T1H01002		32x64 12x24 13x26 16x32 18x36
XZYbJ		T1H01041		20x40 24x48 26x52 32x64 12x24
XZYbN		T1HK0290		13x26 16x32 18x36 20x40 24x48
XZYbO		T1H00290		26x52 32x64 12x24 12x24 12x24
XZYbU		T1HK0037		12x24 12x24 12x24
XZYbV		T1H01027		
<b>Japanese Mincho (JIS90) simulated by Heisei Mincho – IBJHMNW3 (L)</b>				
XZMbxD	Full Full	T1J300	20932093	16x16 24x24 26x26 32x32 36x36
XZZbxD		T1J300		40x40 44x44 48x48 52x52 64x64 24x24
<b>Japanese Heisei Mincho simulated by Heisei Mincho – IBJHMNW3 (L)</b>				
XZKbxB	Full Full	T10300	2093 2093	16x16 24x24 26x26 32x32 36x36
XZKbxF	Half Half	T10300	1132 1187	40x40 44x44 48x48 52x52 64x64
XZLbxD	HalfHalf	T1H01002	332 1398	16x16 24x24 26x26 32x32 36x36
XZLbJ	Half Half	T1H01041	101 1398	40x40 44x44 48x48 52x52 64x64
XZLbN		T1HK0290		12x24 13x26 16x32 18x36 20x40
XZLbO		T1H00290		22x44 24x48 26x52 32x64 12x24
XZLbU		T1HK0037		13x26 16x32 18x36 20x40 22x44
XZLbV		T1H01027		24x48 26x52 32x64 12x24 13x26 16x32 18x36 20x40 22x44 24x48 26x52 32x64 12x24 13x26 16x32 18x36 20x40 22x44 24x48 26x52 32x64 12x24 13x26 16x32 18x36 20x40 22x44 24x48 26x52 32x64 13x26 16x32 18x36 20x40 22x44 24x48 26x52 32x64
<b>Korean Gothic simulated by Gothic – IBHKG2W5 (M)</b>				
XZGbxK	Full Full	T10834	1010 1010	16x16 24x30 16x16 24x30 8x16 12x30
XZGbxL	Half	T10834	1173	
XZHbxK		T1H00833		
<b>Korean Mincho simulated by Myengjo – IBHSM2W5 (M)</b>				
XZMbxB	Full Full	T10834	1010 1010	24x24 32x32 36x36 40x40 48x48
XZMbXLXZ-NbxK	Half	T10834	1173	64x64 24x24 32x32 36x36 40x40 48x48 64x64 12x30 16x32 18x36 20x40 24x48 32x64

Here are the **character set** codes and **FGDI**s associated with the CJK simulation fonts:

<b>CID file name</b>	<b>Character set</b>	<b>FDGI</b>
ILSHEIW6	CZSHEI	54565
ILSSNGW5	CZSSNG	54567
IBTSNGW3	CZTSNG	54563
IBJHKGW5	CZJHKG	53249
IBJHMGW4	CZJHMG	53250
IBJHMNW3	CZJHMN	53248
IBHKG2W5	CZHKG2	53816
IBHSM2W5	CZHSM2	53560



# 5. AFP Classic OpenType Fonts

- Highlights of the AFP Classic Fonts
- AFP Classic Fonts and Resource Access Table File List
- AFP Classic Fonts Extended Code Page File List
- Samples of AFP Classic Fonts

The AFP classic OpenType fonts that are included with the InfoPrint Font Collection are:

- Courier IBM
- Helvetica IBM
- Times New Roman IBM

Each of these fonts has four styles: Regular, Bold, Italic, and Bold Italic.

An extra set of 12 Arabic-specific fonts are included to provide backward compatibility with the older Arabic AFP Outline fonts. Within the Arabic fonts, certain Latin characters had a different design than their non-Arabic Latin equivalents. The typeface names are: Courier IBM Arabic, Helvetica IBM Arabic, and Times New Roman IBM Arabic. Each Arabic typeface is available in four styles; Regular, Bold, Italic, and Bold Italic.

## Highlights of the AFP Classic Fonts

The AFP classic OpenType fonts include these highlights:

- Unicode glyph support included in each font:

Alphabetic Presentation Forms	Lao
Arabic	Latin Extended-A
Arabic Presentation Forms-B	Latin Extended-B
Arrows	Latin-1 Supplement
Basic Latin	Letter-like Symbols
Block Elements	Mathematical Operators
Box Drawing	Miscellaneous Symbols
CJK symbols and Punctuation	Miscellaneous Technical
Combining Diacritical Marks	Non-Plane 0
Currency Symbols	Number Forms
Cyrillic	Private Use
General Punctuation	Small Form Variants
Geometric Shapes	Spacing Modifier Letters
Greek	Superscripts and Subscripts
Hebrew	Thai

- The Tilde and Circumflex characters have been modified to match Unicode standards.

- The Arabic Latin glyphs with design variations are listed below in the Classic Helvetica IBM Type
 

Helvetica IBM Numbers 0-9	0123456789
Helvetica IBM Arabic Numbers 0-9	0123456789
Helvetica IBM Punctuation	: ! ! ! ' " ( ) { } []
Helvetica IBM Arabic Punctuation	: ! ! ! ' " ( ) ( ) []

family printed in 18 point:

ifc0001

- The AFP Classic Symbols fonts are not included at this time.
- The "Theta Small" glyph, "0", has been assigned the Unicode value of U+03B8 to match the IBM standard for GCSGID GT610000.

## AFP Classic Fonts and Resource Access Table File List

Font Name / Description	File Name
Courier IBM	IBMCOU.ttf
Courier IBM Bold	IBMCOUB.ttf
<i>Courier IBM Bold Italic</i>	IBMCOUBI.ttf
<i>Courier Italic</i>	IBMCOUI.ttf
Helvetica IBM	IBMHEL.ttf
<b>Helvetica IBM Bold</b>	IBMHELB.ttf
<b><i>Helvetica IBM Bold Italic</i></b>	IBMHELBI.ttf
<i>Helvetica IBM Italic</i>	IBMHELI.ttf
Times New Roman IBM	IBMTNR.ttf
<b>Times New Roman IBM Bold</b>	IBMTNRB.ttf
<b><i>Times New Roman IBM Bold Italic</i></b>	IBMTNRBI.ttf
<i>Times New Roman IBM Italic</i>	IBMTNRI.ttf
Courier IBM Arabic	IBMCOUA.ttf
Courier IBM Arabic Bold	IBMCOUAB.ttf
<i>Courier IBM Arabic Bold Italic</i>	IBMCOUABI.ttf
<i>Courier IBM Arabic Italic</i>	IBMCOUAI.ttf
Helvetica IBM Arabic	IBMHELA.ttf
<b>Helvetica IBM Arabic Bold</b>	IBMHELAB.ttf
<b><i>Helvetica IBM Arabic Bold Italic</i></b>	IBMHELABI.ttf
<i>Helvetica IBM Arabic Italic</i>	IBMHELAI.ttf
Times New Roman IBM Arabic	IBMTNRA.ttf
<b>Times New Roman IBM Arabic Bold</b>	IBMTNRAB.ttf
<b><i>Times New Roman IBM Arabic Bold Italic</i></b>	IBMTNRABI.ttf
<i>Times New Roman IBM Arabic Italic</i>	IBMTNRAI.ttf
AFP Resource Access Table	IBM_DataObjectFont.rat

ifc0002

## AFP Classic Fonts Extended Code Page File List

T1000038.ECP	T1000259.ECP	T1000260.ECP	T1000276.ECP	T1000286.ECP
T1000287.ECP	T1000288.ECP	T1000289.ECP	T1000290.ECP	T1000293.ECP
T1000310.ECP	T1000361.ECP	T1000363.ECP	T1000367.ECP	T1000382.ECP
T1000383.ECP	T1000384.ECP	T1000385.ECP	T1000386.ECP	T1000387.ECP
T1000388.ECP	T1000389.ECP	T1000390.ECP	T1000391.ECP	T1000392.ECP
T1000393.ECP	T1000394.ECP	T1000395.ECP	T1000420.ECP	T1000423.ECP
T1000424.ECP	T1000437.ECP	T1000803.ECP	T1000808.ECP	T1000813.ECP
T1000819.ECP	T1000829.ECP	T1000836.ECP	T1000838.ECP	T1000848.ECP
T1000849.ECP	T1000850.ECP	T1000851.ECP	T1000852.ECP	T1000853.ECP
T1000855.ECP	T1000856.ECP	T1000857.ECP	T1000858.ECP	T1000860.ECP
T1000861.ECP	T1000862.ECP	T1000863.ECP	T1000864.ECP	T1000865.ECP
T1000866.ECP	T1000867.ECP	T1000869.ECP	T1000870.ECP	T1000872.ECP
T1000874.ECP	T1000875.ECP	T1000876.ECP	T1000877.ECP	T1000880.ECP
T1000889.ECP	T1000892.ECP	T1000893.ECP	T1000897.ECP	T1000899.ECP
T1000901.ECP	T1000902.ECP	T1000903.ECP	T1000904.ECP	T1000905.ECP
T1000910.ECP	T1000912.ECP	T1000913.ECP	T1000914.ECP	T1000915.ECP
T1000916.ECP	T1000920.ECP	T1000921.ECP	T1000922.ECP	T1000923.ECP
T1000924.ECP	T1001002.ECP	T1001003.ECP	T1001004.ECP	T1001008.ECP
T1001025.ECP	T1001026.ECP	T1001027.ECP	T1001028.ECP	T1001029.ECP
T1001038.ECP	T1001039.ECP	T1001041.ECP	T1001042.ECP	T1001043.ECP
T1001046.ECP	T1001068.ECP	T1001069.ECP	T1001087.ECP	T1001091.ECP
T1001092.ECP	T1001093.ECP	T1001110.ECP	T1001111.ECP	T1001112.ECP
T1001122.ECP	T1001123.ECP	T1001124.ECP	T1001125.ECP	T1001129.ECP
T1001130.ECP	T1001131.ECP	T1001132.ECP	T1001133.ECP	T1001139.ECP
T1001140.ECP	T1001141.ECP	T1001142.ECP	T1001143.ECP	T1001144.ECP
T1001145.ECP	T1001146.ECP	T1001147.ECP	T1001148.ECP	T1001149.ECP
T1001153.ECP	T1001154.ECP	T1001155.ECP	T1001156.ECP	T1001157.ECP
T1001158.ECP	T1001160.ECP	T1001161.ECP	T1001162.ECP	T1001163.ECP
T1001164.ECP	T1001166.ECP	T1001250.ECP	T1001251.ECP	T1001252.ECP
T1001253.ECP	T1001254.ECP	T1001257.ECP	T1001258.ECP	T1B00037.ECP
T1B00273.ECP	T1B00274.ECP	T1B00275.ECP	T1B00277.ECP	T1B00278.ECP
T1B00280.ECP	T1B00281.ECP	T1B00282.ECP	T1B00284.ECP	T1B00285.ECP
T1B00297.ECP	T1B00361.ECP	T1B00382.ECP	T1B00383.ECP	T1B00384.ECP
T1B00385.ECP	T1B00386.ECP	T1B00387.ECP	T1B00388.ECP	T1B00389.ECP
T1B00390.ECP	T1B00391.ECP	T1B00392.ECP	T1B00393.ECP	T1B00394.ECP
T1B00395.ECP	T1B00500.ECP	T1B00871.ECP	T1B00BGS.ECP	T1D0BASE.ECP
T1D0GP12.ECP	T1DABASE.ECP	T1DDBASE.ECP	T1DCDCFS.ECP	T1DDBASE.ECP
T1DEBASE.ECP	T1DFBASE.ECP	T1DIBASE.ECP	T1DNBASE.ECP	T1DSBASE.ECP
T1DUBASE.ECP	T1E00420.ECP	T1E00813.ECP	T1E00852.ECP	T1E00857.ECP
T1E00864.ECP	T1E00869.ECP	T1E00875.ECP	T1E00877.ECP	T1E00893.ECP
T1E01008.ECP	T1E01046.ECP	T1GE0200.ECP	T1GE0300.ECP	T1GI0361.ECP
T1GI0382.ECP	T1GI0383.ECP	T1GI0384.ECP	T1GI0385.ECP	T1GI0386.ECP
T1GI0387.ECP	T1GI0388.ECP	T1GI0389.ECP	T1GI0390.ECP	T1GI0391.ECP
T1GI0392.ECP	T1GI0393.ECP	T1GI0394.ECP	T1GI0395.ECP	T1GPI363.ECP
T1L000GN.ECP	T1L000RN.ECP	T1L000SN.ECP	T1L000XN.ECP	T1L000YN.ECP
T1L00A11.ECP	T1L00KN1.ECP	T1L00QNC.ECP	T1L02773.ECP	T1L02774.ECP
T1L038BA.ECP	T1L038TE.ECP	T1L0AD10.ECP	T1L0AG10.ECP	T1L0AG15.ECP
T1L0AI10.ECP	T1L0AT10.ECP	T1L0DUMP.ECP	T1L0FOLD.ECP	T1L0OCR1.ECP
T1L0OCR2.ECP	T1L0OCR3.ECP	T1L0OCRB.ECP	T1L0PCAN.ECP	T1L0PCHN.ECP
T1M00830.ECP	T1S0AE10.ECP	T1S0AP10.ECP	T1S0S192.ECP	T1S0S193.ECP
T1S0S198.ECP	T1V10037.ECP	T1V10273.ECP	T1V10274.ECP	T1V10275.ECP
T1V10277.ECP	T1V10278.ECP	T1V10280.ECP	T1V10281.ECP	T1V10282.ECP
T1V10284.ECP	T1V10285.ECP	T1V10290.ECP	T1V10297.ECP	T1V10500.ECP
T1V10871.ECP				

ifc0003

## Samples of AFP Classic Fonts

This section shows samples of the AFP Classic Fonts.

### AFP Classic Courier IBM font samples

Courier IBM

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#\$\$%^&\*()\_+  
1234567890-={}|:"<>?] [¥; ', ./

*Courier IBM Italic*

*ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#\$\$%^&\*()\_+  
1234567890-={}|:"<>?] [¥; ', ./*

Courier IBM Bold

**ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#\$\$%^&\*()\_+  
1234567890-={}|:"<>?] [¥; ', ./**

*Courier IBM Bold Italic*

***ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#\$\$%^&\*()\_+  
1234567890-={}|:"<>?] [¥; ', ./***

ifc0004

**AFP Classic Helvetica IBM font samples**

Helvetica IBM

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={}|:"<>?[¥;',./

*Helvetica IBM Italic*

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={}|:"<>?[¥;',./

**Helvetica IBM Bold**

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={}|:"<>?[¥;',./

*Helvetica IBM Bold Italic*

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={}|:"<>?[¥;',./

ife0006

**AFP Classic Times New Roman IBM font samples**

Times New Roman IBM

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={}|:"<>?[¥;',./

*Times New Roman IBM Italic*

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={}|:"<>?[¥;',./

**Times New Roman IBM Bold**

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={}|:"<>?[¥;',./

*Times New Roman IBM Bold Italic*

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={}|:"<>?[¥;',./

ife0007

### AFP Classic Courier IBM Arabic font samples

Courier IBM Arabic  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#%&^\*( )\_+  
1234567890-=()|: "<>? ] [ ¥; ' , . /

*Courier IBM Arabic Italic*  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#%&^\*( )\_+  
1234567890-=()|: "<>? ] [ ¥; ' , . /

**Courier IBM Arabic Bold**  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#%&^\*( )\_+  
1234567890-=()|: "<>? ] [ ¥; ' , . /

***Courier IBM Arabic Bold Italic***  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#%&^\*( )\_+  
1234567890-=()|: "<>? ] [ ¥; ' , . /

ifc0008

### AFP Classic Helvetica IBM Arabic font samples

Helvetica IBM Arabic  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#%&^\*( )\_+  
1234567890-=()|: "<>? ] [ ¥; ' , . /

*Helvetica IBM Arabic Italic*  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#%&^\*( )\_+  
1234567890-=()|: "<>? ] [ ¥; ' , . /

**Helvetica IBM Arabic Bold**  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#%&^\*( )\_+  
1234567890-=()|: "<>? ] [ ¥; ' , . /

***Helvetica IBM Arabic Bold Italic***  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz!@#%&^\*( )\_+  
1234567890-=()|: "<>? ] [ ¥; ' , . /

ifc0009

**AFP Classic Times New Roman IBM Arabic font samples**

Times New Roman IBM Arabic

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={ }|:"'<>?][\;',./

*Times New Roman IBM Arabic Italic*

*ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={ }|:"'<>?][\;',./*

**Times New Roman IBM Arabic Bold**

**ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={ }|:"'<>?][\;',./**

***Times New Roman IBM Arabic Bold Italic***

***ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz!@#\$%^&\*()\_+  
 1234567890-={ }|:"'<>?][\;',./***

ifc0010





## 6. AFP Asian Classic OpenType Fonts

- **Highlights of the AFP Asian Classic Fonts**
- **AFP Asian Classic Fonts and Resource Access Table File List**
- **AFP Asian Classic Fonts Extended Code Page File List**

The new Asian Classic TrueType Collection (TTC) fonts can be used to replace the older AFP Asian double-byte character set (DBCS) fonts. The new Asian Classic OpenType (TTF) fonts can be used to replace the older AFP Asian single-byte character set (SBCS) fonts.

These Asian locales and typefaces are provided:

Locale	Typeface
Simplified Chinese	Fang Song
	Hei
	Kai
	Song
Traditional Chinese	Kai
	Sung
Japanese	Heisei Mincho
	Heisei Kaku Gothic
	Heisei Maru Gothic
Korean	Gothic
	Myengjo

### Highlights of the AFP Asian Classic Fonts

The Japanese Heisei fonts have been enhanced to meet the JIS X 0213:2004 Japanese International Standard.

The Japanese AFP Asian Classic TTC Fonts were enhanced in the 3.7 version of the InfoPrint Font Collection.

The Unicode code point for a single new Japanese Era name character, Reiwa, is U+32FF. It can also be printed or displayed utilizing two Unicode code points: U+4EE4U+548C.

### AFP Asian Classic Fonts and Resource Access Table File List

Considerations for the AFP Asian Classic Font set:

- A total of 34 fonts are provided with the AFP Asian Classic Font set.
- A 'P' in the font names represents a proportional font. No 'P' in the font name represents a monospaced font. For example, the font file IBM\_TCSung.TTC contains font "TC-Sung IBM" and font "TC-PSung IBM".
- The OpenType TTF fonts are half width to provide compatibility with the old AFP SBCS fonts.
- Font file names containing 'SB' are derived from the single-byte Asian font set and must use the extended code pages provided. Non 'SB' fonts can be used to print UTF-16BE Unicode data.

Locale	Font Name	Font File Name
Japanese	Heisei KakuGothic PW5 IBM	IBM_Heisei_KakuGothic5.TTC
	Heisei KakuGothic W5 IBM	
	Heisei MaruGothic PW4 IBM	IBM_Heisei_MaruGothic4.TTC
	Heisei MaruGothic W4 IBM	
	Heisei Mincho PW3 IBM	IBM_Heisei_Mincho3.TTC
	Heisei Mincho W3 IBM	
	HeiseiKakuGothicW5SBIBM	IBM_HeiseiKakuGoW5SB.TTF
	HeiseiMaruGothicW4SBIBM	IBM_HeiseiMaruGoW4SB.TTF
	HeiseiMinchoW3SBIBM	IBM_HeiseiMinchoW3SB.TTF
	HeiseiKakuGothicW5IBM	IBMHeiseiKakuGothic5.TTC
	PHeiseiKakuGothicW5IBM	
	HeiseiKakuGothicW5IBMi83	IBMHeiseiKakuGothic5i83.TTC
	PHeiseiKakuGothicW5IBMi83	
	HeiseiKakuGothicW5IBMi90	IBMHeiseiKakuGothic5i90.TTC
	PHeiseiKakuGothicW5IBMi90	
	HeiseiKakuGothicW5IBMj90	IBMHeiseiKakuGothic5j90.TTC
	PHeiseiKakuGothicW5IBMj90	
	HeiseiMaruGothicW4IBM	IBMHeiseiMaruGothic4.TTC
	PHeiseiMaruGothicW4IBM	
	HeiseiMaruGothicW4IBMi83	IBMHeiseiMaruGothic4i83.TTC
	PHeiseiMaruGothicW4IBMi83	
	HeiseiMaruGothicW4IBMi90	IBMHeiseiMaruGothic4i90.TTC
	PHeiseiMaruGothicW4IBMi90	
	HeiseiMaruGothicW4IBMj90	IBMHeiseiMaruGothic4j90.TTC
	PHeiseiMaruGothicW4IBMj90	
	HeiseiMinchoW3IBM	IBMHeiseiMincho3.TTC

Japanese	PHeiseiMinchoW3IBM	
	HeiseiMinchoW3IBMi83	IBMHeiseiMincho3i83.TTC
	PHeiseiMinchoW3IBMi83	
	HeiseiMinchoW3IBMi90	IBMHeiseiMincho3i90.TTC
	PHeiseiMinchoW3IBMi90	
	HeiseiMinchoW3IBMj90	IBMHeiseiMincho3j90.TTC
	PHeiseiMinchoW3IBMj90	
Korean	K-Gothic IBM	IBM_KGothic.TTC
	K-PGothic IBM	
	K-Gothic SB IBM	IBM_KGothicSB.ttf
	K-Myengjo IBM	IBM_KMyengjo.TTC
	K-PMyengjo IBM	
	K-Myengjo SB IBM	IBM_KMyengjoSB.ttf
Simplified Chinese	SCFangSong IBM	IBM_SCFangSong.TTC
	SCPFangSong IBM	
	SCFangSong SB IBM	IBM_SCFangSongSB.TTF
	SCHei IBM	IBM_SCHei.TTC
	SCPHei IBM	
	SCHei SB IBM	IBM_SCHeiSB.TTF
	SCKai IBM	IBM_SCKai.TTC
	SCPkai IBM	
	SCKai SB IBM	IBM_SCKaiSB.TTF
	SCPSong IBM	IBM_SCSong.TTC
	SGSong IBM	
	SGSong SB IBM	IBM_SCSongSB.TTF
	Traditional Chinese	TC-Kai IBM
TC-PKai IBM		
TC-Kai SB IBM		IBM_TCKaiSB.TTF
TC-PSung IBM		IBM_TCSung.TTC
TC-Sung IBM		
TC-Sung SB IBM		IBM_TCSungSB.TTF

## AFP Asian Classic Fonts Extended Code Page File List

The AFP Asian Classic Fonts include a set of extended code pages. The extended code pages allow mapping an ASCII or EBCDIC code point directly to its equivalent UTF-16BE Unicode code point. If you use the extended code pages, you must supply the extended code page source directory to AFP as a code page resource path. It is recommended that you concatenate the extended code page directory that is included in front of your existing code page directory.

Locale	Code Page	Description
Japanese	T10300.ECP	Japanese DBCS -Host
	T10300U.ECP	Japanese DBCS -Host
	T1H00290.ECP	Japanese Katakana Extended
	T1H01002.ECP	Japanese DCF Rel 2 Compatibility
	T1H01027.ECP	Japanese Latin Extended
	T1H01030.ECP	Japanese Katakana Extended w/Box
	T1H01031.ECP	Japanese Latin Extended w/Box
	T1H01041.ECP	Japanese PC Extended
	T1HK0037.ECP	Japanese EBCDIC US English
	T1I300.ECP	Japanese DBCS -Host
	T1J300.ECP	Japanese DBCS -Host
	T1K300.ECP	Japanese DBCS -Host
	T1K300U.ECP	Japanese DBCS -Host
	Korean	T10834.ECP
T1H00833.ECP		Korean EBCDIC
T1H01126.ECP		Korean PC
T1H01150.ECP		Korean EBCDIC Extended w/Box
T1K834.ECP		Korean DBCS -Host
Simplified Chinese	T10837.ECP	Simplified Chinese DBCS -Host
	T1H00836.ECP	Simplified Chinese EBCDIC
	T1H01115.ECP	Simplified Chinese PC, IBM GB
	T1H01151.ECP	Simplified Chinese EBCDIC Extended w/Box
	T1H01252.ECP	Simplified Chinese PC, IBM GBK
	T1K837.ECP	Simplified Chinese DBCS -Host
Traditional Chinese	T10835.ECP	Traditional Chinese DBCS -Host
	T1H00037.ECP	Traditional Chinese EBCDIC
	T1H01043.ECP	Traditional Chinese PC
	T1H01114.ECP	Traditional Chinese PC, IBM Big5
	T1H01152.ECP	Traditional Chinese EBCDIC Extended w/Box
	T1H01159.ECP	Traditional Chinese EBCDIC

## Recommended Extended Code Pages to be used for Asian single-byte font files

Asian Classic Single Byte Font Files and Extended Code Pages			
Locale	Font File Name	Font Name	Extended Code Pages
Korean	IBM_KGothicSB.ttf	K-Gothic SB IBM	T1H00833.ECP T1H01126.ECP
	IBM_KMyengjoSB.ttf	K-Myengjo SB IBM	T1H01150.ECP
Traditional Chinese	IBM_TCKaiSB.TTF	TC-Kai SB IBM	T1H00037.ECP T1H01043.ECP T1H01114.ECP
	IBM_TCSungSB.TTF	TC-Sung SB IBM	T1H01159.ECP T1H01152.ECP
Simplified Chinese	IBM_SCFangSongSB.TTF	SC-FangSong SB IBM	T1H00836.ECP T1H01115.ECP
	IBM_SCheiSB.TTF	SC-Hei SB IBM	T1H01151.ECP
	IBM_SCKaiSB.TTF	SC-Kai SB IBM	T1H00836.ECP T1H01115.ECP T1H01151.ECP T1H01252.ECP
	IBM_SCSongSB.TTF	SC-Song SB IBM	T1H00836.ECP T1H01115.ECP T1H01151.ECP T1H01252.ECP
Japanese	IBM_HeiseiKakuGoW5SB.TTF	HeiseiKakuGothicW5SBIBM	T1H00290.ECP T1H00290.ECP T1H01002.ECP T1H01002.ECP
	IBM_HeiseiMaruGoW4SB.TTF	HeiseiMaruGothicW4SBIBM	T1H01027.ECP T1H01027.ECP T1H01030.ECP T1H01030.ECP
	IBM_HeiseiMinchoW3SB.TTF	HeiseiMinchoW3SBIBM	T1H01031.ECP T1H01031.ECP T1H01041.ECP T1H01041.ECP T1HK0037.ECP T1HK0037.ECP

## Recommended Extended Code Pages to be used for Chinese and Korean TrueType Collection fonts

Locale	Font File Name	Font Name	Extended Code Pages
Korean	IBM_KGothic.TTC	K-Gothic IBM	T10834.ECP T1H00833.ECP T1H01126.ECP T1H01150.ECP T1K834.ECP
		K-PGothic IBM	
	IBM_KMyengjo.TTC	K-Myengjo IBM	T10834.ECP T1H00833.ECP T1H01126.ECP T1H01150.ECP T1K834.ECP
		K-PMyengjo IBM	
Simplified Chinese	IBM_SCFangSong.TTC	SGFangSong IBM	T10837.ECP T1H00836.ECP T1H01115.ECP T1H01151.ECP
		SGPFangSong IBM	
	IBM_SChei.TTC	SGHei IBM	T10837.ECP T1H00836.ECP T1H01115.ECP T1H01151.ECP T1H01251.ECP T1K837.ECP
		SGPHei IBM	
	IBM_SCKai.TTC	SGKai IBM	T10837.ECP T1H00836.ECP T1H01115.ECP T1H01151.ECP
		SGPKai IBM	
	IBM_SCSong.TTC	SGPSong IBM	T10837.ECP T1H00836.ECP T1H01115.ECP T1H01151.ECP T1H01251.ECP T1H01252.ECP T1K837.ECP
		SGSong IBM	

Traditional Chinese	IBM_TCKai.TTC	TC-PKai IBM	T10835.ECP T1H00037.ECP T1H01043.ECP T1H01114.ECP T1H01152.ECP T1H01159.ECP
		TC-Kai IBM	
	IBM_TCSung.TTC	TC-PSung IBM	T10835.ECP T1H00037.ECP T1H01043.ECP T1H01114.ECP T1H01152.ECP T1H01159.ECP
		TC-Sung IBM	





# 7. WorldType Fonts

- Naming conventions for the WorldType Fonts
- Summary tables for WorldType fonts
- Version updates for WorldType fonts

WorldType fonts are TrueType and OpenType fonts supplied in a Microsoft Unicode format. The WorldType Fonts include these typefaces:

- WorldType Sans
- WorldType SansDuo
- WorldType Serif
- WorldType SerifDuo

## Format and operating systems for WorldType Fonts

Format	Operating systems
WorldType fonts	Native support for Windows. The fonts can be copied to AIX, Linux, IBM i, and z/OS as needed.

## Unicode Ranges

The WorldType fonts are organized by subsets and grouped by character blocks as defined by Unicode. These subsets do not fully support all glyphs in every character block and might contain glyphs from other characters blocks:

- Windows Glyph List (WGL) is a subset supporting Latin, Greek, Cyrillic, Modified Letters and Combining Marks. Partial support for Symbols and glyphs in the Special Area. This subset provides the same basic set of characters as Microsoft's Windows Glyph List 4.
- All the WorldType fonts now contain the Ethiopic language script.
- Middle East Glyph List is a subset supporting Arabic and Hebrew in addition to the WGL support.
- Indic Glyph List is a subset supporting Indic scripts in addition to the WGL support.
- Southeast Asian Glyph List is a subset supporting Thai, Lao, Khmer, Burmese, and Vietnamese in addition to the WGL support.
- The East Asian Glyph Lists are a subset of the Chinese, Hong Kong, Japanese, Korean, and Taiwan full font sets.
- Complete Glyph List contains every character presently supported. In addition to WGL, Middle East, and Indic support, it supports Han, Hiragana, Katakana, Hangul, Bopomofo, and Yi.

## Localizations

The Complete Glyph List is available with Han localizations for Japanese, Korean, Simplified Chinese, and Traditional Chinese. There is a 64-K glyph limit in the TrueType and OpenType font architecture that limits the amount of support that can be provided with a single font. This limitation requires a different font to be selected to represent each locale properly.

The set of Han glyphs is not fully localized for all four locales. Each of the localizations supports the Windows 98 glyph set for a particular locale. The Simplified Chinese locale is the only uniform designed glyph set. There are fallback glyphs in the other locales for those glyphs not supported. For

example, if a glyph is specified that is not part of the Windows 98 Japanese glyph set, the Simplified Chinese glyph is used for that particular glyph.

## Embedded bitmaps

The Complete Glyph List and East Asian Glyph list are available with embedded bitmaps. The embedded bitmaps are provided for many of the Han, Hiragana, and Katakana glyphs. These bitmaps improve the quality of the glyph at screen resolutions.

The level of embedded bitmap support is based on the Windows 95 glyph set. There are six bitmap sizes included in the fonts. Each bitmap size is designed to represent the locale and the type style, except for the smallest bitmap, which is too small to distinguish the difference.

## Naming conventions for the WorldType Fonts

The WorldType font naming convention uses the format of *TTTTLLSB* with the definitions listed in Tables 10 and 11 below.

### Note

The InfoPrint Font Collection contains the latest version of the WorldType fonts. The file name prefixes in Version 8.2.2 are different from the file name prefixes in Version 6.3. This section describes the naming conventions for the latest WorldType font version.

### WorldType font naming: TTTT identifies the typeface name

<i>TTTT</i>	Typeface name
wt__	WT Serif
wt_d	WT SerifDuo
wts_	WT Sans
wtsd	WT SansDuo

### WorldType font naming: LLSB identifies the localization, subset and the presents of embedded bitmaps

<i>LLSB</i>	Typeface name appendage	Description	Bitmaps
i__	IN	Indic	No
j_eb	J EA	Japanese East Asian	Yes
j__b	J	Japanese	Yes
k__b	K	Korean	Yes
k_eb	K EA	Korean East Asian	Yes
m__	ME	Middle East	No
s__b	SC	Simplified Chinese	Yes
s_eb	SC EA	Simplified Chinese East Asian	Yes
sxb_	SC xB	Simplified Chinese-Extension B	No

<b>LLSB</b>	<b>Typeface name appendage</b>	<b>Description</b>	<b>Bitmaps</b>
th_b	HK	Traditional Chinese Hong Kong	Yes
theb	HK EA	Traditional Chinese Hong Kong East Asian	Yes
tt_b	TW	Traditional Chinese Taiwan	Yes
tteb	TW EA	Traditional Chinese Taiwan East Asian	Yes
ttxb	TW xB	Traditional Chinese Taiwan Extension B	Yes
sea_	SEA	Southeast Asia	No
w____		Windows Glyph List 4	No

## Summary tables for WorldType fonts

This section lists summary tables for the base WorldType fonts and link WorldType fonts.

### Base fonts



Ricoh® recommends that you use the most recent version of the WorldType fonts.

The next table provides this information for base WorldType fonts:

#### Full font name

The combination of the font family name and the font subfamily name.

#### File name

The name of the font file with a file extension of . t t f .

#### Version

The WorldType font version that supplies the font.

#### Localization

The view preference of the glyph shapes.

#### Glyph List

The set of glyphs contained in the font.

#### Bitmaps

An indicator of whether the font contains embedded bitmaps for better screen resolution quality.

The style and weight of all WorldType fonts is Roman Medium.

## Summary of base WorldType fonts

Full font name (Bitmaps)	File name	Version	Localization	Glyph List
WT Sans(No)	wts_w____.ttf	8.22	N/A	Windows Glyph List (WGL)
WT Sans HK(Yes)	wts_th_b.ttf	8.30	Traditional Chinese Hong Kong	Complete
WT Sans HK EA(Yes)	wts_theb.ttf	8.30	Traditional Chinese Hong Kong	East Asian
WT Sans IN(No)	wts_i____.ttf	8.22	N/A	Indic
WT Sans J(Yes)	wts_j__b.ttf	8.30	Japanese	Complete
WT Sans J EA(Yes)	wts_j_eb.ttf	8.30	Japanese	East Asian
WT Sans K(Yes)	wts_k__b.ttf	8.30	Korean	Complete
WT Sans K EA(Yes)	wts_k_eb.ttf	8.30	Korean	East Asian
WT Sans ME(No)	wts_m____.ttf	8.22	N/A	Middle East
WT Sans SC(Yes)	wts_s__b.ttf	8.30	Simplified Chinese	Complete
WT Sans SC EA(Yes)	wts_s_eb.ttf	8.30	Simplified Chinese	East Asian
WT Sans SEA(No)	wts_sea_.ttf	8.22	N/A	Southeast Asian
WT Sans TW(Yes)	wts_tt_b.ttf	8.30	Traditional Chinese Taiwan	Complete
WT Sans TW EA(Yes)	wts_tteb.ttf	8.30	Traditional Chinese Taiwan	East Asian
WT Sans TW xB(Yes)	wts_ttxb.ttf	8.22	Traditional Chinese Taiwan	Extension B
WT SansDuo(No)	wtsdw____.ttf	8.22	N/A	WGL
WT SansDuo HK (Yes)	wtsdth_b.ttf	8.30	Traditional Chinese Hong Kong	Complete
WTSansDuo HK EA (Yes)	wtsdtheb.ttf	8.30	Traditional Chinese Hong Kong	East Asian
WT SansDuo IN(No)	wtsdi____.ttf	8.22	N/A	Indic
WT SansDuo J(Yes)	wtsdj__b.ttf	8.30	Japanese	Complete
WT SansDuo J EA(Yes)	wtsdj_eb.ttf	8.30	Japanese	East Asian

Full font name (Bitmaps)	File name	Version	Localization	Glyph List
WT SansDuo K(Yes)	wtsdk__b.ttf	8.30	Korean	Complete
WT SansDuo K EA(Yes)	wtsdk_eb.ttf	8.30	Korean	East Asian
WT SansDuo ME(No)	wtsdm___.ttf	8.22	N/A	Middle East
WT SansDuo SC(Yes)	wtsds__b.ttf	8.30	Simplified Chinese	Complete
WT SansDuo SC EA (Yes)	wtsds_eb.ttf	8.30	Simplified Chinese	East Asian
WT SansDuo SC xB (No)	wtsdsxb_.ttf	8.22	Simplified Chinese	Extension B
WT SansDuo SEA(No)	wtsdsea_.ttf	8.22	N/A	Southeast Asian
WT SansDuo TW(Yes)	wtsdtt_b.ttf	8.30	Traditional Chinese Taiwan	Complete
WT SansDuo TW EA (Yes)	wtsdtteb.ttf	8.30	Traditional Chinese Taiwan	East Asian
WT SansDuo TW xB (Yes)	wtsdttxb.ttf	8.22	Traditional Chinese Taiwan	Extension B
WT Serif(No)	wt__w___.ttf	8.22	N/A	WGL
WT Serif HK(Yes)	wt__th_b.ttf	8.30	Traditional Chinese Hong Kong	Complete
WT Serif HK EA(Yes)	wt_theb.ttf	8.30	Traditional Chinese Hong Kong	East Asian
WT Serif IN(No)	wt__i___.ttf	8.22	N/A	Indic
WT Serif J(Yes)	wt__j__b.ttf	8.30	Japanese	Complete
WT Serif J EA(Yes)	wt__j_eb.ttf	8.30	Japanese	East Asian
WT Serif K(Yes)	wt__k__b.ttf	8.30	Korean	Complete
WT Serif K EA(Yes)	wt__k_eb.ttf	8.30	Korean	East Asian
WT Serif ME(No)	wt__m___.ttf	8.22	N/A	Middle East
WT Serif SC(Yes)	wt__s__b.ttf	8.30	Simplified Chinese	Complete
WT Serif SC EA(Yes)	wt__s_eb.ttf	8.30	Simplified Chinese	East Asian
WT Serif SC xB(Yes)	wt__s_xb.ttf	8.22	Simplified Chinese	Extension B
WT Serif SEA(No)	wt__sea_.ttf	8.22	N/A	Southeast Asian

<b>Full font name (Bitmaps)</b>	<b>File name</b>	<b>Version</b>	<b>Localization</b>	<b>Glyph List</b>
WT Serif TW(Yes)	wt__tt_b.ttf	8.30	Traditional Chinese Taiwan	Complete
WT Serif TW EA(Yes)	wt__tteb.ttf	8.30	Traditional Chinese Taiwan	East Asian
WT Serif TW xB(Yes)	wt__ttxb.ttf	8.22	Traditional Chinese Taiwan	Extension B
WT SerifDuo(No)	wt_dw___.ttf	8.22	N/A	WGL
WT SerifDuo HK(Yes)	wt_dth_b.ttf	8.30	Traditional Chinese Hong Kong	Complete
WT SerifDuo HK EA (Yes)	wt_dtheb.ttf	8.30	Traditional Chinese Hong Kong	East Asian
WT SerifDuo IN(Yes)	wt_di___.ttf	8.22	N/A	Indic
WT SerifDuo J(Yes)	wt_dj__b.ttf	8.30	Japanese	Complete
WT SerifDuo J EA(Yes)	wt_dj_eb.ttf	8.30	Japanese	East Asian
WT SerifDuo K(Yes)	wt_dk__b.ttf	8.30	Korean	Complete
WT SerifDuo K EA(Yes)	wt_dk_eb.ttf	8.30	Korean	East Asian
WT SerifDuo ME(No)	wt_dm___.ttf	8.22	N/A	Middle East
WT SerifDuo SC(Yes)	wt_ds__b.ttf	8.30	Simplified Chinese	Complete
WT SerifDuo SC EA (Yes)	wt_ds_eb.ttf	8.30	Simplified Chinese	East Asian
WT SerifDuo SC xB (Yes)	wt_ds_xb.ttf	8.22	Simplified Chinese	Extension B
WT SerifDuo SEA(No)	wt_dsea_.ttf	8.22	N/A	Southeast Asian
WT SerifDuo TW(Yes)	wt_dtt_b.ttf	8.30	Traditional Chinese Taiwan	Complete
WT SerifDuo TW EA (Yes)	wt_dtteb.ttf	8.30	Traditional Chinese Taiwan	East Asian
WT SerifDuo TW xB (Yes)	wt_dttxb.ttf	8.22	Traditional Chinese Taiwan	Extension B
Monotype Sans Duospace Ext B(No)	mtsdsxb_.ttf	6.3	Simplified Chinese	Extension B
Monotype Sans Duospace WT(No)	mtsdw___.ttf	6.3	N/A	WGL

Full font name (Bitmaps)	File name	Version	Localization	Glyph List
Monotype Sans Duospace WT IN(No)	mtsdi____.ttf	6.3	N/A	Indic
Monotype Sans Duospace WT J(Yes)	mtsdi__b.ttf	6.3	Japanese	Complete
Monotype Sans Duospace WT J EA(Yes)	mtsdi__eb.ttf	6.3	Japanese	East Asian
Monotype Sans Duospace WT K(Yes)	mtsdi__b.ttf	6.3	Korean	Complete
Monotype Sans Duospace WT K EA (Yes)	mtsdi__eb.ttf	6.3	Korean	East Asian
Monotype Sans Duospace WT ME(No)	mtsdi____.ttf	6.3	N/A	Middle Eastern
Monotype Sans Duospace WT SC(Yes)	mtsdi__b.ttf	6.3	Simplified Chinese	Complete
Monotype Sans Duospace WT SC EA (Yes)	mtsdi__eb.ttf	6.3	Simplified Chinese	East Asian
Monotype Sans Duospace WT TC(Yes)	mtsdi__b.ttf	6.3	Traditional Chinese	Complete
Monotype Sans Duospace WT TC EA (Yes)	mtsdi__eb.ttf	6.3	Traditional Chinese	East Asian
Monotype Sans Duospace WT TC TW (Yes)	mtsdi__b.ttf	6.3	Traditional Chinese Taiwan	Complete
Monotype Sans Duospace WT TC TW EA(Yes)	mtsdi__eb.ttf	6.3	Traditional Chinese Taiwan	East Asian
Monotype Sans WT (No)	mts_w____.ttf	6.3	N/A	WGL
Monotype Sans WT IN (No)	mts_i____.ttf	6.3	N/A	Indic
Monotype Sans WT J (Yes)	mts_j__b.ttf	6.3	Japanese	Complete
Monotype Sans WT J EA(Yes)	mts_j__eb.ttf	6.3	Japanese	East Asian
Monotype Sans WT K (Yes)	mts_k__b.ttf	6.3	Korean	Complete

<b>Full font name (Bitmaps)</b>	<b>File name</b>	<b>Version</b>	<b>Localization</b>	<b>Glyph List</b>
Monotype Sans WT K EA(Yes)	mts_k_eb.ttf	6.3	Korean	East Asian
Monotype Sans WT ME (No)	mts_m___.ttf	6.3	N/A	Middle Eastern
Monotype Sans WT SC (Yes)	mts_s__b.ttf	6.3	Simplified Chinese	Complete
Monotype Sans WT SC EA(Yes)	mts_s_eb.ttf	6.3	Simplified Chinese	East Asian
Monotype Sans WT TC (Yes)	mts_t__b.ttf	6.3	Traditional Chinese	Complete
Monotype Sans WT TC EA(Yes)	mts_t_eb.ttf	6.3	Traditional Chinese	East Asian
Monotype Sans WT TC TW(Yes)	mts_tt_b.ttf	6.3	Traditional Chinese Taiwan	Complete
Monotype Sans WT TC TW EA(Yes)	mts_tteb.ttf	6.3	Traditional Chinese Taiwan	East Asian
Thorndale Duospace WT(No)	thrdw___.ttf	6.3	N/A	WGL
Thorndale Duospace WT IN(No)	thrdi___.ttf	6.3	N/A	Indic
Thorndale Duospace WT J(Yes)	thrdj__b.ttf	6.3	Japanese	Complete
Thorndale Duospace WT J EA(Yes)	thrdj_eb.ttf	6.3	Japanese	East Asian
Thorndale Duospace WT K(Yes)	thrdk__b.ttf	6.3	Korean	Complete
Thorndale Duospace WT K EA(Yes)	thrdk_eb_tf	6.3	Korean	East Asian
Thorndale Duospace WT ME(No)	thrdm___.ttf	6.3	N/A	Middle Eastern
Thorndale Duospace WT SC(Yes)	thrds__b.ttf	6.3	Simplified Chinese	Complete
Thorndale Duospace WT SC EA(Yes)	thrds_eb.ttf	6.3	Simplified Chinese	East Asian
Thorndale Duospace WT TC(Yes)	thrdt__b.ttf	6.3	Traditional Chinese	Complete
Thorndale Duospace WT TC EA(Yes)	thrdt_eb.ttf	6.3	Traditional Chinese	East Asian



Full font name (Bitmaps)	File name	Version	Localization	Glyph List
Thorndale Duospace WT TC TW(Yes)	thrdtt_b.ttf	6.3	Traditional Chinese Taiwan	Complete
Thorndale Duospace WT TC TW EA(Yes)	thrdtteb.ttf	6.3	Traditional Chinese Taiwan	East Asian
Times New Roman WT (No)	tnr_w__.ttf	6.3	N/A	WGL
Times New Roman WT IN(No)	tnr_i__.ttf	6.3	N/A	Indic
Times New Roman WT J(Yes)	tnr_j__b.ttf	6.3	Japanese	Complete
Times New Roman WT J EA(Yes)	tnr_j_eb.ttf	6.3	Japanese	East Asian
Times New Roman WT K(Yes)	tnr_k__b.ttf	6.3	Korean	Complete
Times New Roman WT K EA(Yes)	tnr_k_eb.ttf	6.3	Korean	East Asian
Times New Roman WT ME(No)	tnr_m__.ttf	6.3	N/A	Middle Eastern
Times New Roman WT SC(Yes)	tnr_s__b.ttf	6.3	Simplified Chinese	Complete
Times New Roman WT SC EA(Yes)	tnr_s_eb.ttf	6.3	Simplified Chinese	East Asian
Times New Roman WT TC(Yes)	tnr_t__b.ttf	6.3	Traditional Chinese	Complete
Times New Roman WT TC EA(Yes)	tnr_t_eb.ttf	6.3	Traditional Chinese	East Asian
Times New Roman WT TC TW(Yes)	tnr_tt_b.ttf	6.3	Traditional Chinese Taiwan	Complete
Times New Roman WT TC TW EA(Yes)	tnr_tteb.ttf	6.3	Traditional Chinese Taiwan	East Asian

## Link fonts

Link fonts are searched when the Unicode value is not found in the base font. This extends the base font. The link font is included as a base font. The next table defines the link fonts that have been added to the resource access table (RAT) for WorldType fonts. It provides this information:

### Full font name

The combination of the font family name and the font subfamily name for the base font or the linked font.

**File name**

The name of the base or linked font file with a file extension of .ttf.

**Version**

The WorldType font version in which the link font is defined.

**Summary of link WorldType fonts**

Full font name, file name, and version of a link WorldType font that is associated with base WorldType fonts.

Base Font		Link Font		Version
Full font name	File name	Full font name	File name	
WT Sans SC	wts_s__b.ttf	WT SansDuo SC xB	wtsdsxb_.ttf	8.22
WT Sans SC EA	wts_s_eb.ttf			
WT Sans TW	wts_tt_b.ttf	WT Sans TW xB	wts_ttxb.ttf	8.22
WT Sans TW EA	wts_tteb.ttf			
WT SansDuo SC	wtsds__b.ttf	WT SansDuo SC xB	wtsdsxb_.ttf	8.22
WT SansDuo SC EA	wtsds_eb.ttf			
WT SansDuo TW	wtsdtt_b.ttf	WT SansDuo TW xB	wtsdttxb.ttf	8.22
WT SansDuo TW EA	wtsdtteb.ttf			
WT Serif SC	wt__s__b.ttf	WT Serif SC xB	wt__s_xb.ttf	8.22
WT Serif SC EA	wt__s_eb.ttf			
WT Serif TW	wt__tt_b.ttf	WT Serif TW xB	wt__ttxb.ttf	8.22
WT Serif TW EA	wt__tteb.ttf			
WT SerifDuo SC	wt_ds__b.ttf	WT SerifDuo SC xB	wt_ds_xb.ttf	8.22
WT SerifDuo SC EA	wt_ds_eb.ttf			
WT SerifDuo TW	wt_dtt_b.ttf	WT SerifDuo TW xB	wt_dttxb.ttf	8.22
WT SerifDuo TW EA	wt_dtteb.ttf			
Monotype Sans Duospace WT SC	mtsds__b.ttf	Monotype Sans Duospace Ext B	mtsdsxb_.ttf	6.3
Monotype Sans WT SC	mts_s__b.ttf			
Thorndale Duospace WT SC	thrds__b.ttf			
Times New Roman WT SC	tnr_s__b.ttf			

## Version updates for WorldType fonts

This section describes the updates to supported WorldType font Versions 6.3 through 8.2 that are contained in the InfoPrint Font Collection.

### Updates from Version 6.3 to Version 7.0

Updates for Version 7.0 of the WorldType fonts include:

- These typeface names have changed:
  - WT Sans replaces Monotype Sans WT
  - WT Sans Duo replaces Monotype Sans Duospace WT
  - WT Sans Duo SC xB replaces Monotype Sans Duospace Ext B
  - WT Serif replaces Times New Roman WT
  - WT Serif Duo replaces Thorndale Duospace WT
- These file name prefixes have changed:
  - wts\_\* replaces mts\_\*
  - wtsd\* replaces mtsd\*
  - wt\_\_\* replaces tnr\_\*
  - wt\_d\* replaces thrd\*
- These new standards have been added:
  - Japanese International Standard, JIS X 0213:2004
  - Hong Kong Supplementary Character Set, HKSCS:2004
- The Chinese, Japanese, and Korean (CJK) fonts that contain bitmap characters have been included for enhanced display.

### Updates from Version 7.0 to Version 8.0

Updates for Version 8.0 of the WorldType fonts include:

- These typeface names have changed:
  - WT SansDuo replaces WT Sans Duo
  - WT SerifDuo replaces WT Serif Duo
  - WT SansDuo SC xB replaces WT Sans Duo SC xB
- These Southeast Asian (SEA) fonts are new:
  - The prior Windows Glyph subset
  - Khmer language scripts

#### Note

One Khmer design was used for Sans and Serif fonts. The SEA Duospace fonts (wtsdsea\_.ttf and wt\_dsea\_.ttf) do not contain the Khmer script.

- Lao language scripts

- Thai language scripts
- Vietnamese language scripts
- New outline glyphs were added to support standard Hong Kong Supplementary Character Set, HKSCS:2004.
- New Unicode has been added:
  - Sinhala (U+0D80-U+0DFF) are now included in these WorldType fonts: Complete set, Traditional Chinese Hong Kong (HK), Japanese (J), Korean (K), Simplified Chinese (SC), Traditional Chinese Taiwan (TW), and Indic (IN)
  - Georgian (U+10A0-U+10FF) and Georgian Supplement (U+2D00-U+2D2F) are now included in these WorldType fonts: Windows Glyph List, Traditional Chinese Hong Kong (HK), Japanese (J), Korean (K), Simplified Chinese (SC), and Traditional Chinese Taiwan (TW)
  - Armenian (U+0530-U+058F) and Armenian Ligatures (U+FB13-U+FB17) are now included in these WorldType fonts: Windows Glyph List, Traditional Chinese Hong Kong (HK), Japanese (J), Korean (K), Simplified Chinese (SC), and Traditional Chinese Taiwan (TW)
- Indic Version 2 OpenType tables are now included in these WorldType fonts:
  - Traditional Chinese Hong Kong (HK)
  - Indic (IN)
  - Japanese (J)
  - Korean (K)
  - Simplified Chinese (SC)
  - Traditional Chinese Taiwan (TW)

### Updates from Version 8.0 to Version 8.1.1

There have been over 1,000 new characters added into the WorldType fonts from the 2010 version 8.0 to the 2012 version 8.1.1.

A new subset of 20 East Asian fonts has been included in this version of WorldType fonts.

#### Highlights of new additions:

- Character additions to support the Traditional Chinese Hong Kong Supplemental Character Set 2008 (HKSCS 2008)
- New Amharic Ethiopian language support
- Additions to the Latin character set to support more African languages
- New Robam Khmer Duo characters
- Unicode level 5.2–6.2 support for Currency Symbols including:
  - Kazakhstan Tenge symbol (U+20B8)
  - Indian Rupee symbol (U+20B9)
  - Turkish Lira symbol (U+20BA)
- Unicode level 5.2 support for more Math Operators and Miscellaneous Technical characters
- New Myanmar Burmese language support in version 8..1.1 of the South East Asian fonts

- Armenian Dram sign (U+058F), added into the Armenian language scripts
- Arabic Samvat sign (U+0604), added into Arabic language scripts
- Gujarati Abbreviation Sign (U+0AF0), added into Gujarati language scripts
- Raised MC sign (U+1F16A), Marque de Commerce
- Raised MD sign (U+1F16B), Marque Déposée

## Updates from Version 8.1.1 to Version 8.2

Updates for Version 8.2 of the WorldType fonts include:

### Character corrections:

- Bopomofo letter l (U+3127)
- Kannada vowel sign AI (U+0CC8)
- Kannada AI length mark (U+0CD6)
- Arabic Letter Feh with dot below (U+06A3)

### New character additions:

- Arabic Letter Mark (U+061C) for text formatting
- New Currency Symbols:
  - Azerbaijan Manat (U+20BC)
  - Russian Ruble (U+20BD)
  - Georgia Lari (U+20BE)
- Simplified Chinese Additions in the Basic Multilingual Plane:

Added new Simplified Chinese Basic Multilingual Plane (BMP) Unicode code points listed below into the "FULL" and East Asian "EA" WorldType fonts. The new characters are provided in bitmap and outline formats in the Song and Hei styles:

9FCC	9FCD	9FCE	9FCF	9FD0
9FD1	9FD2	9FD3	9FD4	9FD5

- Simplified Chinese Additions in the WT SansDuo SC xB font:  
New Simplified Chinese Extension C, D, and E code points are listed below. The new characters will be provided in outline format in the Hei style.

New Simplified Chinese Extension C Unicode code points:

2A7DD	2A8FB	2A917	2AA30	2AA36	2AA58	2AFA2	2B127
2B128	2B137	2B138	2B1ED	2B300	2B363	2B36F	2B372
2B37D	2B404	2B410	2B413	2B461	2B4E7	2B4EF	2B4F6
2B4F9	2B50D	2B50E	2B536	2B5AE	2B5AF	2B5B3	2B5E7
2B5F4	2B61C	2B61D	2B626	2B627	2B628	2B62A	2B62C
2B695	2B696	2B6AD	2B6ED				

New Simplified Chinese Extension D Unicode code points:

2B7A9	2B7C5	2B7E6	2B7F9	2B7FC	2B806	2B80A	2B81C
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New Simplified Chinese Extension E Unicode code points:

2B8B8	2BAC7	2BB5F	2BB62	2BB7C	2BB83	2BC1B	2BD77
2BD87	2BDF7	2BE29	2C029	2C02A	2C0A9	2C0CA	2C1D5
2C1D9	2C1F9	2C27C	2C288	2C2A4	2C317	2C35B	2C361
2C364	2C488	2C494	2C497	2C542	2C613	2C618	2C621
2C629	2C62B	2C62C	2C62D	2C62F	2C642	2C64A	2C64B
2C72C	2C72F	2C79F	2C7C1	2C7FD	2C8D9	2C8DE	2C8E1
2C8F3	2C907	2C90A	2C91D	2CA02	2CA0E	2CA7D	2CAA9
2CB29	2CB2D	2CB2E	2CB31	2CB38	2CB39	2CB3B	2CB3F
2CB41	2CB4A	2CB4E	2CB5A	2CB5B	2CB64	2CB69	2CB6C
2CB6F	2CB73	2CB76	2CB78	2CB7C	2CBB1	2CBBF	2CBC0
2CBCE	2CC56	2CC5F	2CCF5	2CCF6	2CCFD	2CCFF	2CD02
2CD03	2CD0A	2CD8B	2CD8D	2CD8F	2CD90	2CD9F	2CDA0
2CDA8	2CDAD	2CDAE	2CDD5	2CE18	2CE1A	2CE23	2CE26
2CE2A	2CE7C	2CE88	2CE93				

- New Lao OpenType features.

## 7

## Updates from Version 8.2 to Version 8.22

- Enhancements to the Thai language scripts for better character combining.
- Stroke enhancements were made to some Simplified Chinese characters in the WT SansDuo SC xB font.
- Six new extended xB Chinese fonts are being added to the InfoPrint Font Collection to enhance the range of graphic capabilities for the current Chinese fonts. The extended xB fonts will complement the existing Simplified and Traditional Chinese fonts by adding ideographs from the Unicode Supplemental Ideographic Plane in the Song and Hei style.
  - New Simplified Chinese fonts with Song ideographs:
    - ◆ WT SerifDuo SC xB
    - ◆ WT Serif SC xB
  - New Traditional Chinese Taiwan Sans Fonts with Hei ideographs:
    - ◆ WT Sans TW xB
    - ◆ WT SansDuo TW xB
  - New Traditional Chinese Taiwan Serif fonts with Song ideographs:
    - ◆ WT Serif TW xB
    - ◆ WT SerifDuo TW xB

## Updates from Version 8.22 to Version 8.30

- Forty of the Asian WorldType fonts identified with version 8.30 were updated with the new Japanese Era name character, Reiwa. The new Unicode code point for a single Reiwa character is U+32FF.
- The new Japanese Era name can also be printed or displayed utilizing two Unicode code points: U+4EE4U+548C.





## 8. AFP Raster Fonts

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- SBCS fonts
- DBCS fonts
- Math, PI, and Sonoran fonts
- Compatibility fonts

AFP Raster fonts are distinguished from AFP outline fonts because they have character set and coded font names that are eight characters rather than six characters. These AFP raster fonts are included with the InfoPrint Font Collection:

- Single-byte character set (SBCS) expanded core fonts
- Double-byte character set (DBCS) core fonts
- Math, PI, and Sonoran fonts

This section also describes the compatibility fonts that are included for reference even though they are not part of the InfoPrint Font Collection.

### SBCS fonts

SBCS expanded core fonts are part of the AFP raster fonts shipped with the InfoPrint Font Collection. The fonts contain various typefaces and font sizes (including typographic and uniformly spaced typeface families) and combine IBM Core Interchange Fonts, IBM Coordinated Fonts, and IBM BookMaster Fonts.

The next table shows the formats for SBCS fonts provided in the InfoPrint Font Collection.

#### Format and operating systems for SBCS fonts

Format	Operating systems
240-pel bounded-box fonts	z/OS, IBM i, Linux, AIX, Windows
300-pel fonts	z/OS, IBM i, Linux, AIX, Windows

[Summary table for SBCS fonts, p. 83](#) lists SBCS fonts by font type and language group.

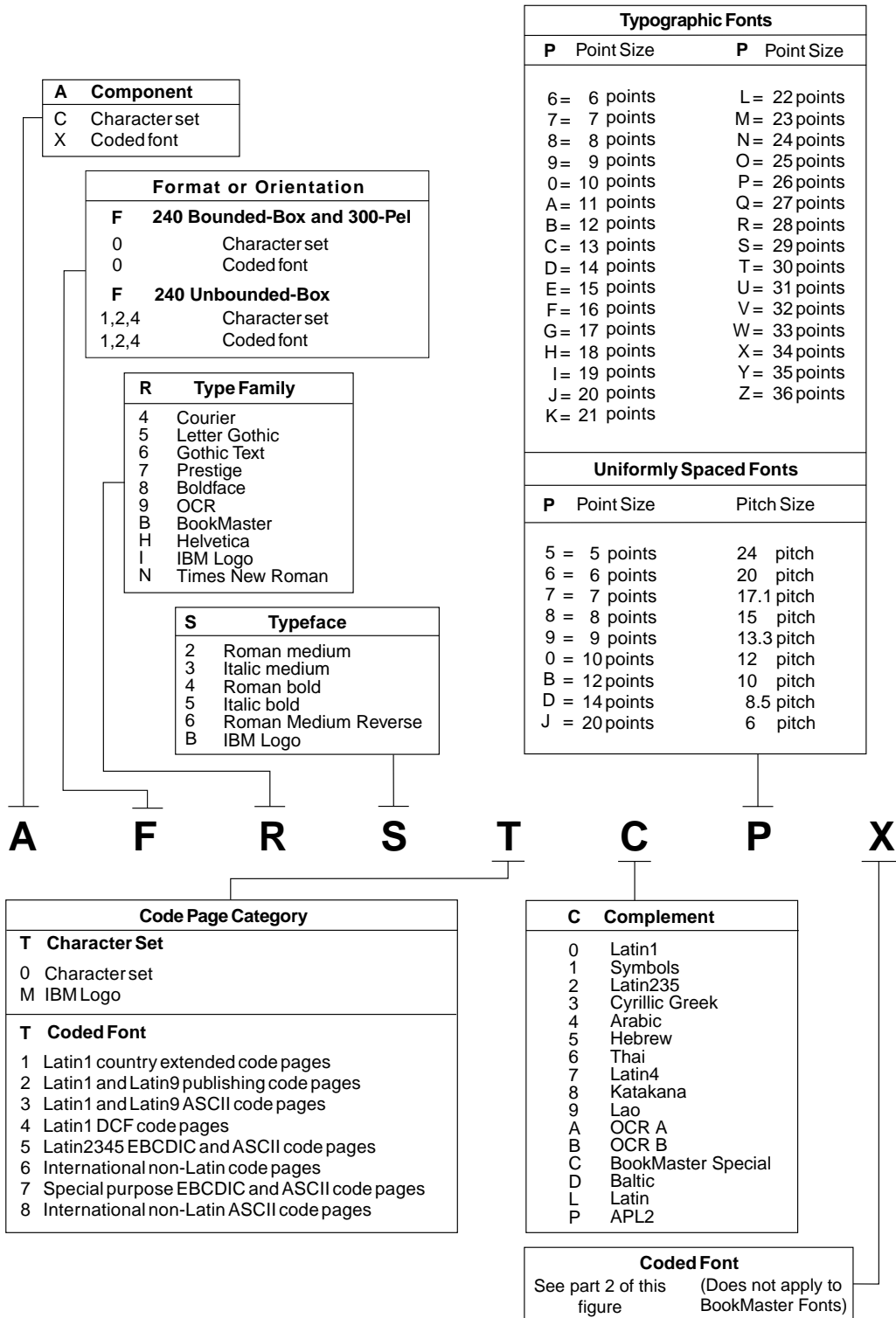
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### Naming conventions for SBCS fonts

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The next two tables illustrate the naming conventions for SBCS expanded core fonts.

## Part 1: Naming conventions for SBCS fonts



## Part 2: Naming conventions for SBCS fonts

**A      F      R      S      T      C      P      X**

Latin1 Country Extended Code Pages (T=1)		Latin1 DCF Code Pages (T=4)	
<b>X</b>	<b>C</b>	<b>X</b>	<b>C</b>
1	0 T1V10037 United States, Canada	1	0 T1001002 DCF Release 2 Compatibility
2	0 T1V10273 Austria, Germany	2	0 T1001003 U. S. Text Subset
3	0 T1V10274 Belgium	3	0 T1001068 Text with Numeric Spacing
4	0 T1V10275 Brazil	4	0-7 T1001039 GML List Symbols
5	0 T1V10277 Denmark, Norway	Latin2345 EBCDIC and ASCII Code Pages (T=5)	
6	0 T1V10278 Finland, Sweden	<b>X</b>	<b>C</b>
7	0 T1V10280 Italy	1	2 T1000870 Latin2 EBCDIC
8	0 T1V10281 Japan (Latin)	2	2 T1000905 Latin3 EBCDIC
9	0 T1V10282 Portugal	3	2 T1001026 Latin5 EBCDIC
0	0 T1V10284 Spain, Latin America	4	2 T1000852 Personal Computer: Latin2
A	0 T1V10285 United Kingdom	5	2 T1000853 Personal Computer: Latin3
B	0 T1V10297 France	6	2 T1000857 Personal Computer: Latin5
C	0 T1V10500 International #5	7	2 T1000912 ISO/ANSI 8-Bit: Latin2
D	0 T1V10871 Iceland	8	2 T1000920 ISO/ANSI 8-Bit: Latin5
Latin1 Euro Country Extended Code Pages (T=1)		9	7 T1001069 Latin4 EBCDIC
<b>X</b>	<b>C</b>	0	7 T1000914 ISO/ASCII: Latin4
1	E T1001140 USA, Canada ECECP	A	2 T1001110 Latin2 Multilingual
2	E T1001141 Austria, Germany ECECP	B	2 T1001111 Latin2 ISO/ANSI 8-bit
5	E T1001142 Denmark, Norway ECECP	C	2 T1000913 Latin3 ISO/ASCII
6	E T1001143 Finland, Sweden ECECP	D	2 T1001122 Estonia EBCDIC
7	E T1001144 Italy ECECP	International Non-Latin Code Pages (T=6)	
0	E T1001145 Spain, Latin America ECECP	<b>X</b>	<b>C</b>
A	E T1001146 UK ECECP	1	4 T1000420 Arabic Bilingual
B	E T1001147 France ECECP	2	3 T1000423 Greece 183
C	E T1001148 International ECECP	3	5 T1000424 Hebrew
D	E T1001149 Iceland ECECP	4	5 T1000803 Hebrew
Latin1 and Latin9 Publishing Code Pages (T=2)		5	3 T1000875 Greece
<b>X</b>	<b>C</b>	6	8 T1V10290 Japan (Katakana)
1	0 T1000361 International Set #5	7	3 T1000880 Cyrillic Multilingual
2	0 T1000382 Austria, Germany, Switzerland	8	6 T1000838 Thailand
3	0 T1000383 Belgium	9	3 T1001025 Cyrillic Multilingual
4	0 T1000384 Brazil	0	5 T1001028 Hebrew Publishing
5	0 T1000385 Canada (French)	A	8 T1001027 Japanese (Latin) Extended
6	0 T1000386 Denmark, Norway	B	6 T1000889 Thailand
7	0 T1000387 Sweden, Finland	C	3 T1001123 Cyrillic, Ukraine EBCDIC
8	0 T1000388 France, Switzerland	D	3 T1001124 Cyrillic, Ukraine ASCII
9	0 T1000389 Italy, Switzerland (Italian)	E	9 T1001132 Lao EBCDIC
0	0 T1000390 Japan (Latin)	F	8 T1001139 Japan Katakana Numeric
A	0 T1000391 Portugal	Latin1 and Latin9 ASCII Code Pages (T=3)	
B	0 T1000392 Spain, Philippines	<b>X</b>	<b>C</b>
C	0 T1000393 Latin America (Spanish)	1	0 T1000437 Personal Computer
D	0 T1000394 United Kingdom, Australia, Ireland, Hong Kong, New Zealand	2	0 T1000850 Personal Computer: Multilingual
E	0 T1000395 United States, Canada (English)	3	0 T1000860 Personal Computer: Portugal
F	0 T1000924 Latin9	4	0 T1000861 Personal Computer: Iceland
Latin1 and Latin9 ASCII Code Pages (T=3)		5	0 T1000863 Personal Computer: Canadian French
<b>X</b>	<b>C</b>	6	0 T1000865 Personal Computer: Nordic
1	0 T1000437 Personal Computer	7	0 T1001004 IBM PC Desktop Publishing
2	0 T1000850 Personal Computer: Multilingual	8	0 T1000819 ISO/ANSI 8-Bit: Latin1
3	0 T1000860 Personal Computer: Portugal	9	0 T1000858 PC Multilingual with euro
4	0 T1000861 Personal Computer: Iceland	A	0 T1000923 Latin9
5	0 T1000863 Personal Computer: Canadian French	B	0 T1001252 Windows Latin1
6	0 T1000865 Personal Computer: Nordic		
7	0 T1001004 IBM PC Desktop Publishing		
8	0 T1000819 ISO/ANSI 8-Bit: Latin1		
9	0 T1000858 PC Multilingual with euro		
A	0 T1000923 Latin9		
B	0 T1001252 Windows Latin1		

The seventh character in the naming convention, “P” in, represents the point size or pitch size of the font. The sizes of typographic and mixed-pitch fonts are expressed in points, which is a vertical measurement indicating the general size of the font. One point is 1/72 inch. The sizes of uniformly spaced fonts are expressed in pitch, which is the number of characters that can be printed in 1 inch of text. The next table shows the point and pitch sizes available for the SBCS font AFP typeface names. See [Summary table for SBCS fonts, p. 83](#) for a list of SBCS fonts by font type, language group, and AFP typeface name.

### Size in point or pitch for SBCS fonts

AFP typeface name	Size in point or pitch
Courier APL2	10 pitch
Boutros Typing Arabic	6, 8.5, 10, 12, 15, and 17.1 pitch
ITC Boutros Modern Rokaa Arabic	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
ITC Bourtros Setting Arabic	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
BookMaster Specials	5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 24, 30, and 36 points
BookMaster Specials Reverse	5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 24, 30, and 36 points
Courier Cyrillic Greek	6, 8.5, 10, 12, 15, and 17.1 pitch
Helvetica Cyrillic Greek	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Times New Roman Cyrillic Greek	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Shalom Hebrew	6, 8.5, 10, 12, 15, and 17.1 pitch
Narkiss Tam Hebrew	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Narkissim Hebrew	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
IBM Logo	10, 12, 14, 16, 18, 20, 24, 28, 32, 36, 40, and 48 points
Gothic Katakana	6, 8.5, 10, 12, 15, 17.1 and 20 pitch
Boldface Latin 1	12 points
BookMaster Latin 1	5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 24, 30, and 36 points
BookMaster Latin 1 Reverse	5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 24, 30, and 36 points
Courier Latin 1	6, 8.5, 10, 12, 15, and 17.1 pitch

<b>AFP typeface name</b>	<b>Size in point or pitch</b>
Gothic Text Latin 1	6, 8.5, 10, 12, 13.3, 15, 17.1, 20, and 24 pitch
Helvetica Latin 1	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Letter Gothic Latin 1	6, 8.5, 10, 12, 15, 17.1 and 20 pitch
Prestige Latin 1	6, 8.5, 10, 12, 15, and 17.1 pitch
Times New Roman Latin 1	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Courier Latin235	6, 8.5, 10, 12, 15, and 17.1 pitch
Helvetica Latin235	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Times New Roman Latin235	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Courier Latin4	6, 8.5, 10, 12, 15, and 17.1 pitch
Helvetica Latin4	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Times new Roman Latin4	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
OCRA	10 pitch
OCRB	10 pitch
Courier Lao	6, 8.5, 10, 12, 15, and 17.1 pitch
Pusuwan	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Kaewfah	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Courier Symbols	6, 8.5, 10, 12, 15, and 17.1 pitch
Helvetica Symbols	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points
Times New Roman Symbols	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 30, and 36 points

## Summary table for SBCS fonts

This section lists SBCS expanded core fonts by font type or language group, and AFP typeface name, including: APL, Arabic, BookMaster specials, Cyrillic, Greek, Hebrew, IBM Logo, Katakana, Lao,

Latin1 with and without euro, Latin2, Latin3, Latin4, Latin5, optical character recognition (OCR), symbols for Courier, Helvetica, and Times New Roman, and Thai.

The summary table for SBCS fonts provides this information:

### **Font type**

The font type name, followed by the GCSGID (the graphic character set global identifier, which is a collection of characters registered with a unique number and sometimes used for font and code page selection).

### **AFP typeface name**

The IBM name for the typeface.

### **Type 1 typeface name**

The Type 1 font name for the typeface. The name contains information about the style and weight of the font, which can be:

Roman Medium (the basic style)

Roman Bold (Bold)

Italic Medium (Italic)

Italic Bold (Bold Italic)

### **Character set identifier**

An eight-character name that identifies an AFP raster character set.

### **Type 1 file name**

The name of a Type 1 font that is used to create the AFP raster font. The file extensions are AFM, INF, and PFB.

### **Coded font identifier**

An eight-character name of the raster coded font that identifies the combination of code page and character set. IBM BookMaster fonts do not have a coded font identifier because BookMaster does not use coded fonts.

### **Alternate coded font identifier**

A six-character coded font name for certain operating environments, such as JES, that limits coded font identifiers to six characters; for example, XOGT10. All SBCS fonts with a coded font identifier also have an alternate coded font identifier.

### **FGID**

The font typeface global identifier (FGID) is a number assigned to each typeface and is sometimes used for font selection.

### **Code page**

An eight-character name, with "T1" as the prefix, that identifies the code page. Alphabetic script and symbol fonts use only single-byte code pages.

### **GCSGID**

The graphic character set global identifier (a collection of characters registered with a unique number and sometimes used for font and code page selection)

## Summary of the AFP Typeface Names for SBCS fonts

SBCS fonts grouped by font type and language group.

Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
<b>APL</b>					
<i>Courier APL2</i>					
Courier APL2	C0420PB0	APL	X0427PB2	X0480B	307
Courier APL2 Bold	C0440PB0	APLB	X0447PB2	X0481B	322
<b>Arabic</b>					
<i>Boutros Typing Arabic</i>					
Typing	C04204p0	COU_A	X04264p1	X0427p	416
Typing Bold	C04404p0	COU_AB	X04464p1	X0449p	420
Typing Italic	C04304p0	COU_AI	X04364p1	X0438p	424
Typing Bold Italic	C04504p0	COU_ABI	X04564p1	X045Ap	428
<i>ITC Boutros Modern Rokaa Arabic</i>					
Rokaa	C0H204p0	HEL_A	X0H264p1	X0H27p	2304
Rokaa Bold	C0H404p0	HEL_AB	X0H464p1	X0H49p	2305
Rokaa Italic	C0H304p0	HEL_AI	X0H364p1	X0H38p	2306
Rokaa Bold Italic	C0H504p0	HEL_ABI	X0H564p1	X0H5Ap	2307
<i>ITC Boutros Setting Arabic</i>					
Setting	C0N204p0	TNR_A	X0H264p1	X0N27p	2308
Setting Bold	C0N404p0	TNR_AB	X0H464p1	X0N49p	2309
Setting Italic	C0N304p0	TNR_AI	X0H364p1	X0N38p	2310
Setting Bold Italic	C0N504p0	TNR_ABI	X0H564p1	X0N5Ap	2311
<b>BookMaster Specials</b>					
<i>BookMaster Specials</i>					
BookMaster Specials	C0B20Cp0	EDFBS	N/A	N/A	335
BookMaster Specials Bold	C0B40Cp0	EDFBSB	N/A	N/A	336
BookMaster Specials Italic	C0B30Cp0	EDFBSI	N/A	N/A	337
BookMaster Specials Bold Italic	C0B50Cp0	EDFBSBI	N/A	N/A	338
<i>BookMaster Specials Reverse</i>					

Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
BookMaster Specials Reverse	C0B60Cp0	EDFBSR	N/A	N/A	339
<b>Cyrillic</b>					
<i><b>Courier Cyrillic Greek</b></i>					
Courier Cyr Grk	C04203p0	COU_CG	X04263p9	X045Cp	416
Courier Cyr Grk Bold	C04403p0	COU_CGB	X04463p9	X045Ep	420
Courier Cyr Grk Italic	C04303p0	COU_CGI	X04363p9	X045Dp	424
Courier Cyr Grk Bold Italic	C04503p0	COU_CGBI	X04563p9	X045Fp	428
<i><b>Helvetica Cyrillic Greek</b></i>					
Helvetica Cyr Grk	C0H203p0	HEL_CG	X0H263p9	X0H5Cp	2304
Helvetica Cyr Grk Bold	C0H403p0	HEL_CGB	X0H463p9	X0H5Ep	2305
Helvetica Cyr Grk Italic	C0H303p0	HEL_CGI	X0H363p9	X0H5Dp	2306
Helvetica Cyr Grk Bold Italic	C0H503p0	HEL_CGBI	X0H563p9	X0H5Fp	2307
<i><b>Times New Roman Cyrillic Greek</b></i>					
Times New Roman Cyr Grk	C0N203p0	TNR_CG	X0N263p9	X0N5Cp	2308
Times New Roman Cyr Grk Bold	C0N403p0	TNR_CGB	X0N463p9	X0N5Ep	2309
Times New Roman Cyr Grk Italic	C0N303p0	TNR_CGI	X0N363p9	X0N5Dp	2310
Times New Roman Cyr Grk Bold Italic	C0N503p0	TNR_CGBI	X0N563p9	X0N5Fp	2311
<b>Greek</b>					
<i><b>Courier Cyrillic Greek</b></i>					
Courier Cyr Grk	C04203p0	COU_CG	X04263p5	X0448p	416
Courier Cyr Grk Bold	C04403p0	COU_CGB	X04463p5	X044Ap	420
Courier Cyr Grk Italic	C04303p0	COU_CGI	X04363p5	X0449p	424
Courier Cyr Grk Bold Italic	C04503p0	COU_CGBI	X04563p5	X044Bp	428
<i><b>Helvetica Cyrillic Greek</b></i>					



Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
Helvetica Cyr Grk	C0H203p0	HEL_CG	X0H263p5	X0H48p	2304
Helvetica Cyr Grk Bold	C0H403p0	HEL_CGB	X0H463p5	X0H4Ap	2305
Helvetica Cyr Grk Italic	C0H303p0	HEL_CGI	X0H363p5	X0H49p	2306
Helvetica Cyr Grk Bold Italic	C0H503p0	HEL_CGBI	X0H563p5	X0H4Bp	2307
<b>Times New Roman Cyrillic Greek</b>					
Times New Roman Cyr Grk	C0N203p0	TNR_CG	X0N263p5	X0N48p	2308
Times New Roman Cyr Grk Bold	C0N403p0	TNR_CGB	X0N463p5	X0N4Ap	2309
Times New Roman Cyr Grk Italic	C0N303p0	TNR_CGI	X0N363p5	X0N49p	2310
Times New Roman Cyr Grk Bold Italic	C0N503p0	TNR_CGBI	X0N563p5	X0N4Bp	2311
<b>Hebrew</b>					
<b>Shalom Hebrew</b>					
Shalom Hebrew	C04205p0	COU_H	X04265p3	X042Cp	416
Shalom Hebrew Bold	C04205p0	COU_HB	X044265p3	X042Ep	420
Shalom Hebrew Italic	C04205p0	COU_HI	X04365p3	X042Dp	424
Shalom Hebrew Bold Italic	C04205p0	COU_HBI	X04565p3	X042Fp	428
<b>Narkiss Tam Hebrew</b>					
Narkiss Tam Hebrew	C0H205p0	HEL_H	X0H265p3	X0H2Cp	2304
Narkiss Tam Hebrew Bold	C0H405p0	HEL_HB	X0H465p3	X0H2Ep	2305
Narkiss Tam Hebrew Italic	C0H305p0	HEL_HI	X0H365p3	X0H2Dp	2306
Narkiss Tam Hebrew Bold Italic	C0H505p0	HEL_HBI	X0H565p3	X0H2Fp	2307
<b>Narkissim Hebrew</b>					
Narkissim Hebrew	C0N205p0	TNR_H	X0N265p3	X0N2Cp	2308
Narkissim Hebrew Bold	C0N405p0	TNR_HB	X0N465p3	X0N2Ep	2309
Narkissim Hebrew Italic	C0N305p0	TNR_HI	X0N365p3	X0N2Dp	2310

Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
Narkissim Hebrew Bold Italic	C0N505p0	TNR_HBI	X0N565p3	X0N2Fp	2311
<b>IBM Logo</b>					
<b>IBM Logo</b>					
IBM Logo	LOGOIBM	N/A	N/A	N/A	51767
<b>Katakana</b>					
<b>Gothic Katakana</b>					
Gothic Katakana	C06208p0	GOT_K	X06288pE	X0699p	304
Gothic Katakana Bold	C06208p0	GOT_K	X06268pA	X069Ap	
Gothic Katakana Italic	C06208p0	GOT_K	X06288pF	X069Bp	
Gothic Katakana Bold Italic	C06208p0	GOT_K	X06268p6	X0696p	
<b>Latin 1</b>					
<b>Boldface Latin 1</b>					
Boldface	C08400p0	BFC	X08410pc	X0805p	20224
<b>BookMaster Latin 1</b>					
BookMaster	C0B200p0	EDFBL	N/A	N/A	335
BookMaster Bold	C0B400p0	EDFBLB	N/A	N/A	336
BookMaster Italic	C0B300p0	EDFBLI	N/A	N/A	337
BookMaster Bold Italic	C0B500p0	EDFBLBI	N/A	N/A	338
<b>BookMaster Latin 1 Reverse</b>					
BookMaster Reverse	C0B600p0	EDFBLR	N/A	N/A	339
<b>Courier Latin 1</b>					
Courier	C04200p0	COU	X04210pC	X040Dp	416
Courier Bold	C04400p0	COUB	X04410pC	X040Fp	420
Courier Italic	C04300p0	COUI	X04310pC	X040Ep	424
Courier Bold Italic	C04500p0	COUBI	X04510pC	X0410p	428
<b>Gothic Text Latin 1</b>					
Gothic Text	C06200p0	GOT	X06210pC	X060Dp	304
<b>Helvetica Latin 1</b>					
Helvetica	C0H200p0	HEL	X0H210pC	X0H0Dp	2304

Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
Helvetica Bold	C0H400p0	HELB	X0H410pC	X0H0Fp	2305
Helvetica Italic	C0H300p0	HELI	X0H310pC	X0H0Ep	2306
Helvetica Bold Italic	C0H500p0	HELBI	X0H510pC	X0H10p	2307
<b>Letter Gothic Latin1</b>					
Letter Gothic	C05200p0	LGO	X05210pC	X050Dp	400
Letter Gothic Bold	C05400p0	LGOB	X05410pc	X050Fp	404
<b>Prestige Latin1</b>					
Prestige Latin1	C07200p0	PRS	X07210pC	X070Dp	432
Prestige Latin1 Bold	C07400p0	PRSB	X07410pC	X070Fp	318
Prestige Latin1 Italic	C07300p0	PRSI	X07310pC	X070Ep	319
<b>Times New Roman Latin1</b>					
Times New Roman	C0N200p0	TNR	X0N210pc	X0N0Dp	2308
Times New Roman Bold	C0N400p0	TNRB	X0N410pc	X0N0Fp	2309
Times New Roman Italic	C0N300p0	TNRI	X0N310pc	X0N0Ep	2310
Times New Roman Bold Italic	C0N500p0	TNRBI	X0N510pc	X0N10p	2311
<b>Latin1 euro</b>					
<b>Boldface Latin1</b>					
Boldface	C08400p0	BFC	X0841Epc	X080Vp	20224
<b>BookMaster Latin1</b>					
BookMaster	C0B200p0	EDFBL	N/A	N/A	335
BookMaster Bold	C0B400p0	EDFBLB	N/A	N/A	336
BookMaster Italic	C0B300p0	EDFBLI	N/A	N/A	337
BookMaster Bold Italic	C0B500p0	EDFBLBI	N/A	N/A	338
<b>BookMaster Latin1 Reverse</b>					
BookMaster Reverse	C0B600p0	EDFBLR	N/A	N/A	339
<b>Courier Latin1</b>					
Courier	C04200p0	COU	X0421EpC	X040Sp	416
Courier Bold	C04400p0	COUB	X0441EpC	X040Vp	420
Courier Italic	C04300p0	COUI	X0431EpC	X040Up	424
Courier Bold Italic	C04500p0	COUBI	X0451EpC	X040Wp	428

Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
<b>Gothic Text Latin1</b>					
Gothic Text	C06200p0	GOT	X0621EpC	X060Sp	304
<b>Helvetica Latin1</b>					
Helvetica	C0H200p0	HEL	X0H21EpC	X0H0Sp	2304
Helvetica Bold	C0H400p0	HELB	X0H41EpC	X0H0Vp	2305
Helvetica Italic	C0H300p0	HELI	X0H31EpC	X0H0Up	2306
Helvetica Bold Italic	C0H500p0	HELBI	X0H51EpC	X0H0Wp	2307
<b>Letter Gothic Latin1</b>					
Letter Gothic	C05200p0	LGO	X0521EpC	X050Sp	400
Letter Gothic Bold	C05400p0	LGOB	X0541EpC	X050Vp	404
<b>Prestige Latin1</b>					
Prestige	C07200p0	PRS	X0721EpC	X070Sp	432
Prestige Bold	C07400p0	PRSB	X0741EpC	X070Vp	318
Prestige Italic	C07300p0	PRSI	X0731EpC	X070Up	319
<b>Times New Roman Latin1</b>					
Times New Roman	C0N200p0	TNR	X0N21EpC	X0N0Sp	2308
Times New Roman Bold	C0N400p0	TNRB	X0N41EpC	X0N0Vp	2309
Times New Roman Italic	C0N300p0	TNRI	X0N31EpC	X0N0Up	2310
Times New Roman Bold Italic	C0N500p0	TNRBI	X0N51EpC	X0N0Wp	2311
<b>Latin2</b>					
<b>Courier Latin235</b>					
Courier	C04202p0	COU	X04252p1	X0444p	416
Courier Bold	C04402p0	COUB	X04452p1	X0446p	420
Courier Italic	C042302p0	COUI	X04352p1	X0445p	424
Courier Bold Italic	C04502p0	COUBI	X04552p1	X0447p	428
<b>Helvetica Latin235</b>					
Helvetica	C0H202p0	HEL	X0H252p1	X0H44p	2304
Helvetica Bold	C0H402p0	HELB	X0H452p1	X0H46p	2305
Helvetica Italic	C0H302p0	HELI	X0H352p1	X0H45p	2306
Helvetica Bold Italic	C0H502p0	HELBI	X0H552p1	X0H47p	2307

Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
<b>Times New Roman Latin235</b>					
Times New Roman	C0N202p0	TNR	X0N252p1	X0N44p	2308
Times New Roman Bold	C0N402p0	TNRB	X0N452p1	X0N46p	2309
Times New Roman Italic	C0N302p0	TNRI	X0N352p1	X0N45p	2310
Times New Roman Bold Italic	C0N502p0	TNRBI	X0N552p1	X0N47p	2311
<b>Latin3</b>					
<b>Courier Latin235</b>					
Courier	C04202p0	COU	X0425202	X044E0	416
Courier Bold	C04402p0	COUB	N/A	N/A	420
Courier Italic	C04302p0	COUI	N/A	N/A	424
Courier Bold Italic	C04502p0	COUBI	N/A	N/A	428
<b>Helvetica Latin235</b>					
Helvetica	C0H202p0	HEL	X0H25202	X0H4E0	2304
Helvetica Bold	C0H402p0	HELB	N/A	N/A	2305
Helvetica Italic	C0H302p0	HELI	N/A	N/A	2306
Helvetica Bold Italic	C0H502p0	HELBI	N/A	N/A	2307
<b>Times New Roman Latin235</b>					
Times New Roman	C0N202p0	TNR	X0N25202	X0N4E0	2308
Times New Roman Bold	C0N402p0	TNRB	N/A	N/A	2309
Times New Roman Italic	C0N302p0	TNRI	N/A	N/A	2310
Times New Roman Bold Italic	C0N502p0	TNRBI	N/A	N/A	2311
<b>Latin4</b>					
<b>Courier Latin4</b>					
Courier	C04207p0	COU	X04257p9	X0473p	416
Courier Bold	C04407p0	COUB	X04457p9	X0475p	420
Courier Italic	C04307p0	COUI	X04357p9	X0474p	424
Courier Bold Italic	C04507p0	COUBI	X04557p9	X0476p	428
<b>Helvetica Latin4</b>					
Helvetica	C0H207p0	HEL	X0H257p9	X0H73p	2304

Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
Helvetica Bold	C0H407p0	HELB	X0H457p9	X0H75p	2305
Helvetica Italic	C0H307p0	HELI	X0H357p9	X0H74p	2306
Helvetica Bold Italic	C0H507p0	HELBI	X0H557p9	X0H76p	2307
<b>Times New Roman Latin4</b>					
Times New Roman	CON207p0	TNR	X0N257p9	X0N73p	2308
Times New Roman Bold	CON407p0	TNRB	X0N457p9	X0N75p	2309
Times New Roman Italic	CON307p0	TNRI	X0N357p9	X0N74p	2310
Times New Roman Bold Italic	CON507p0	TNRBI	X0N557p9	X0N76p	2311
<b>Latin5</b>					
<b>Courier Latin235</b>					
Courier	C04202p0	COU		X0460p	416
Courier Bold	C04402p0	COUB	X04452p3	X0462p	420
Courier Italic	C04302p0	COUI	X04352p3	X0461p	424
Courier Bold Italic	C04502p0	COUBI	X04552p3	X0463p	428
<b>Helvetica Latin235</b>					
Helvetica	C0H202p0	HEL	X0H252p3	X0H60p	2304
Helvetica Bold	C0H402p0	HELB	X0H452p3	X0H62p	2305
Helvetica Italic	C0H302p0	HELI	X0H352p3	X0H61p	2306
Helvetica Bold Italic	C0H502p0	HELBI	X0H552p3	X0H63p	2307
<b>Times New Roman Latin235</b>					
Times New Roman	CON202p0	TRN	X0N252p3	X0N60p	2308
Times New Roman Bold	CON42p0	TRNB	X0N452p3	X0N60p	2309
Times New Roman Italic	CON232p0	TRNI	X0N352p3	X0N60p	2310
Times New Roman Bold Italic	CON52p0	TRNBI	X0N552p3	X0N60p	2311
<b>Optical Character Recognition (OCR)</b>					
<b>OCRA</b>					
OCRA	C0920AB0	OCR_A	X0927AB4	X09B0B	305
<b>OCRB</b>					
OCRB	C0920BB0	OCR_B	X0927BB5	X09B1B	306

Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
<b>Lao</b>					
<b><i>Courier Lao</i></b>					
Courier Lao	C04209p0	COU_L	X04269pE	X041Op	416
Courier Lao Bold	C04409p0	COU_LB	X04469pE	X041Qp	420
Courier Lao Italic	C04309p0	COU_LI	X04369pE	X041Pp	424
Courier Lao Bold Italic	C04509p0	COU_LBI	X04569pE	X041Rp	428
<b><i>Pusuwan</i></b>					
Pusuwan	C0H209p0	HEL_L	X0H269pE	X0H1Op	2304
Pusuwan Bold	C0H409p0	HEL_LB	X0H469pE	X0H1Qp	2305
Pusuwan Italic	C0H309p0	HEL_LI	X0H369pE	X0H1Pp	2306
Pusuwan Bold Italic	C0H509p0	HEL_LBI	X0H569pE	X0H1Rp	2307
<b><i>Kaewfah</i></b>					
Kaewfah	C0N209p0	TNR_L	X0N269pE	X0N1Op	2308
Kaewfah Bold	C0N409p0	TNR_LB	X0N469pE	X0N1Qp	2309
Kaewfah Italic	C0N309p0	TNR_LI	X0N369pE	X0N1Pp	2310
Kaewfah Bold Italic	C0N509p0	TNR_LBI	X0N569pE	X0N1Rp	2311
<b>Symbols</b>					
<b><i>Courier Symbols</i></b>					
Courier Symbols	C04201p0	COU_S	X04271p1	X0412p	416
Courier Symbols Bold	C04401p0	COU_SB	X04471p1	X0413p	420
<b><i>Helvetica Symbols</i></b>					
Helvetica Symbols	C0H201p0	HEL_S	X0H271p1	X0H12p	2304
Helvetica Symbols Bold	C0H401p0	HEL_SB	X0H471p1	X0H13p	2305
<b><i>Times New Roman Symbols</i></b>					
Times New Roman Symbols	C0N201p0	TNR_S	X0N271p1	X0N12p	2308
Times New Roman Symbols Bold	C0N401p0	TNR_SB	X0N471p1	X0N13p	2309
<b>Thai</b>					
<b><i>Courier Thai</i></b>					
Courier Thai	C04206p0	COU_T	X04266p8	X047Bp	416

Type 1 typeface name	Character set	Type 1 file name	Coded font	Alternate coded font	FGID
Courier Thai Bold	C04406p0	COU_TB	X04466p8	X047Dp	420
Courier Thai Italic	C04306p0	COU_TI	X04366p8	X047Cp	424
Courier Thai Bold Italic	C04506p0	COU_TBI	X04566p8	X047Vp	428
<b>Thonburi</b>					
Thonburi	C0H206p0	HEL_T	X0H266p8	X0H7Bp	2304
Thonburi Bold	C0H406p0	HEL_TB	X0H466p8	X0H7Dp	2305
Thonburi Italic	C0H306p0	HEL_TI	X0H366p8	X0H7Pp	2306
Thonburi Bold Italic	C0H506p0	HEL_TBI	X0H566p8	X0H7Vp	2307
<b>Burirum</b>					
Burirum	C0N206p0	TNR_T	X0N266p8	X0N7Bp	2308
Burirum Bold	C0N406p0	TNR_TB	X0N466p8	X0N7Dp	2309
Burirum Italic	C0N306p0	TNR_TI	X0N366p8	X0N7Cp	2310
Burirum Bold Italic	C0N506p0	TNR_TBI	X0N566p8	X0N7Vp	2311

Here are the **code page** and the **GCSGID** of each font type:

Type name	Code page	GCSGID
APL	T1000293	1364
Arabic	T1000420	1264
BookMaster Specials	T1B00BGS	1241
Cyrillic	T1001025	1300
Greek	T1000875	1300
Hebrew	T1000424	1362
IBM Logo	C0IBM0p0	2040
Katakana: Gothic Katakana Gothic Katakana Bold Gothic Katakana Italic Gothic Katakana Bold Italic	T1000897T1001027- T1001041T1V10290	1306
Latin 1: Boldface BookMaster Courier Gothic Text Helvetica Letter Gothic Prestige Latin 1 Times New Roman	T1V15000T1B00500T1- V10500T1V15000T1V10500- T1V15000T1V15000T1- V10500	2039
Latin 1 euro: BookMaster	T1001148T1B00500	2041
Latin 2	T1000870	1261
Latin 3	T1000905	1261



Type name	Code page	GCSGID
Latin4	T1001069	1261
Latin5	T1001026	1261
OCRA	T1000892	968
OCRB	T1000893	968
Lao	T1001132	1341
Symbols	T1000259	1275
Thai	T1000838	1279

## DBCS fonts

DBCS core fonts are part of the AFP raster fonts shipped with the z/OS Font Collection. The fonts contain different typefaces that are suitable for printing various Chinese, Japanese, and Korean (CJK) documents. CJK fonts are derived from the Adobe CID-Keyed font technology.

DBCS fonts are provided in 240-pel bounded-box font formats for the z/OS, IBM , AIX, Linux, and Windows operating systems.

[Summary table for DBCS fonts, p. 98](#) lists DBCS fonts by CJK typeface.

The Japanese DBCS Raster fonts and extended code pages were enhanced in the 3.7 version of the InfoPrint Font Collection. The new Japanese Era name character, Reiwa, has been added to section E8 code point 60 of the DBCS character sets C0\*\*\*\*E8 and code pages T10300E8, T10300, T11300, T1J300, T1K300. The GCGID for the new Japanese Era name character is IXA0E860, which represents EBCDIC double byte code point E860.

In version 3.8 of the InfoPrint Font Collection, three Japanese DBCS Outline fonts: CZJHKG, CZJHMG, CZJHMN and four DBCS code pages: T11300, T1J300, T1K300, T10300 were enhanced to include the new Japanese Era, Reiwa character 令和 utilizing GCGID IXA0E860 and EBCDIC double byte code point E860.

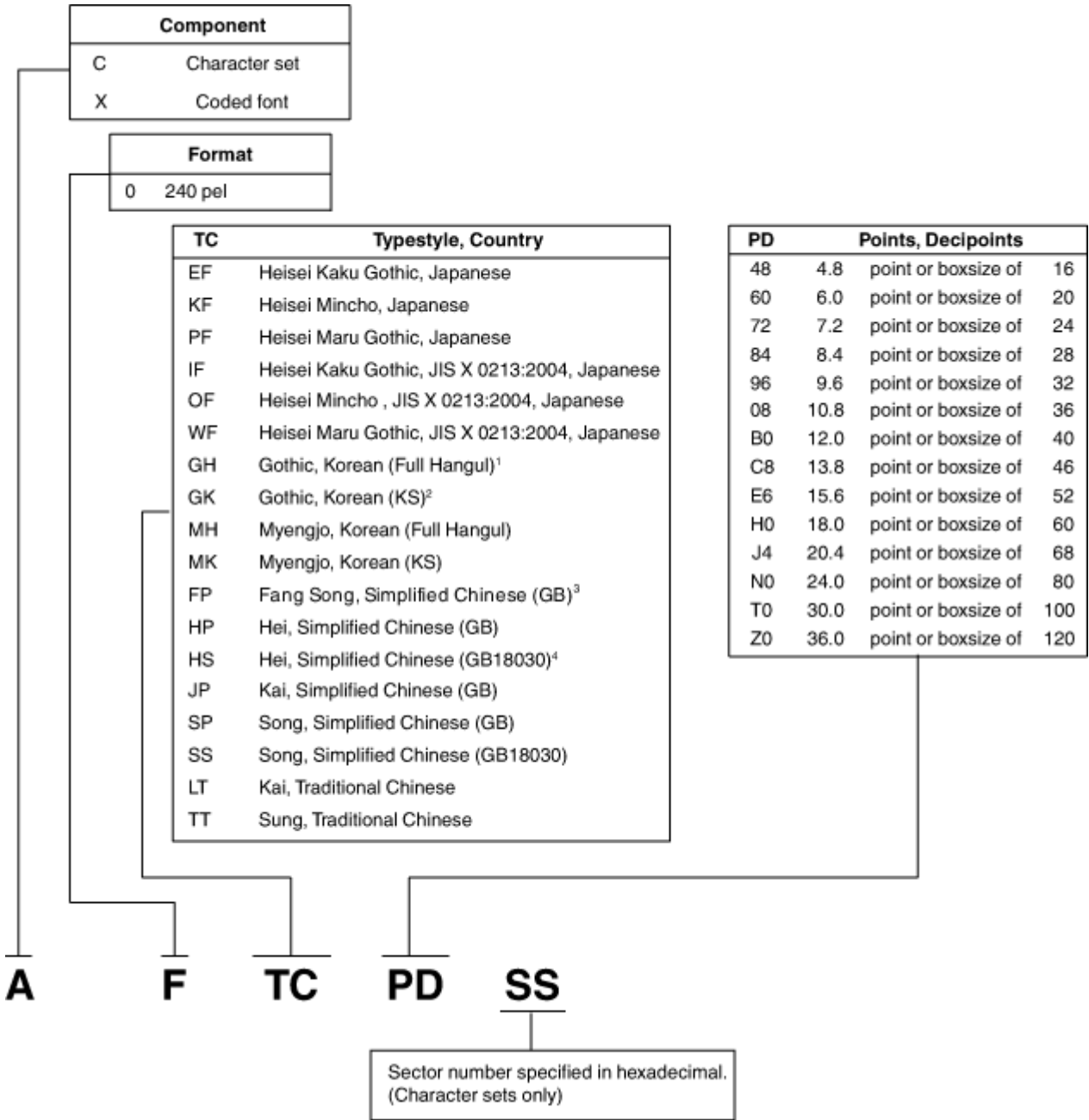
## Naming conventions for DBCS fonts

This section shows the naming conventions for DBCS full-width and half-width raster coded fonts and character sets. It also shows the size groups that include the point and box sizes of fonts.

### DBCS full-width fonts

The next figure illustrates the naming convention for DBCS full-width fonts.

### Naming convention for DBCS full-width fonts



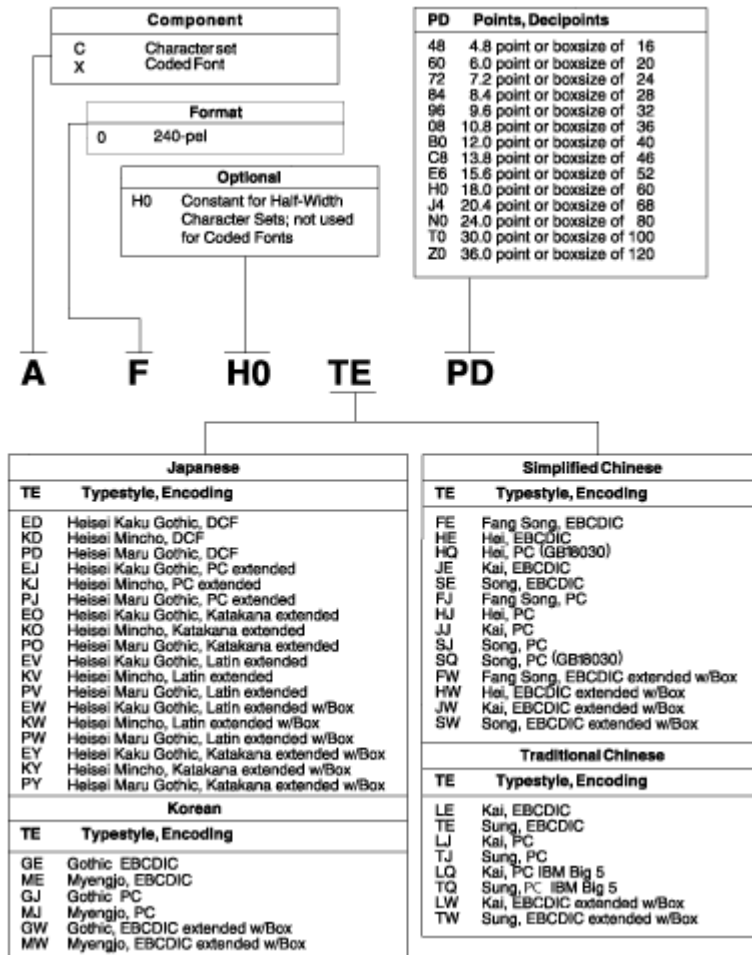
↓ Notes

1. **Full Hangul:** Korean Industrial Standard Code for information interchange (Hangul and Hanja) KSC 5700-199.
2. **KS:** Korean Industrial Standard Code for information interchange (Hangul and Hanja) KSC 5601-1989.
3. **GB:** Code of Chinese Graphic Character Set for Information Interchange GB 2312-80.
4. **GB18030:** Code of Chinese Graphic Character Set for Information Interchange GB 18030-2000.

## DBCS half-width fonts

The next figure illustrates the naming convention for the DBCS half-width fonts.

### Naming convention for DBCS half-width fonts



### Point and box sizes for DBCS fonts

The "PD" characters in the naming convention (the fifth and sixth characters and the seventh and eighth characters represent the point size and box size of the font. The point size and box size that can be used with a font are determined by the size group assigned to the font. The next table shows whether a PD point size and box size is in size group 1, size group 2, or both. It also shows the size groups that are assigned to the DBCS fonts.

### Size groups for DBCS font point sizes and box sizes

PD	Point size	Box size	Size group 1	Size group 2
60	6.0	20	X	
72	7.2	24	X	X
84	8.4	28	X	
96	9.6	32	X	X

PD	Point size	Box size	Size group 1	Size group 2
08	10.8	36	X	
B0	12.0	40	X	
C8	13.8	46	X	
E6	15.6	52	X	
H0	18.0	60	X	
J4	20.4	68	X	
N0	30.0	80	X	

## Summary table for DBCS fonts

This section lists DBCS core fonts for these typefaces:

- Chinese:
  - Simplified Chinese:
    - ◆ GB Fang Song
    - ◆ GB Hei
    - ◆ GB Kai
    - ◆ GBK Song
  - Traditional Chinese:
    - ◆ Kai
    - ◆ Sung
- Japanese:
  - Japanese Heisei Kaku Gothic
  - Japanese Heisei Maru Gothic
  - Japanese Heisei Mincho
- Korean:
  - Gothic
  - Myengjo

The next table provides this information:

### AFP/CID typeface name

The IBM name for the typeface.

### CID file name

The name of the CID-Keyed font file used to create the font. The file extensions are CID and CMP.

### Weight

The weight of the font. Possible values are:

**L**

Light

**M**

Medium

**SB**

Semi-bold

**SL**

Semi-light

**Width**

The width of the font. Possible values are:

**Full**

Full-width

**Half**

Half-width

**Coded font**

A six-character name of the font, with "X0" as the prefix, that identifies the combination of code page and character set.

**Character set**

An eight-character name, with "C0" as the prefix, that identifies an AFP raster character set.

**Code page**

An eight-character name, with "T1" as the prefix, that identifies the code page.

**GCSGID**

The graphic character set global identifier (GCSGID) is a collection of characters registered with a unique number and sometimes used for font and code page selection.

**FGID**

The font typeface global identifier (FGID) is a number assigned to each typeface and is sometimes used for font selection.

**Size**

The size group that defines what point size and box size the font can use.

**Summary of DBCS fonts**

DBCS fonts are grouped by Chinese, Japanese, and Korean typefaces.

Typeface name	Width	Coded font	Character set	Code page	GCSGID	FGID	Size
<b>Simplified Chinese - GB Fang Song – IBSFSGW4 (SL)</b>							
Fang Song	Full	XOFPpd	COFPpdss	T10837ss	1020	54566	1
	Half	XOFEpd	COHOFEpd	T1H00836	1174		1
	Half	XOFJpd	COHOJpd	T1H01115	1240		1
	Half	XOFWpd	COHOFWpd	T1H01151	1366		2
<b>Simplified Chinese - GB Hei – IBSHEIW6 (SB)</b>							
Hei	Full	XOHPpd	COHPpdss	T10837ss	1020	54565	1
	Half	XOHEpd	COHOHEpd	T1H00836	1174		1
	Half	XOHJpd	COHOHJpd	T1H01115	1240		1
	Half	XOHWpd	COHOHWpd	T1H01151	1366		2
<b>Simplified Chinese - GB Kai – IBSKAIW5 (M)</b>							
Kai	Full	XOJPpd	COJPpdss	T10837ss	1020	54568	1
	Half	XOJEpd	COHOJEpd	T1H00836	1174		1
	Half	XOJJpd	COHOJJpd	T1H01115	1240		1
	Half	XOJWpd	COHOJWpd	T1H01151	1366		2
<b>Simplified Chinese - GBK Song – IKSSNGW5 (M)</b>							
Song	Full	XOSPpd	COSPpdss	T10837ss	1020	54567	1
	Full	XOSSpd	COSSpdss	T1K837ss	1085		1
	Half	XOSEpd	COHOSEpd	T1H00836	1174		1
	Half	XOSJpd	COHOSJpd	T1H01115	1240		1
	Half	XOSUpd	COHOSUpd	T1H00836	1174		1
	Half	XOSNpd	COHOSNpd	T1H01115	1240		1
	Half	XOSQpd	COHOSQpd	T1H01114	1238		1
	Half	XOSWpd	COHOSWpd	T1H01151	1366		2
<b>Traditional Chinese Kai – IBTKAIW5 (M)</b>							
Kai	Full	XOLTpd	COLTpdss	T10835ss	2074	54568	1
	Half	XOLEpd	COHOLEpd	T1H00037	1175		1
	Half	XOLJpd	COHOLJpd	T1H01043	1189		1
	Half	XOLQpd	COHOLQpd	T1H01114	1500		1
	Half	XOLVpd	COHOLVpd	T1H01159	1399		1

Typeface name	Width	Coded font	Character set	Code page	GCSGID	FGID	Size
	Half	X0LWpd	COH0LWpd	T1H01152	1367		2
<b>Traditional Chinese Sung – IBTSNGW3 (L)</b>							
Sung	Full	X0TTpd	C0TTpdss	T10835ss	2074	54563	1
	Half	X0TEpd	COH0TEpd	T1H00037	1175		1
	Half	X0TJpd	COH0TJpd	T1H01043	1189		1
	Half	X0TQpd	COH0TQpd	T1H01114	1500		1
	Half	X0TVpd	COH0TVpd	T1H01159	1399		1
	Half	X0TWpd	COH0TWpd	T1H01152	1367		2
<b>Japanese Heisei Kaku Gothic – IBJHKGW5 (M)</b>							
Heisei Kaku Gothic	Full	X0EFpd	C0EFpdss	T10300ss	2057	53249	1
	Half	X0EDpd	COH0EDpd	T1H01002	1132		1
	Half	X0EJpd	COH0EJpd	T1H01041	1187		1
	Half	X0EOpd	COH0EOpd	T1H00290	1398		1
	Half	X0EVpd	COH0EVpd	T1H01027	1398		1
	Half	X0EWpd	COH0EWpd	T1H01031	1363		2
	Half	X0EYpd	COH0EYpd	T1H01030	1363		2
<b>Japanese Heisei Maru Gothic – IBJHMGW4 (SL)</b>							
Heisei Maru Gothic	Full	X0PFpd	C0PFpdss	T10300ss	2057	53250	1
	Half	X0PDpd	COH0PDpd	T1H01002	1132		1
	Half	X0PJpd	COH0PJpd	T1H01041	1187		1
	Half	X0POpd	COH0POpd	T1H00290	1398		1
	Half	X0PVpd	COH0PVpd	T1H01027	1398		1
	Half	X0PWpd	COH0PWpd	T1H01031	1363		2
	Half	X0PYpd	COH0PYpd	T1H01030	1363		2
<b>Japanese Heisei Mincho – IBJHMNW3 (L)</b>							
Heisei Mincho	Full	X0KFpd	C0KFpdss	T10300ss	2057	53248	1
	Half	X0KDpd	COH0KDpd	T1H01002	1132		1
	Half	X0KJpd	COH0KJpd	T1H01041	1187		1
	Half	X0KOpd	COH0KOpd	T1H00290	1398		1
	Half	X0KVpd	COH0KVpd	T1H01027	1398		1

Typeface name	Width	Coded font	Character set	Code page	GCSGID	FGID	Size
	Half	X0KWpd	C0H0KWpd	T1H01031	1363		2
	Half	X0KYpd	C0H0KYpd	T1H01030	1363		2
<b>Korean Gothic – IBHKG2W5 (M)</b>							
Gothic	Full	X0GKpd	C0GKpdss	T10834ss	1010	53816	1
	Full	X0GHpd	C0GHpdss	T1K834ss	1094		1
	Half	X0GEpd	C0H0GEpd	T1H00833	1173		1
	Half	X0GJpd	C0H0GJpd	T1H01088	1267		1
	Half	X0GUpd	C0H0GUpd	T1H00833	1173		1
	Half	X0GNpd	C0H0GNpd	T1H01088	1267		1
	Half	X0GWpd	C0H0GWpd	T1H01150	1365		2
<b>Korean Myengjo – IBHSM2W5 (M)</b>							
Myengjo	Full	X0MKpd	C0MKpdss	T10834ss	1010	53560	1
	Full	X0MHpd	C0MHpdss	T1K834ss	1094		1
	Half	X0MEpd	C0H0MEpd	T1H00833	1173		1
	Half	X0MJpd	C0H0MJpd	T1H01088	1267		1
	Half	X0MUpd	C0H0MUpd	T1H00833	1173		1
	Half	X0MNpd	C0H0MNpd	T1H01088	1267		1
	Half	X0MWpd	C0H0MWpd	T1H01150	1365		2

## Math, PI, and Sonoran fonts

This section lists the Math, PI, and Sonoran 240-pel raster fonts that are included in the z/OS Font Collection.

The next table provides this information:

### Font name

The name of the font.

### Code page

An eight-character name, with "T1" as the prefix, that identifies the code page.

### GCSGID

The graphic character set global identifier (GCSGID), which is a collection of characters registered with a unique number and sometimes used for font and code page selection.

For Math Symbols Serif and Math Symbols San Serif, the **GCSGID** is 909. For all the others, it is 0.

### CPGID



The code page global identifier (CPGID), which is a number registered by IBM to identify each code page uniquely.

### Wd

The width of the font. Values are:

**M**

Medium

**SB**

Semi-bold

### Wt

The weight of the font. Values are:

**B**

Bold

**M**

Medium

### Coded font

An eight-character name of the font, with "X0" as the prefix, that identifies the combination of code page and character set.

### Character set

An eight-character name, with "C0" as the prefix, that identifies an AFP raster character set.

### Vertical size

The maximum vertical size of the font in points.

### Summary of Math, PI, and Sonoran 240-pel fonts

The coded font, character set, and point size of Math, PI, and Sonoran 240-pel fonts are grouped by font name, code page, GCSGID, CPGID, width, and weight.

Font name	Code page	CPGID	Wd	Wt	Coded font	Character set	Vertical size
Math Format	T1M00830	2080	M	M	X0MO5500	C0MO5500	10.0
					X0MO5541	C0MO5541	40.0
					X0MO5560	C0MO5560	6.0
					X0MO5570	C0MO5570	7.0
					X0MO5580	C0MO5580	8.0
					X0MO5581	C0MO5581	44.0
					X0MO5590	C0MO5590	9.0
					X0MO55A0	C0MO55A0	11.0
					X0MO55B0	C0MO55B0	12.0

Font name	Code page	CPGID	Wd	Wt	Coded font	Character set	Vertical size
					X0MO55B1	C0MO55B1	48.0
					X0MO55D0	C0MO55D0	14.0
					X0MO55F0	C0MO55F0	16.0
					X0MO55H0	C0MO55H0	18.0
					X0MO55H1	C0MO55H1	54.0
					X0MO55J0	C0MO55J0	20.0
					X0MO55L0	C0MO55L0	22.0
					X0MO55N0	C0MO55N0	24.0
					X0MO55N1	C0MO55N1	60.0
					X0MO55R0	C0MO55R0	28.0
					X0MO55T0	C0MO55T0	30.0
					X0MO55V0	C0MO55V0	32.0
					X0MO55Z0	C0MO55Z0	36.0
					X0MO55Z	C0MO55Z1	72.0
Math Symbols Serif	T1M00829	829	M	M	X0MP5500	COMP5500	10.0
					X0MP5560	COMP5560	6.0
					X0MP5570	COMP5570	7.0
					X0MP5580	COMP5580	8.0
					X0MP5590	COMP5590	9.0
					X0MP55A0	COMP55A0	11.0
					X0MP55B0	COMP55B0	12.0
					X0MP55D0	COMP55D0	14.0
					X0MP55F0	COMP55F0	16.0
					X0MP55H0	COMP55H0	18.0
					X0MP55N0	COMP55N0	24.0
					X0MP55Z0	COMP55Z0	36.0
					B	X0MP7500	COMP7500
				X0MP7560		COMP7560	6.0
				X0MP7570		COMP7570	7.0
				X0MP7580		COMP7580	8.0
				X0MP7590		COMP7590	9.0
				X0MP75A0		COMP75A0	11.0
				X0MP75B0		COMP75B0	12.0
				X0MP75D0	COMP75D0	14.0	

Font name	Code page	CPGID	Wd	Wt	Coded font	Character set	Vertical size
					X0MP75F0	C0MP75F0	16.0
					X0MP75H0	C0MP75H0	18.0
					X0MP75N0	C0MP75N0	24.0
					X0MP75Z0	C0MP75Z0	36.0
Math Symbols San Serif	T1M00829	829	M	M	X0MQ5500	C0MQ5500	10.0
					X0MQ5560	C0MQ5560	6.0
					X0MQ5570	C0MQ5570	7.0
					X0MQ5580	C0MQ5580	8.0
					X0MQ5590	C0MQ5590	9.0
					X0MQ55A0	C0MQ55A0	11.0
					X0MQ55B0	C0MQ55B0	12.0
					X0MQ55D0	C0MQ55D0	14.0
					X0MQ55F0	C0MQ55F0	16.0
					X0MQ55H0	C0MQ55H0	18.0
					X0MQ55N0	C0MQ55N0	24.0
					X0MQ55Z0	C0MQ55Z0	36.0
				B	X0MQ7500	C0MQ7500	10.0
					X0MQ7560	C0MQ7560	6.0
					X0MQ7570	C0MQ7570	7.0
					X0MQ7580	C0MQ7580	8.0
					X0MQ7590	C0MQ7590	9.0
					X0MQ75A0	C0MQ75A0	11.0
					X0MQ75B0	C0MQ75B0	12.0
					X0MQ75D0	C0MQ75D0	14.0
					X0MQ75F0	C0MQ75F0	16.0
					X0MQ75H0	C0MQ75H0	18.0
PI Serif	T1GPI363	2066	M	M	X0Q0550P	C0Q05500	10.0
					X0Q0556P	C0Q05560	6.0
					X0Q0558P	C0Q05580	8.0
					X0Q055BP	C0Q055B0	12.0
				B	X0Q0750P	C0Q07500	10.0
					X0Q0756P	C0Q07560	6.0

Font name	Code page	CPGID	Wd	Wt	Coded font	Character set	Vertical size
					X0Q0758P	C0Q07580	8.0
					X0Q075BP	C0Q075B0	12.0
PI Sans Serif	T1GPI363	2066	M	M	XOP0550P	COP05500	10.0
					XOP0556P	COP05560	6.0
					XOP0558P	COP05580	8.0
					XOP055BP	COP055B0	12.0
				B	XOP0750P	COP07500	10.0
					XOP0756P	COP07560	6.0
					XOP0758P	COP07580	8.0
					XOP075BP	COP075B0	12.0
Sonoran Display	T1GE0200	2081	M	M	XOJ055JE	C0J055J0	20.0
					XOJ055ZE	C0J055Z0	36.0
Sonoran Petite	T1GE0300	2082	SB	M	XOZ0564E	C0Z05640	4.0

## Compatibility fonts

Compatibility fonts are a feature of Print Services Facility™ (PSF) and are not included in the InfoPrint Font Collection. The fonts are described in this section for reference only.

Compatibility fonts include uniformly spaced, mixed-pitch, and Proprinter Emulation fonts. Uniformly spaced fonts are measured horizontally in pitch. Proportionally spaced and mixed-pitch fonts are measured vertically in points. Compatibility fonts are provided in these formats:

- 240-pel bounded-box
- 240-pel unbounded-box
- 300-pel

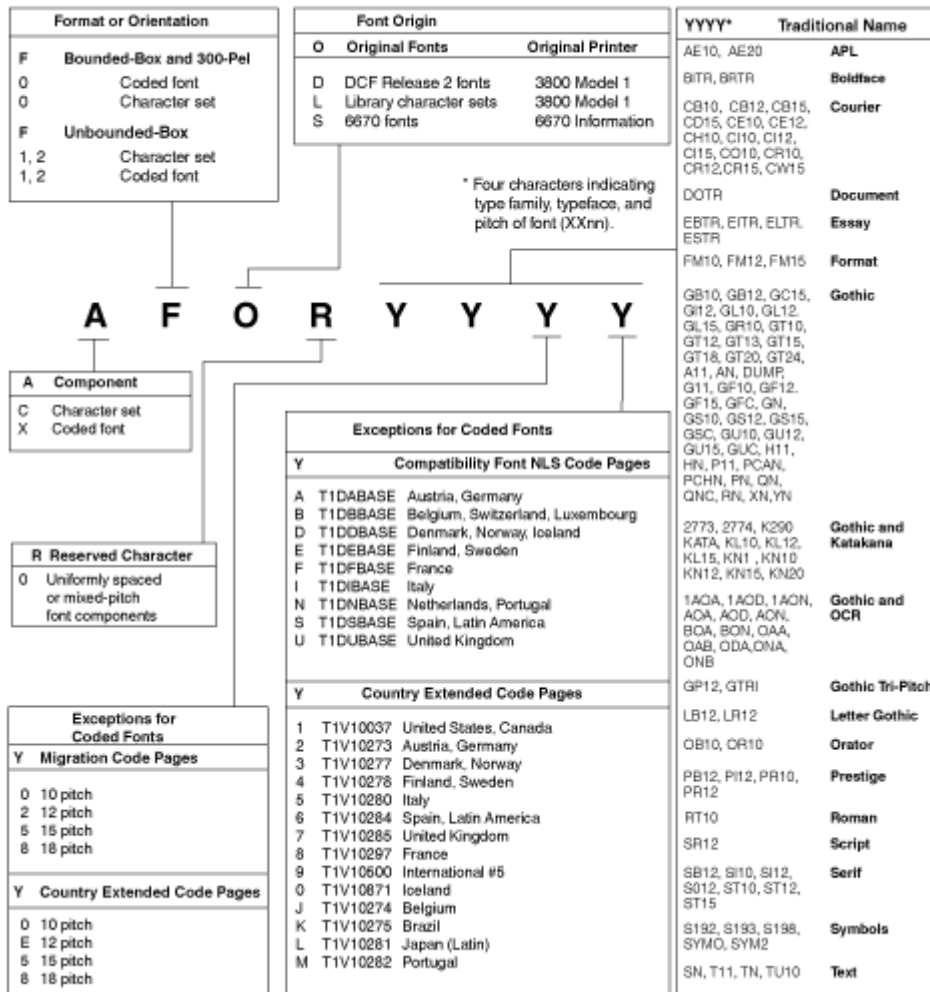
The next table lists compatibility fonts by font type.

## Naming conventions for compatibility fonts

The next figure illustrates the naming convention for compatibility fonts.

## Naming conventions for compatibility fonts

### Compatibility Fonts (240-pel and 300-pel)



## Summary table for compatibility fonts

The next table provides this information:

### AFP typeface name

The IBM name for the typeface.

### S/W

The style and weight of the font. Possible values are:

**IB**

Italic Bold

**IM**

Italic Medium

**RB**

Roman Bold

**RC**

Roman Condensed

**RL**

Roman Light

**RM**

Roman Medium

**RSL**

Roman Semi-Light

**Code page**

An eight-character name, with "T1" as the prefix, that identifies the code page. Alphabetic script and symbol fonts use only single-byte code pages.

**Character set identifier**

An eight-character name that identifies an AFP raster character set.

**Coded font identifier**

A five- to eight-character name of the raster coded font that identifies the combination of code page and character set.

**GCSGID**

The graphic character set global identifier (GCSGID) is a collection of characters registered with a unique number and sometimes used for font and code page selection.

**FGID**

The font typeface global identifier (FGID) is a number assigned to each typeface and is sometimes used for font selection.

**Size**

The size of the font in pitch or points. **MP** stands for mixed pitch.

**Summary of compatibility fonts**

Compatibility fonts are grouped by font type.

Typeface name(S/W)	Code page	Character set	Coded font	GCSGID	FGID	Size
<b>APL</b>						
APL (RM)	T1S0AE10	C0S0AE10	X0AE10	2029	45	10 pitch
	T1S0AE10	C0S0AE20	X0AE20		280	20 ptich
<b>Boldface</b>						

Typeface name(S/W)	Code page	Character set	Coded font	GCSGID	FGID	Size
Book Bold (RB)	T1DOBASE	COS0BRTR	X0BRTR	2023	159	MP
Book Italic (IB)	T1DOBASE	COS0BITR	X0BITR		155	
<b>Courier</b>						
Courier (RM)	T1DOBASE	COS0CR10	X0CR10	2023	11	10 pitch
	T1DOBASE	COS0CR12	X0CR12		85	12 pitch
	T1DOBASE	COS0CR15	X0CR15		223	15 pitch
	T1DOBASE	COS0CE10	X0CE12		85	12 pitch
Courier Bold (RB)	T1DOBASE	COS0CB10	X0CB10	2023	46	10 pitch
	T1DOBASE	COS0CB12	X0CB12		108	12 pitch
	T1DOBASE	COS0CB15	X0CB15		214	15 pitch
Courier Italic (IM)	T1DOBASE	COS0CI10	X0CI10	2023	18	10 pitch
	T1DOBASE	COS0CI12	X0CI12		92	12 pitch
	T1DOBASE	COS0CI15	X0CI15		215	15 pitch
Courier (Double Wide) (RM)	T1DOBASE	COS0CD15	X0CD15	2023	417	15 pitch
Courier (Double Wide Italic) (IM)	T1DOBASE	COS0CW15	X0CW15	2023	425	15 pitch
Courier (Overstruck) (RM)	T1DOBASE	COS0CO10	X0CO10	2025	302	10 pitch
Courier elongaged (Overstruck) (RM)	T1DOBASE	COS0CH10	X0CH10	2025	37	10 pitch
Courier extended (RM)	T1DOBASE	COS0CE10	X0CE10	2036	85	10 pitch
<b>Document</b>						
Book (RM)	T1DOBASE	COS0DOTR	X0DOTR	2023	175	MP 10 points
<b>Essay</b>						
Essay Bold (RB)	T1DOBASE	COS0EBTR	X0EBTR	2023	163	MP 10 points

Typeface name(S/W)	Code page	Character set	Coded font	GCSGID	FGID	Size
Essay Italic (IM)	T1DOBASE	COSOEITR	XOEITR	2023	162	MP 10 points
Essay Light (RL)	T1DOBASE	COSOELTR	XOELTR	2023	173	MP 10 points
Essay (Overstruck) (RM)	T1DOBASE	COSOEOTR	XOEOTR	2028	196	MP 10 points
Essay (RM)	T1DOBASE	COSOESTR	XOESTR	2023	160	MP 10 points
<b>Format</b>						
Format (RM)	T1LOOFMT	COLOFM10	XOFM10	2027	30	10 pitch
	T1LOOFMT	COLOFM12	XOFM12		80	12 pitch
	T1LOOFMT	COLOFM15	XOFM15		225	15 pitch
<b>Gothic</b>						
Gothic Bold (RB)	T1DOBASE	CODOGB10	XOGB10	2023	39	10 pitch
	T1DOBASE	CODOGB12	XOGB12		69	12 pitch
Gothic Uppercase (RC)	T1L038BA	COL00GSC	X0GSC	2038	398	15 pitch
Gothic Italic (IM)	T1DOBASE	CODOGI12	X0GI12	2023	68	12 pitch
Gothic Reverse (RM)	T1DOBASE	CODOGR10	X0GR10	2023	310	10 pitch
Gothic (RSL)	T1DOBASE	CODOGL10	X0GL10	2023	303	10 pitch
	T1DOBASE	CODOGL12	X0GL12		303	12 pitch
	T1DOBASE	CODOGL15	X0GL15		303	15 pitch
Gothic (RM)	T1DOBASE	CODOGT10	X0GT10	2023	40	10 pitch
	T1DOBASE	CODOGT12	X0GT12		66	12 pitch
Gothic13 (RM)	T1DOBASE	CODOGT13	X0GT13	2037	203	13.3 pitch
Gothic (RM)	T1DOBASE	CODOGC15	X0GC15	2037	231	15 pitch
Gothic (RM)	T1DOBASE	CODOGT15	X0GT15	2023	230	15 pitch



Typeface name(S/W)	Code page	Character set	Coded font	GCSGID	FGID	Size
	T1D0BASE	C0D0GT18	X0GT18		275	18 pitch
Gothic (RM)	T1D0BASE	C0D0GT20	X0GT20	2023	230	20 pitch
	T1D0BASE	C0D0GT24	X0GT24		275	24 pitch
Gothic (RM)	T1D0BASE	C0L0GU10	X0GU10	2038	312	10 pitch
	T1D0BASE	C0L0GU12	X0GU12		312	12 pitch
	T1D0BASE	C0L0GU15	X0GU15		312	15 pitch
	T1D0BASE	C0L0GUC	X0GUC		311	15 pitch
DUMP (RM)	T1L0DUMP	C0L0DUMP	X0DUMP	2022	230	15 pitch
<b>Gothic and Katakana</b>						
Katakana (RM)	T1000290	C0L0KN12	X0KN12	2031	433	12 pitch
	T1000290	C0L0KN15	X0KN15		433	15 pitch
	T1000290	C0L0KN20	X0KN20		433	20 pitch
	T1000290	C0L0KATA	X0KATA		433	10 pitch
Katakana (RSL)	T1000290	C0K0KL10	X0KL10	2031	521	10 pitch
	T1000290	C0K0KL12	X0KL12		521	12 pitch
	T1000290	C0K0KL15	X0KL15		521	15 pitch
<b>Gothic and Optical Character Recognition-A (OCR-A)</b>						
OCR AOA1 (RM)	T1L0OCR1	C0L01AOA	X01AOA	2034	19	10 pitch
OCRA AOA (RM)	T1L0OCR1	C0L00AOA	X0AOA	2034	19	10 pitch
OCR A AON1 (RM)	T1L0OCR1	C0L01AON	X01AOD	2035	19	10 pitch
OCRA AON (RM)	T1L0OCR1	C0L00AOB	X0AOD	2035	19	10 pitch
<b>Gothic and Optical Character Recognition-B (OCR-B)</b>						
OCRB BOA (RM)	T1L0OCRB	C0L00BOA	X0BOA	2032	3	10 pitch
OCRB BON (RM)	T1L0OCR1	C0L00BOB	X0BON	2032	3	10 pitch
OCRB OAB (RM)	T1L0OCR1	C0L00OAB	X0OAB	2032	3	10 pitch
<b>Gothic Tri-Pitch</b>						

Typeface name(S/W)	Code page	Character set	Coded font	GCSGID	FGID	Size
Gothic Proportional (RM)	T1D0GP12	C0D0GP12	X0GP12	2023	174	MP 9 points
<b>Letter Gothic</b>						
Letter Gothic (RM)	T1D0BASE	C0S0LR12	X0LR12	2023	87	12 pitch
Letter Gothic Bold (RB)	T1D0BASE	C0S0LB12	X0LB12	2023	110	12 pitch
<b>Orator</b>						
Orator (RM)	T1D0BASE	C0S0OR10	X0OR10	2025	5	10 pitch
Orator Bold (RB)	T1D0BASE	C0S0OB10	X0OB10	2025	5	10 pitch
<b>Prestige</b>						
Prestige (RM)	T1D0BASE	C0S0PR10	X0PR10	2023	12	10 pitch
	T1D0BASE	C0S0PR12	X0PR12		86	12 pitch
Prestige Bold (RB)	T1D0BASE	C0S0PB12	X0PB12	2023	111	12 pitch
<b>Proprinter Emulation</b>						
Proptr Emul 5 CPI Small (RM)	T1000437	C02059L0	X02059LF	1262	443	5 pitch
Proptr Emul 6 CPI Small (RM)	T1000437	C02058M0	X02059MF	1262	444	6 pitch
Proptr Emul 8.55 CPI (RM)	T1000437	C02056N0	X02056NF	1262	445	8.55 pitch
Proptr Emul 10 CPI Small (RM)	T1000437	C02055P0	X02055PF	1262	440	10 pitch
Proptr Emul 12 CPI Small (RM)	T1000437	C02054Q0	X02054QF	1262	441	12 pitch
Proptr Emul 17.1 CPI Small (RM)	T1000437	C02051R0	X02051RF	1262	442	17.1 pitch
Proptr Emul 5 CPI Small Bold (RM)	T1000437	C02079L0	X02079LF	1262	448	5 pitch
Proptr Emul 6 CPI Small Bold (RM)	T1000437	C02078M0	X02079MF	1262	449	6 pitch

Typeface name(S/W)	Code page	Character set	Coded font	GCSGID	FGID	Size
Proptr Emul 10 CPI Small Bold (RM)	T1000437	C02075P0	X02075PF	1262	446	10 pitch
Proptr Emul 12 CPI Small Bold (RM)	T1000437	C02074Q0	X02074QF	1262	447	12 pitch
Proptr Emul 5 CPI (RM)	T1000437	C02059A0	X02059AF	1262	453	5 pitch
Proptr Emul 6 CPI (RM)	T1000437	C02059B0	X02059bF	1262	453	6 pitch
Proptr Emul 8.55 CPI (RM)	T1000437	C02059C0	X02059CF	1262	453	8.55 pitch
Proptr Emul 10 CPI (RM)	T1000437	C02055D0	X02055DF	1262	452	10 pitch
Proptr Emul 12 CPI (RM)	T1000437	C02055E0	X02055EF	1262	452	12 pitch
Proptr Emul 17.1 CPI (RM)	T1000437	C02055f0	X02055FF	1262	452	17.1 pitch
Proptr Emul 5 CPI Bold (RM)	T1000437	C02079A0	X02079AF	1262	456	5 pitch
Proptr Emul 65 CPI Bold (RM)	T1000437	C02079B0	X02079BF	1262	456	6 pitch
Proptr Emul 10 CPI Bold (RM)	T1000437	C02075D0	X02075DF	1262	455	10 pitch
Proptr Emul 12 CPI Bold (RM)	T1000437	C02075E0	X02075EF	1262	455	12 pitch
Proptr Emul 5 CPI Dbl High (RM)	T1000437	C02055J0	X02055JF	1262	452	5 pitch
Proptr Emul 10 CPI Dbl High (RM)	T1000437	C02051K0	X02051KF	1262	451	10 pitch
Proptr Emul 5 CPI Dbl High Bold (RM)	T1000437	C02075J0	X02075JF	1262	455	5 pitch 18 points
Proptr Emul 10 CPI Dbl High Bold (RM)	T1000437	C02071J0	X02071JF	1262	454	10 pitch

Typeface name(S/W)	Code page	Character set	Coded font	GCSGID	FGID	Size
Proptr Emul 9 PT (RM)	T1000437	C02059G0	X02059GF	1262	24328	9 points
Proptr Emul 18 PT (RM)	T1000437	C02055H0	X02055HF	1262	24320	18 points
Proptr Emul 9 PT Bold (RM)	T1000437	C02079G0	X02079GF	1262	24329	9 points
Proptr Emul 18 PT Bold (RM)	T1000437	C02075H0	X02075HF	1262	24322	18 points
Proptr Emul 9 PT Small (RM)	T1000437	C02055S0	X02055SF	1262	24324	4 points
Proptr Emul 9 PT Small Bold (RM)	T1000437	C02075S0	X02075SF	1262	24326	4 points
Proptr Emul 9 PT Expanded Small (RM)	T1000437	C02057S0	X02057S0	1262	24325	4 points
Proptr Emul 9 PT Expanded Small Bold (RM)	T1000437	C020757S0	X02077SF	1262	24327	4 points
<b>Roman</b>						
Roman (RM)	T1DOBASE	CODORT10	XORT10	2023	41	10 pitch
<b>Script</b>						
Script (RM)	T1DOBASE	CODOSR12	XOSR12	2025	84	12 pitch
<b>Serif</b>						
Serif Bold (RB)	T1DOBASE	CODOSB12	XOSB12	2023	72	12 pitch
Serif Italic (IM)	T1DOBASE	CODOSI10	XOSI10	2023	43	10 pitch
	T1DOBASE	CODOSI12	XOSI12		71	12 pitch
Serif (Overstruck) (RM)	T1DOBASE	CODOSO12	XOSO12	2023	332	12 pitch
Serif (RM)	T1DOBASE	CODOST10	XOST10	2023	42	10 pitch
	T1DOBASE	CODOST12	XOST12		70	12 pitch
	T1DOBASE	CODOST15	XOST15		229	15 pitch
<b>Symbols</b>						
Symbols (RM)	T1SOS198	COSOS198	XOS198	2024	30	10 pitch

Typeface name(S/W)	Code page	Character set	Coded font	GCSGID	FGID	Size
Symbols (RM)	T1S0S193	C0S0S193	X0S193	2030	80	12 pitch
Symbols OS6 (RM)	T1S0S192	C0S0S1982	X0S192	2026	80	12 pitch
Symbols7 (RM)	T1000259	C0S0SYM0	X0SYM0	340	49975	10 pitch
	T1000259	C0S0SYM02	X0SYM2		49975	12 pitch
<b>Text</b>						
Text (RM)	T1L038TE	COLOOT11	X0T11	2033	339	10 pitch
Text (Underscored) (RM)	T1L038TE	COL0TU10	X0TU10	2033	334	10 pitch



# 9. Code pages and extended code pages

- Naming conventions for code pages
- Summary tables for code pages

A code page maps each character of text to the characters in a character set or to the characters associated to a Unicode point. Two types of code pages exist:

- A *traditional code page* includes EBCDIC or ASCII encodings only; it can be used with FOCA character sets and TrueType and OpenType fonts.
- An *extended code page* includes multiple encodings within a single code page and can contain EBCDIC or ASCII encodings along with the Unicode equivalent value; it can be used with TrueType and OpenType fonts.

AFP outline fonts and AFP raster fonts use traditional code pages to map each character of text to the characters in a character set. TrueType and OpenType fonts use traditional and extended code pages to map each character of text to the characters associated with a Unicode point.

Each code point in an extended code page can be mapped to one or more Unicode values. Extended code pages allow code pages that contain user-defined characters (that is, those characters that have not been registered with IBM and assigned a GCGID value) to be used with TrueType and OpenType fonts.

The next table shows the extended code page files that you can download from the IBM Extended Code Pages web page.

## Downloadable extended code page files

Font library	Extended code page file
General	eCP_g1.zip
Japanese	eCP_japan.zip
Korean	eCP_korea.zip
Simplified Chinese	eCP_chs.zip
Traditional Chinese	eCP_cht.zip

To see a grid for each code page, visit the InfoPrint Information Center and click **Fonts** in the left navigation panel:

<http://www.infoprint.com/infocenter>

## Naming conventions for code pages

All AFP code page names begin with **T1**, which makes them recognizable as code pages. This section shows the naming conventions for code pages and extended code pages used with these font library character sets:

- General Library (outline fonts) and SBCS (expanded core raster fonts)
- CJK (outline fonts) and DBCS (core raster fonts) with full-width characters
- CJK (outline fonts) and DBCS (core raster fonts) with half-width characters

## Code pages for General Library and SBCS fonts

The last six characters of the code page name are used to identify the code page for General Library and SBCS fonts. The preferred naming convention is where the first two characters are **00**, **V1**, or **B0**, and the final four characters are the code page global identifier (CPGID), which is a number registered by IBM to identify each code page uniquely.

The next table shows the naming convention for code pages used with General Library outline font character sets and SBCS raster font character sets. The naming convention format is T1yyyyy.



## Naming convention for General Library and SBCS fonts

T1	yyyyyy
AFP code page prefix	<p>Code page identifier:</p> <p><b>00</b><i>nnnn</i> Expanded core code pages; <i>nnnn</i> is the CPGID.</p> <p><b>V1</b><i>nnnn</i> Expanded core code pages; <i>nnnn</i> is the CPGID.</p> <p><b>B00</b><i>nnn</i> Bookmaster code pages; <i>0nnn</i> is the CPGID.</p> <p><b>Dx</b><i>nnnn</i> DCF-related code pages</p> <p><b>DxBASE</b> Migration code pages</p> <p><b>GDP</b><i>nnn</i> Data processing code pages</p> <p><b>GEO</b><i>nnn</i> Sonoran Display and Sonoran Petite code pages</p> <p><b>GIO</b><i>nnn</i> General code pages</p> <p><b>GPO</b><i>nnn</i> General purpose code pages</p> <p><b>LO</b><i>nnnn</i> LCS-related code pages</p> <p><b>M00</b><i>nnn</i> Mathematics code pages</p> <p><b>SO</b><i>nnnn</i> 6670-related code pages</p> <p><b>SKB</b><i>nnn</i> Standard keyboard code pages</p>

## Code pages with full-width characters for CJK and DBCS fonts

The names of code pages that use full-width characters are typically six characters for CJK outline fonts and eight characters for DBCS raster fonts.

The next table shows the naming convention for code pages used with CJK and DBCS full-width character sets. The naming convention format is T1xxxxss.

### Naming convention for code pages using full-width characters

T1	xxxx	ss
AFP code page prefix	<p>Code page global identifier (CPGID), with these exceptions</p> <p><b>0300</b> Japanese JIS X 0213:2000 code page for CPGID:65280</p> <p><b>K300</b> Japanese JIS X 0213:2004 code page for CPGID:0300</p> <p><b>I300</b> Japanese IBM JIKEI code page for CPGID:65281</p> <p><b>J300</b> Japanese IBM JIKEI with JIS90 code page is for CPGID:65282</p> <p><b>0834</b> Korean KS code page for CPGID:65283</p> <p><b>K834</b> Korean Full Hangul code page for CPGID:0834</p> <p><b>0835</b> Traditional Chinese code page for CPGID:0835</p> <p><b>0837</b> Simplified Chinese GB code page for CPGID:65284</p> <p><b>K837</b> Simplified Chinese GB18030 code page is for CPGID:0837</p>	Section number for a code page used with a raster font.

### Code pages with half-width characters for CJK and DBCS fonts

The names of code pages that use half-width characters typically have **H0** as the third and fourth characters.

The next table shows the naming convention for code pages used with CJK and DBCS half-width character sets. The naming convention format is T1Hnxxxx.

### Naming convention for code pages using half-width characters

T1	H <sub>n</sub>	xxxx
AFP code page prefix	<p><b>H0</b> Typically used to represent half-width characters.</p> <p><b>HK</b> Used for Japanese CPGID:0037,00290 and Simplified Chinese CPGID:1114.</p>	Code page global identifier (CPGID)

## Summary tables for code pages

This section lists code pages and extended code pages that are supported in these font libraries:

- General, includes General Library and SBCS
- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese

The summary tables for code pages provide this information:

### Code page ID

A six- or eight-character name, with "T1" as the prefix, that identifies the code page.

### CDP

An "X" indicates that the code page is supplied as a traditional code page.

### ECP

An "X" indicates that the code page is supplied as an extended code page.

### Description

The description of the code page.

### General library

#### Summary of code pages for General Library and SBCS font library

Code page ID	CDP	ECP	Description
T1000038	X	X	US-ASCII Character Set
T1000259	X		Symbols, Set 7
T1000260	X	X	Canadian French - 116

Code page ID	CDP	ECP	Description
T1000276	X	X	Canada (French) - 94
T1000286	X	X	Austria/Germany F.R., Alt (3270)
T1000287	X	X	Denmark/Norway, Alternate (3270)
T1000288	X	X	Finland/Sweden, Alternate (3270)
T1000289	X	X	Spain, Alternate (3270)
T1000290	X	X	Gothic Katakana, Katakana 10, Katakana 12
T1000293	X		APL (USA)
T1000310	X		APL Graphic Escape
T1000361	X	X	Publishing: International #5
T1000363	X		Symbols, Set 8
T1000367	X	X	ASCII
T1000382	X	X	Publishing: Austria, Germany, Switzerland
T1000383	X	X	Publishing: Belgium
T1000384	X	X	Publishing: Brazil
T1000385	X	X	Publishing: Canada (French)
T1000386	X	X	Publishing: Denmark, Norway
T1000387	X	X	Publishing: Finland, Sweden
T1000388	X	X	Publishing: France, Switzerland
T1000389	X	X	Publishing: Italy, Switzerland
T1000390	X	X	Publishing: Japan (Latin)
T1000391	X	X	Publishing: Portugal
T1000392	X	X	Publishing: Spain, Philippines
T1000393	X	X	Publishing: Latin America (Spanish)
T1000394	X	X	Publishing: United Kingdom, Australia, Hong Kong, Ireland, New Zealand
T1000395	X	X	Publishing: United States, Canada (English)
T1000420	X	X	Arabic Bilingual
T1000423	X	X	Greece 183
T1000424	X	X	Hebrew
T1000437	X	X	Personal Computer: ASCII
T1000803	X		Hebrew Character Set A

Code page ID	CDP	ECP	Description
T1000808	X	X	Hebrew Character Set A
T1000813	X	X	ISO/ANSI 8-Bit Greek
T1000819	X	X	ISO/ANSI 8-Bit Latin 1
T1000829	X		Math Symbols
T1000836	X		People's Republic of China
T1000838	X		Thailand
T1000848	X	X	Personal Computer: Cyrillic, Ukraine with euro
T1000849	X	X	Personal Computer: Cyrillic, Belo Russian with euro
T1000850	X	X	Personal Computer Multilingual
T1000851	X	X	Personal Computer: Greece
T1000852	X	X	Personal Computer: Latin2
T1000853	X	X	Personal Computer: Latin3
T1000855	X	X	Personal Computer: Cyrillic
T1000856	X	X	Personal Computer: Hebrew
T1000857	X	X	Personal Computer: Latin5
T1000858	X	X	Personal Computer – Multilingual with euro
T1000860	X	X	Personal Computer: Portugal
T1000861	X	X	Personal Computer: Iceland
T1000862	X	X	Personal Computer: Hebrew (ASCII)
T1000863	X	X	Personal Computer: France, Canada (French)
T1000864	X	X	Personal Computer: Arabic
T1000865	X	X	Personal Computer: Nordic—Denmark, Norway
T1000866	X	X	Personal Computer: Cyrillic #2
T1000867	X	X	Israel – Personal Computer
T1000869	X	X	Personal Computer: Greece
T1000870	X	X	Personal Computer: Latin2 Multilingual
T1000872	X	X	Cyrillic Personal Computer with euro
T1000874	X		Personal Computer: Thailand
T1000875	X	X	Greece
T1000876	X		OCR-A ASCII

Code page ID	CDP	ECP	Description
T1000877	X		OCR-B ASCII
T1000880	X	X	Cyrillic Multilingual
T1000889	X	X	Thailand
T1000892	X		OCR-A
T1000893	X		OCR-B
T1000897	X	X	Katakana Personal Computer
T1000899	X		ASCII Symbol Set 7
T1000901	X	X	Personal Computer Baltic Multilingual with euro
T1000902	X	X	Multilingual with euro
T1000903	X		People's Republic of China (Latin)
T1000904	X	X	Taiwan (Latin)
T1000905	X	X	Latin3 Multilingual
T1000910	X		APL ASCII
T1000912	X	X	Latin2 ISO/ANSI 8-Bit
T1000913	X	X	Latin3 ISO/ASCII
T1000914	X	X	Latin4 ISO/ANSI
T1000915	X	X	Cyrillic ISO/ANSI 8-Bit
T1000916	X	X	Hebrew ISO/ANSI 8-Bit
T1000920	X	X	Latin5 ISO/ANSI 8-Bit
T1000921	X	X	Personal Computer Baltic Multilingual
T1000922	X	X	Estonia Personal Computer
T1000923	X	X	Latin9
T1000924	X	X	Latin9 EBCDIC
T1001002	X	X	DCF
T1001003	X	X	United States Text Subset
T1001004	X	X	Personal Computer: Desktop Publishing
T1001008	X	X	Arabic ISO/ASCII 8-Bit
T1001025	X	X	Cyrillic Multilingual
T1001026	X	X	Cyrillic Multilingual
T1001027	X	X	Katakana
T1001028	X	X	Hebrew Publishing
T1001029	X		Arabic ISO/ASCII 8-Bit

Code page ID	CDP	ECP	Description
T1001038	X		ASCII Symbols Abode
T1001039	X	X	GML List Symbols
T1001041	X	X	Katakana Personal Computer
T1001042	X		Simplified Chinese Extended
T1001043	X	X	Traditional Chinese Extended
T1001046	X	X	Arabic Extended ISO/ASCII 8-Bit
T1001068	X	X	Text with numeric spacing
T1001069	X	X	Latin4
T1001087	X		Symbols Abode
T1001091	X		Symbols, Set 7 Modified
T1001092	X		ASCII Symbols, Set 7 Modified
T1001093	X	X	IBM Logo
T1001110	X	X	Latin2 Multilingual
T1001111	X	X	Latin3 Multilingual
T1001112	X	X	Baltic – Multilingual EBCDIC
T1001122	X	X	Estonia EBCDIC
T1001123	X	X	Cyrillic, Ukraine EBCDIC
T1001124	X	X	Cyrillic, Ukraine ISO–8
T1001125	X	X	Personal Computer: Cyrillic, Ukraine
T1001129	X	X	Vietnamese ISO-8
T1001130	X	X	Vietnamese EBCDIC
T1001131	X	X	Personal Computer: Cyrillic, Belo Russian
T1001132	X	X	Lao EBCDIC
T1001133	X	X	Lao ISO–8
T1001139	X	X	Japan Alphanumeric Katakana
T1001140	X	X	USA, Canada ECECP
T1001141	X	X	Austria, Germany ECECP
T1001142	X	X	Denmark, Norway ECECP
T1001143	X	X	Finland, Sweden ECECP
T1001144	X	X	Italy ECECP
T1001145	X	X	Spain, Latin America ECECP
T1001146	X	X	UK ECECP

Code page ID	CDP	ECP	Description
T1001147	X	X	France ECECP
T1001148	X	X	International ECECP
T1001149	X	X	Iceland ECECP
T1001153	X	X	Latin2 Multilingual with euro
T1001154	X	X	EBCDIC Cyrillic, Multilingual with euro
T1001155	X	X	EBCDIC Turkey with euro
T1001156	X	X	EBCDIC Baltic Multilingual with euro
T1001157	X	X	EBCDIC Estonia with euro
T1001158	X	X	EBCDIC Cyrillic, Ukraine with euro
T1001160	X		Thailand EBCDIC with euro
T1001161	X		Thailand Personal Computer with euro
T1001162	X	X	Windows Thailand
T1001163	X	X	Vietnamese ISO-8 with euro
T1001164	X	X	Vietnamese, EBCDIC with euro
T1001166	X	X	EBCDIC Cyrillic, Multilingual with euro
T1001250	X	X	Windows Latin2
T1001251	X	X	Windows Cyrillic
T1001252	X	X	Windows Latin 1
T1001253	X	X	Windows Greek
T1001254	X	X	Windows Turkish
T1001257	X	X	Windows Baltic Rim
T1001258	X	X	Windows Vietnamese
T1001300	X		Generic Bar Code/OCR-B
T1B00037	X	X	BookMaster: United States, Canada
T1B00273	X	X	BookMaster: Austria, Germany, Switzerland
T1B00274	X	X	BookMaster: Belgium
T1B00275	X	X	BookMaster: Brazil
T1B00277	X	X	BookMaster: Denmark, Norway
T1B00278	X	X	BookMaster: Finland, Sweden
T1B00280	X	X	BookMaster: Italy, Switzerland
T1B00281	X	X	BookMaster: Japan (Latin)
T1B00282	X	X	BookMaster: Portugal



Code page ID	CDP	ECP	Description
T1B00284	X	X	BookMaster: Spain, Latin America
T1B00285	X	X	BookMaster: United Kingdom
T1B00297	X	X	BookMaster: France
T1B00361	X	X	BookMaster International
T1B00382	X	X	BookMaster: Austria, Germany, Switzerland
T1B00383	X	X	BookMaster: Belgium
T1B00384	X	X	BookMaster: Brazil
T1B00385	X	X	BookMaster: Canada (French)
T1B00386	X	X	BookMaster: Denmark, Norway
T1B00387	X	X	BookMaster: Finland, Sweden
T1B00388	X	X	BookMaster: France, Switzerland
T1B00389	X	X	BookMaster: Italy, Switzerland
T1B00390	X	X	BookMaster: Japan (Latin)
T1B00391	X	X	BookMaster: Portugal
T1B00392	X	X	BookMaster: Spain, Philippines
T1B00393	X	X	BookMaster: Latin America (Spanish)
T1B00394	X	X	BookMaster: United Kingdom, Australia, China (Hong Kong S.A.R.), Ireland, New Zealand
T1B00395	X	X	BookMaster: United States, Canada (English)
T1B00500	X	X	BookMaster: International #5
T1B00871	X	X	BookMaster: Iceland
T1B00BGS	X		BookMaster: Specials
T1D0BASE	X	X	Migration: DCF
T1DOGP12	X	X	DCF Gothic Tri-Pitch
T1DABASE	X	X	Migration: Austria, Germany
T1DBBASE	X	X	Migration: Belgium, Luxemburg, Switzerland
T1DCDCFS	X	X	U.S. Text Subset
T1DDBASE	X	X	Migration: Denmark, Iceland, Norway
T1DEBASE	X	X	Migration: Finland, Sweden
T1DFBASE	X	X	Migration: France
T1DIBASE	X	X	Migration: Italy
T1DNBASE	X	X	Migration: Netherlands, Portugal

Code page ID	CDP	ECP	Description
T1DSBASE	X	X	Migration: Spain, Latin America
T1DUBASE	X	X	Migration: United Kingdom
T1E00420	X	X	Arabic Bilingual with euro
T1E00813	X	X	Greece – ISO 8859-7
T1E00852	X	X	Latin2 Multilingual Personal Computer with euro
T1E00857	X	X	Latin5 Turkey Personal Computer with euro
T1E00864	X	X	Arabic Personal Computer with euro
T1E00869	X	X	Greece – Personal Computer
T1E00875	X	X	Greece – EBCDIC
T1E00877	X		OCR B Personal Computer with euro
T1E00893	X		OCR B with euro
T1E01008	X	X	Arabic ISO with euro
T1E01046	X	X	Arabic Extended ISO with euro
T1GE0200	X	X	Sonoran Display Fonts
T1GE0300	X	X	Sonoran Petite Fonts
T1GI0361	X	X	International Set 5
T1GI0382	X	X	Austria, Germany, Switzerland
T1GI0383	X	X	Belgium
T1GI0384	X	X	Brazil
T1GI0385	X	X	Canada (French)
T1GI0386	X	X	Denmark/Norway
T1GI0387	X	X	Sweden/Finland
T1GI0388	X	X	France, Luxembourg, Switzerland
T1GI0389	X	X	Italy, Switzerland (Italian)
T1GI0390	X	X	Japan (Latin)
T1GI0391	X	X	Portugal
T1GI0392	X	X	Spain/Philippines
T1GI0393	X	X	Latin America (Spanish)
T1GI0394	X	X	U.K., Austral., Ire., H.K., N.Z.
T1GI0395	X	X	United States, Canada (English)
T1GPI363	X		PI Fonts
T1L000GN	X	X	LCS Gothic

Code page ID	CDP	ECP	Description
T1L000RN	X	X	LCS Gothic
T1L000SN	X	X	LCS Text-1 and Text-2
T1L000XN	X	X	LCS Gothic
T1L000YN	X	X	LCS Gothic
T1L00A11	X	X	LCS Gothic
T1L00APL	X		APL2
T1L00FMT	X		LCS Format Characters
T1L00KN1	X	X	LCS Gothic, Katakana (KN1)
T1L00QNC	X	X	LCS Gothic
T1L02773	X	X	LCS Gothic, Katakana (2773)
T1L02774	X	X	LCS Gothic, Katakana (2774)
T1L038BA	X	X	LCS Gothic
T1L038TE	X	X	LCS Text-1 and Text-2
T1L0AD10	X		APL2
T1L0AG10	X		APL2
T1L0AG12	X		APL2
T1L0AG15	X		APL2
T1L0AI10	X		APL2
T1L0AT10	X		APL2
T1L0DUMP	X	X	LCS Dump Character Set
T1L0FOLD	X	X	LCS Gothic Folded
T1L0OCR1	X	X	LCS OCR A
T1L0OCR2	X	X	LCS Gothic and OCR A
T1L0OCR3	X	X	LCS Gothic and OCR A
T1L0OCRB	X	X	LCS Gothic and OCR B
T1L0PCAN	X	X	LCS Gothic
T1L0PCHN	X	X	LCS Gothic
T1M00829	X	X	Math Symbols
T1M00830	X		Math Format
T1SOAE10	X		APL (AE10)
T1SOAP10	X		APL2
T1SOS192	X		6670 Symbol Set
T1SOS193	X		6670 Symbol Set
T1SOS198	X		6670 Symbol Set

Code page ID	CDP	ECP	Description
T1V10037	X	X	Country Extended: United States, Canada
T1V10273	X	X	Country Extended: Austria, Germany, Switzerland
T1V10274	X	X	Country Extended: Belgium
T1V10275	X	X	Country Extended: Brazil
T1V10277	X	X	Country Extended: Denmark, Norway
T1V10278	X	X	Country Extended: Finland, Sweden
T1V10280	X	X	Country Extended: Italy, Switzerland
T1V10281	X	X	Country Extended: Japan (Latin)
T1V10282	X	X	Country Extended: Portugal
T1V10284	X	X	Country Extended: Spain, Latin America
T1V10285	X	X	Country Extended: United Kingdom
T1V10290	X	X	Japan (Katakana)
T1V10297	X	X	Country Extended: France
T1V10500	X	X	Country Extended: International #5
T1V10871	X	X	Country Extended: Iceland

## Japanese library

### Summary of code pages for Japanese font library

Code page ID	CDP	ECP	Description
T10300	X	X	Japanese DBCS-Host: JIS X0213-2000 character shape
T10300U	X	X	Japanese DBCS-Host: JIS X0213-2000 character shape
T1H00290	X	X	Japanese Katakana Extended
T1H01002	X	X	Japanese DCF Compatibility
T1H01027	X	X	Japanese Latin Extended
T1H01030	X	X	Japanese Katakana Extended with box
T1H01031	X	X	Japanese (Latin) Extended with box
T1H01041	X	X	Japanese Personal Computer Extended
T1HK0037	X	X	Japanese Latin
T1HK0290	X	X	Japanese Katakana

Code page ID	CDP	ECP	Description
T1I300	X	X	Japanese DBCS—Host: Supports 751 unique IBM character shapes
T1J300	X	X	Japanese DBCS—Host: Supports 751 unique IBM character shapes with 14 of them changed according to JIS90
T1K300	X	X	Japanese DBCS—Host: JIS X 0213-2004 character shape
T1K300U	X	X	Japanese DBCS—Host: JIS X 0213-2004 character shape with User-Defined Characters

## Korean library

### Summary of code pages for Korean font library

Code page ID	CDP	ECP	Description
T10834	X	X	Korean Host DBCS KS
T10834U	X	X	Korean Host DBCS KS with User Defined Char
T1H00833	X	X	Korean SBCS Host
T1H01088	X	X	Korean SBCS Personal Computer
T1H01126	X	X	Korean SBCS Personal Computer
T1H01150	X	X	Korean Latin with Box
T1K834	X	X	Korean Host DBCS Full Hangul
T1K834U	X	X	Korean Host DBCS Full Hangul with User-Defined Characters

## Simplified Chinese library

### Summary of code pages for Simplified Chinese font library

Code page ID	CDP	ECP	Description
T10837	X	X	Simplified Chinese Host DBCS GB
T10837U	X	X	Simplified Chinese Host DBCS GB with User-Defined Characters
T1H00836	X	X	Simplified Chinese Host
T1H01115	X	X	Simplified Chinese Personal Computer, GB
T1H01151	X	X	Simplified Chinese Latin with Box
T1H01252	X	X	Simplified Chinese Personal Computer, GB18030
T1HK1114	X	X	Simplified Chinese Personal Computer GBK

Code page ID	CDP	ECP	Description
T1K837	X	X	Simplified Chinese Host DBCS GB18030
T1K837U	X	X	Simplified Chinese Host DBCS GB18030 with User-Defined Characters

## Traditional Chinese library

### Summary of code pages for Traditional Chinese font library

Code page ID	CDP	ECP	Description
T10835	X	X	Traditional Chinese Host DBCS
T10835U	X	X	Traditional Chinese Host DBCS with User-Defined Characters
T1H00037	X	X	Traditional Chinese Host DBCS GB
T1H01043	X	X	Traditional Chinese Host SBCS
T1H01114	X	X	Traditional Chinese Personal Computer SBCS
T1H01152	X	X	Traditional Chinese SBCS with box characters
T1H01159	X	X	Traditional Chinese SBCS with Euro

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