



HiFontTool

User Guide

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About This Document

Purpose

This document describes how to tailor true type font (TTF) as user-defined Unicode binary file (UBF) fonts by using the HiFontTool to save board resources.

Related Versions

The following table lists the product versions related to this document.

Product Name	Version
Hi3716C	V2XX
Hi3719C	V1XX
Hi3719M	V1XX
Hi3718C	V1XX
Hi3718M	V1XX
Hi3716M	V4XX
Hi3716M	V3XX
Hi3110E	V5XX
Hi3798C	V2XX

Intended Audience

This document is intended for:

- Technical support personnel
- Board software development engineers



Change History

Changes between document issues are cumulative. Therefore, the latest document issue contains all changes made in previous issues.

Issue 03 (2015-04-30)

This issue is the third official release, which incorporates the following changes:

Hi3798C V200, Hi3716M V410, and Hi3716M V420 are supported.

Issue 02 (2015-03-10)

This issue is the second official release, which incorporates the following changes:

Hi3110E V500 is supported.

Issue 01 (2014-01-20)

This issue is the first official release.

Description of Hi3716M V400 is added.

Issue 00B01 (2013-08-30)

This issue is the first draft release.



Contents

About This Document.....	i
1 Introduction to the HiFontTool.....	1
1.1 Overview	1
1.2 Environment Preparation.....	1
1.3 Main GUI	1
2 GUI and Function Description	3
2.1 HiFontTool GUI and Functions.....	3
2.1.1 UnicodeBlock Tailoring Mode.....	3
2.1.2 CodePage Tailoring Mode.....	6
2.1.3 PasteEdit Tailoring Mode.....	6
3 Application Reference.....	9
3.1 Previewing the Font and Font Size.....	9
3.2 Using the More Refined Tailoring Function in UnicodeBlock and CodePage Tailoring Modes.....	10
3.3 Modifying an Existing Font File	11
4 Notes	14



Figures

Figure 1-1 Main GUI of the HiFontTool	2
Figure 2-1 Selecting a font	3
Figure 2-2 Selecting a font size	4
Figure 2-3 Unicode block list	4
Figure 2-4 Selecting all Unicode blocks	5
Figure 2-5 Generating a font file	5
Figure 2-6 Selecting code pages	6
Figure 2-7 Editing characters	7
Figure 2-8 Saving characters	7
Figure 3-1 Previewing the font and font size	9
Figure 3-2 Selecting characters	10
Figure 3-3 Adding characters	11
Figure 3-4 Selecting the check boxes before the code segments to be added	12
Figure 3-5 Import UBF File dialog box	12
Figure 3-6 Selecting a font file	13



1 Introduction to the HiFontTool

1.1 Overview

The HiFontTool is used to tailor TTF fonts as user-defined UBF fonts in the following three modes:

- UnicodeBlock tailoring mode
- CodePage tailoring mode
- PasteEdit tailoring mode

1.2 Environment Preparation

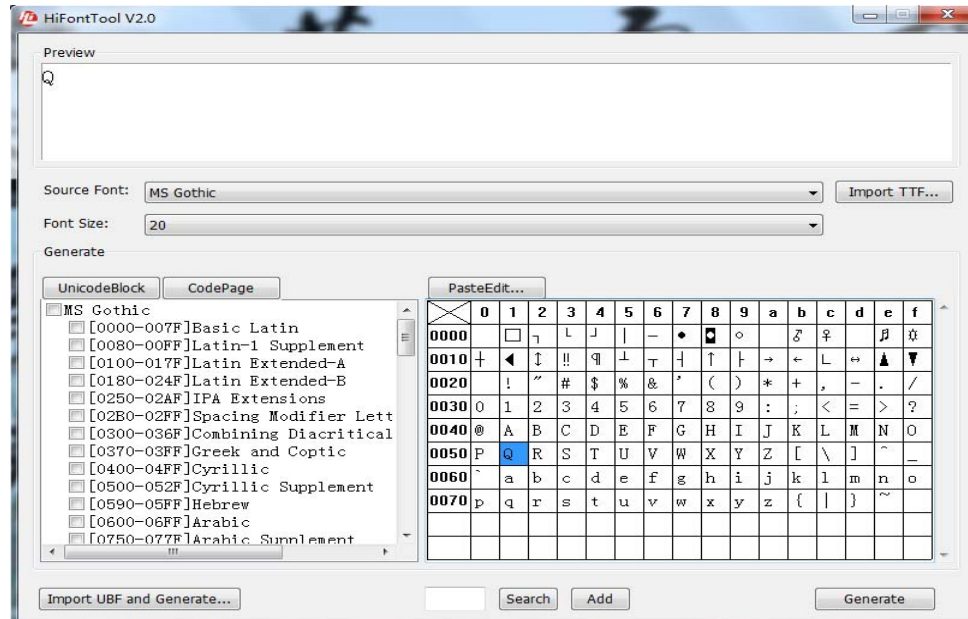
The HiFontTool applies to Windows XP and Windows 7. It can be directly used without installation.

1.3 Main GUI

[Figure 1-1](#) shows the main graphical user interface (GUI) of the HiFontTool.



Figure 1-1 Main GUI of the HiFontTool



The following describes the options or buttons on the main GUI:

- Preview: This text box allows you to preview texts with the selected font and font size.
- Source Font: This drop-down list allows you to select a font.
- Font Size: This drop-down list allows you to select a font size.
- Import TTF: Clicking this button imports external and non-inherent TTF font files.
- UnicodeBlock: Clicking this button tailors font libraries by using the Unicode blocks defined by the Unicode Standard Organization.
- CodePage: Clicking this button tailors font libraries by using the region code pages defined by Microsoft. Region code pages are distinguished by country.
- PasteEdit: Clicking this button tailors font libraries by manually editing fonts.
- Generate: Clicking this button generates a tailored font file.
- Import UBF and Generate: Clicking this button imports and edits tailored font libraries to generate a new font file.
- Search: Clicking this button searches for a character by code point in the view.
- Add: Clicking this button adds selected code segments to the tailored font libraries.



2 GUI and Function Description

2.1 HiFontTool GUI and Functions

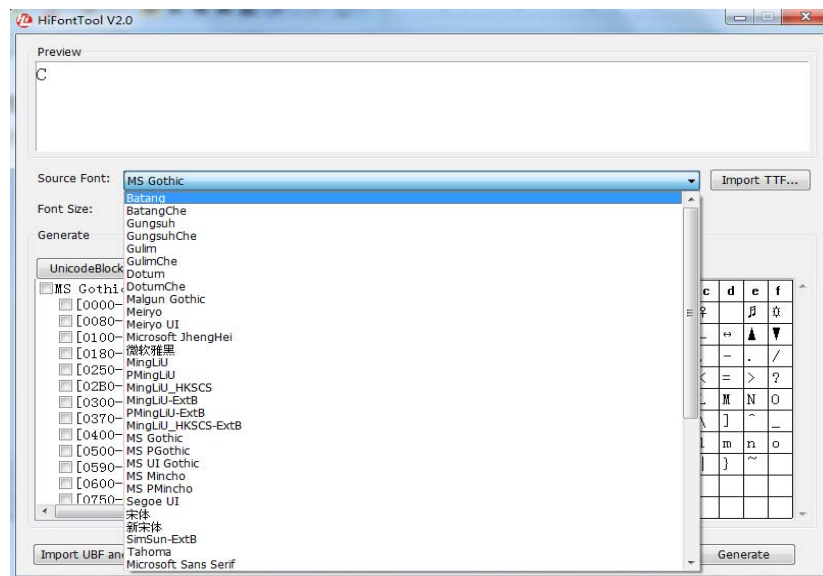
This section describes the functions of the HiFontTool by tailoring mode. For details about the main GUI of the HiFontTool, see [Figure 1-1](#).

2.1.1 UnicodeBlock Tailoring Mode

To tailor fonts in Unicodeblock tailoring mode, perform the following steps:

- Step 1** Select a font (for example, Arial Unicode MS) from the **Source Font** drop-down list, as shown in [Figure 2-1](#).

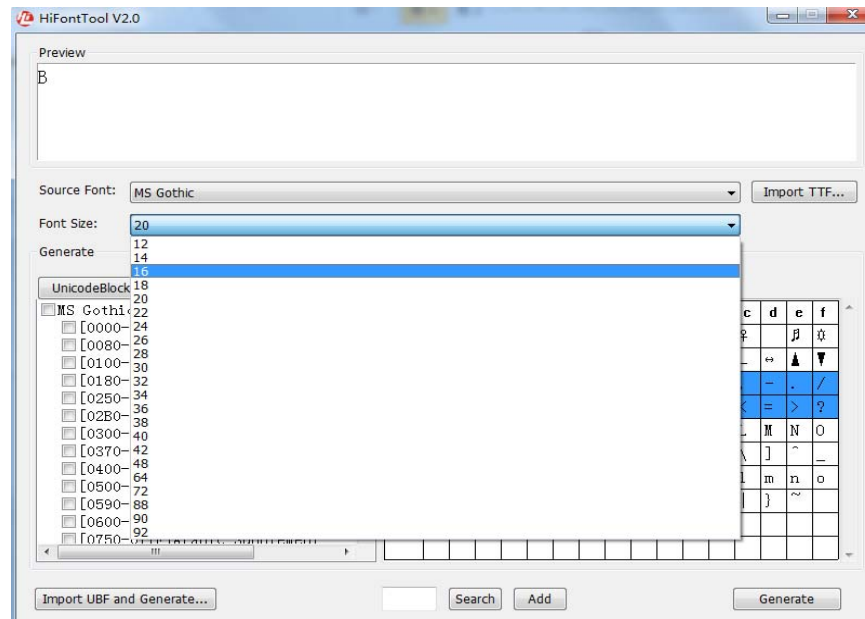
Figure 2-1 Selecting a font



- Step 2** Select a font size from the **Font Size** drop-down list, as shown in [Figure 2-2](#).



Figure 2-2 Selecting a font size



Step 3 Select Unicode blocks.

1. Click **UnicodeBlock**. The Unicode blocks are displayed in the red area shown in [Figure 2-3](#).
2. Select the check boxes before the required Unicode blocks, as shown in [Figure 2-3](#). To select all Unicode blocks, select the **MS Gothic** check box on the top of the Unicode block list, as shown in [Figure 2-4](#).

Figure 2-3 Unicode block list

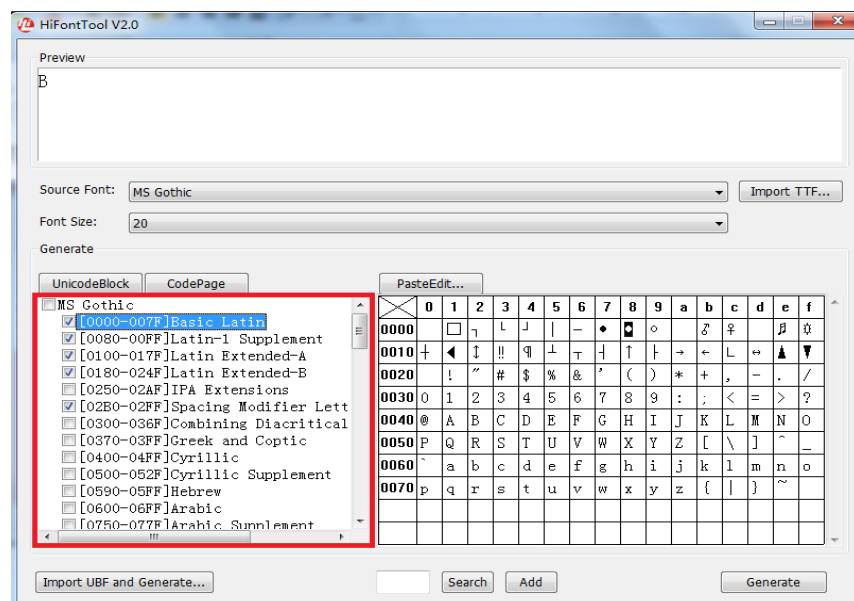
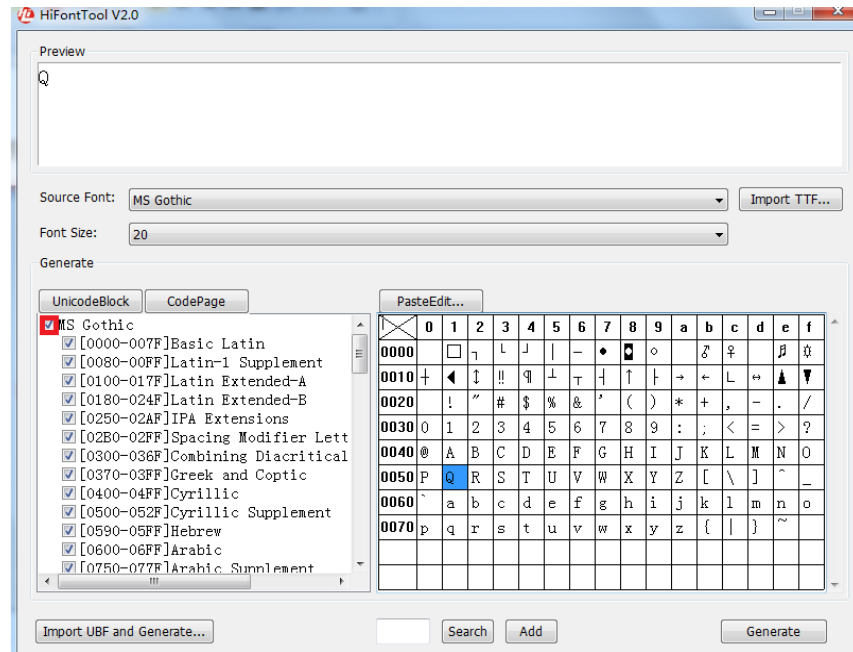




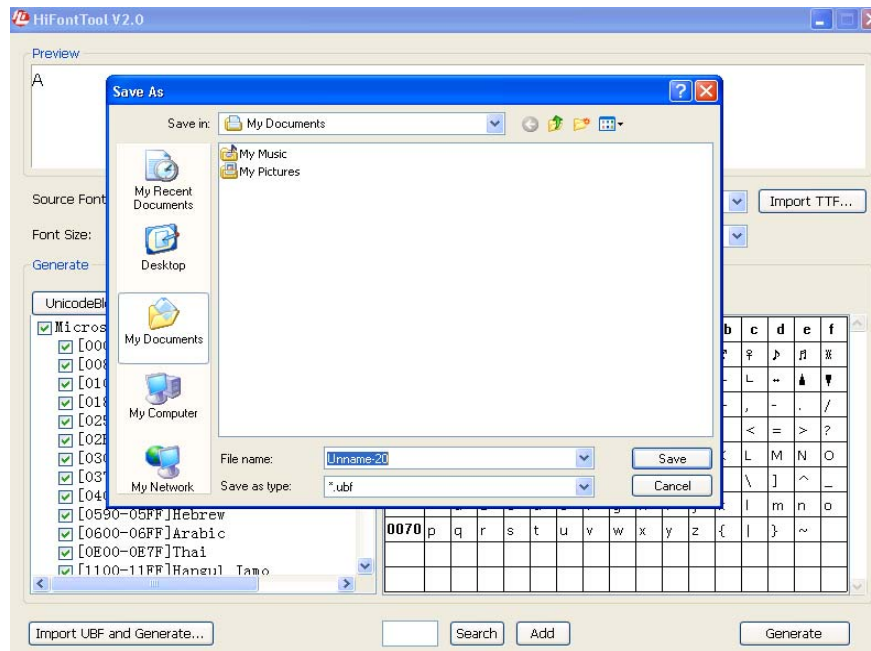
Figure 2-4 Selecting all Unicode blocks



Step 4 Generate a font file.

1. Click **Generate**. The **Save As** dialog box shown in [Figure 2-5](#) is displayed.
2. Enter a font file name in **File name**, select a save path for the file, and click **Save**.

Figure 2-5 Generating a font file



----End

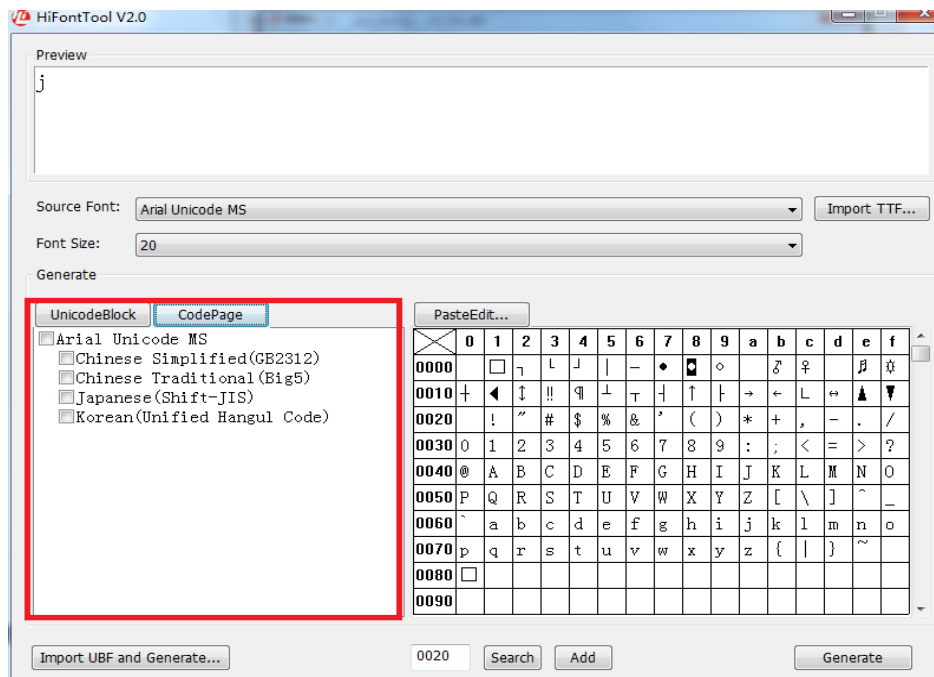


2.1.2 CodePage Tailoring Mode

To tailor fonts in CodePage tailoring mode, perform the following steps:

- Step 1** Select a font from the **Source Font** drop-down list.
- Step 2** Select a font size from the **Font Size** drop-down list.
- Step 3** Select code pages.
 1. Click **CodePage**. The code pages corresponding to the selected font are displayed in the red area shown in [Figure 2-6](#).
 2. Select the check boxes before the required code pages. To select all code pages, select the **Arial Unicode MS** check box.

Figure 2-6 Selecting code pages



- Step 4** Generate a font file.
 1. Click **Generate**. The **Save As** dialog box shown in [Figure 2-5](#) is displayed.
 2. Enter a font file name in **File name**, select a save path for the file, and click **Save**.
- End

2.1.3 PasteEdit Tailoring Mode

More refined fonts are obtained in PasteEdit tailoring mode. To tailor fonts in PasteEdit tailoring mode, perform the following steps:

- Step 1** Select a font from the **Source Font** drop-down list.
- Step 2** Select a font size from the **Font Size** drop-down list.



Step 3 Edit characters.

1. Click **PasteEdit**. The **Input Chars** dialog box shown in Figure 2-7 is displayed.
2. Enter or copy and paste characters in the **Input Chars** dialog box.
3. Click **OK**. The **Save As** dialog box shown in Figure 2-8 is displayed.

Figure 2-7 Editing characters

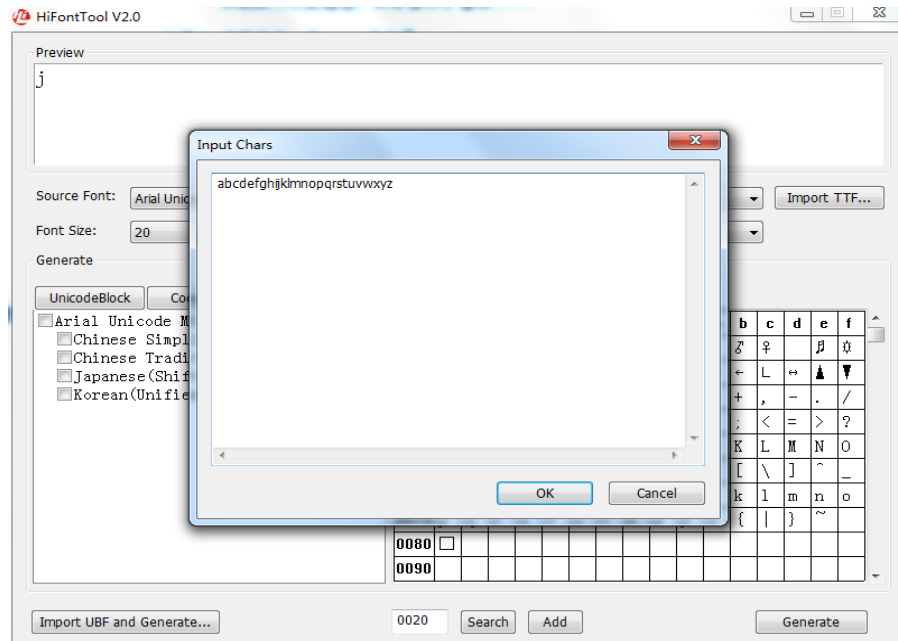
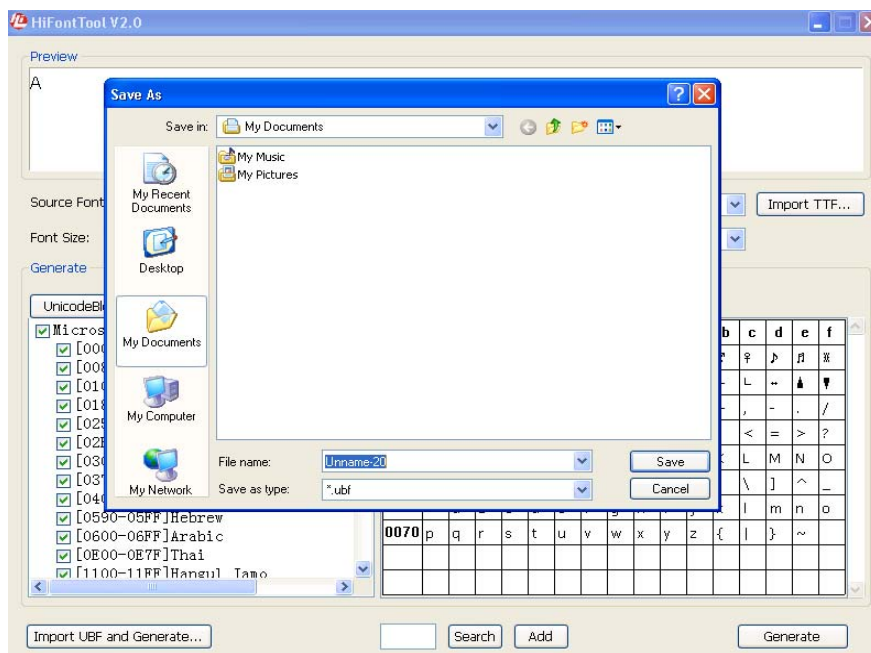


Figure 2-8 Saving characters





Step 4 Generate a font file.

1. Click **Generate**. The **Save As** dialog box shown in [Figure 2-8](#) is displayed.
2. Enter a font file name in **File name**, select a save path for the file, and click **Save**.

----End



CAUTION

Ensure that the font of the characters to be pasted is the same as the font selected from the **Source Font** drop-down list. Otherwise, the pasted characters are filtered based on the selected font when a font file is generated. It is most likely that pasted characters are filtered out if their font does not exist in the **Source Font** drop-down list. As a result, no valid characters can be found.

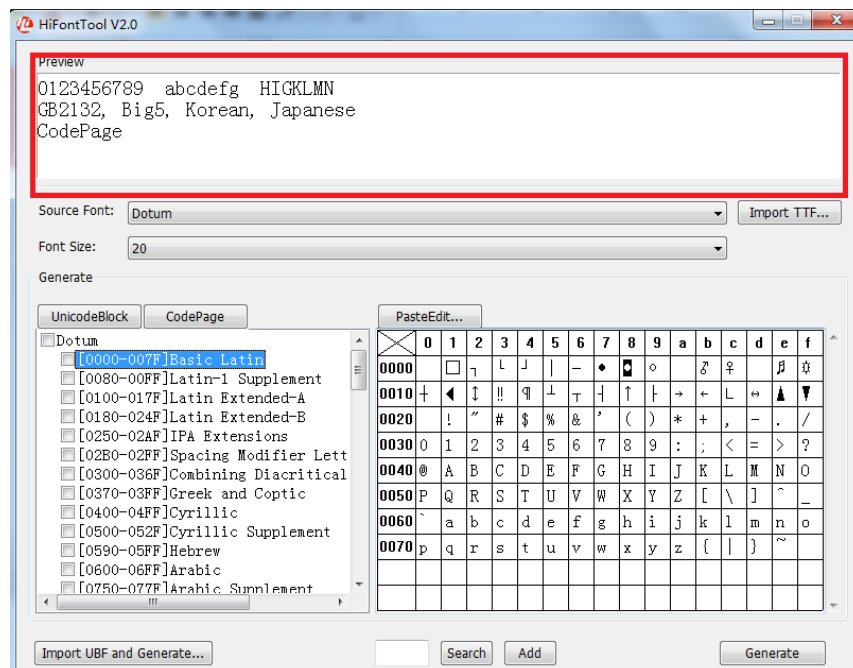


3 Application Reference

3.1 Previewing the Font and Font Size

After selecting a font and font size, you can preview them in the **Preview** text box, as shown in [Figure 3-1](#). The preview effect helps you select an appropriate font and font size.

Figure 3-1 Previewing the font and font size



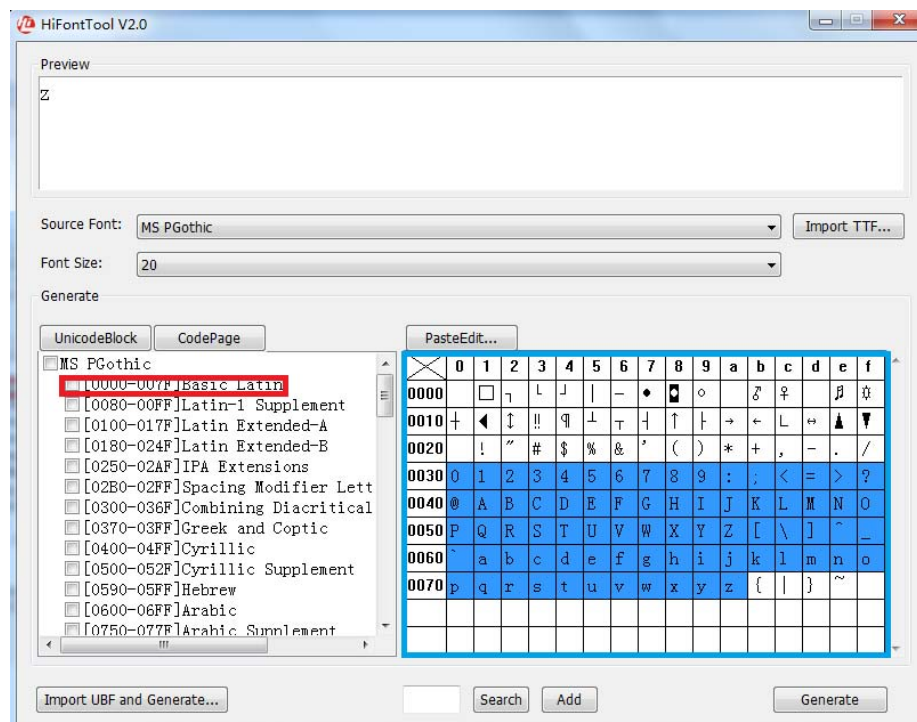


3.2 Using the More Refined Tailoring Function in UnicodeBlock and CodePage Tailoring Modes

Chapter 2 describes how to tailor the fonts in the entire code segment in UnicodeBlock and CodePage tailoring modes. The HiFontTool supports more refined tailoring in the two modes. The following example describes how to tailor the characters in the Arial Unicode MS font of the Basic Latin code segment in UnicodeBlock tailoring mode:

- Step 1** Select the **Basic Latin** code segment. The characters in this code segment are displayed in the code view as shown in [Figure 3-2](#).
- Step 2** Select characters in the code view by clicking the start and end characters. For example, to select the characters 0–z, click the character 0 and then z. Then the background color of the characters from 0 to z becomes blue, as shown in [Figure 3-2](#).

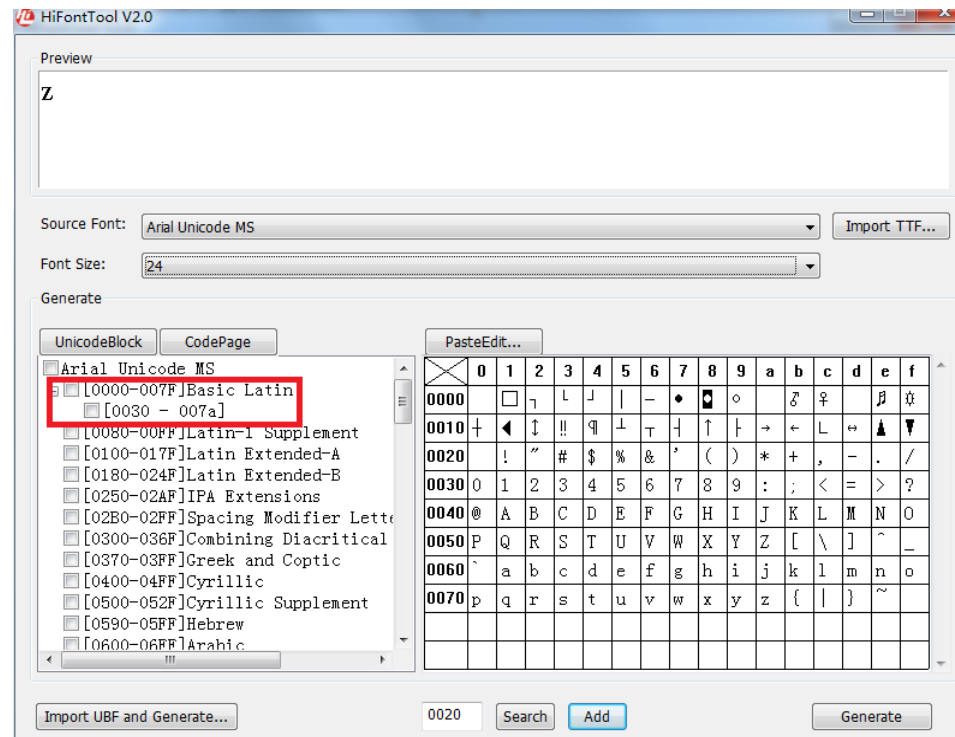
Figure 3-2 Selecting characters



- Step 3** Click **Add** to add the selected characters. The code segment 0030–007a in the red rectangle shown in [Figure 3-3](#) is the one of new characters.



Figure 3-3 Adding characters



Step 4 Select the **0030–007a** check box.

Step 5 Click **Generate** to generate a font file.

----End

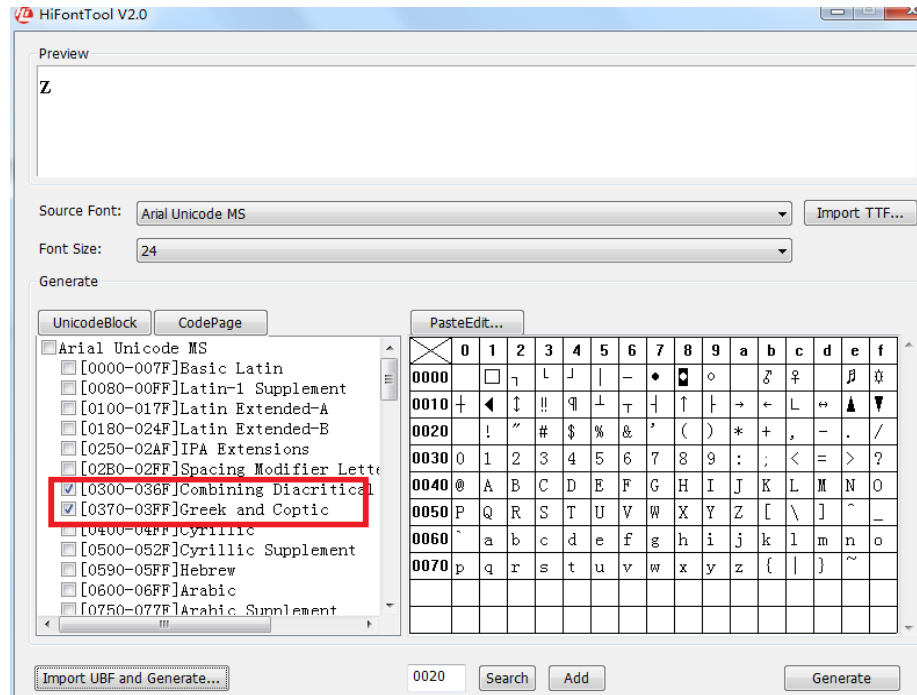
3.3 Modifying an Existing Font File

The HiFontTool allows you to add code segments to a font file so that you do not need to create a new font file. To add code segments to a font file, perform the following steps:

Step 1 Select the check boxes before the required code segments, as shown in [Figure 3-4](#).

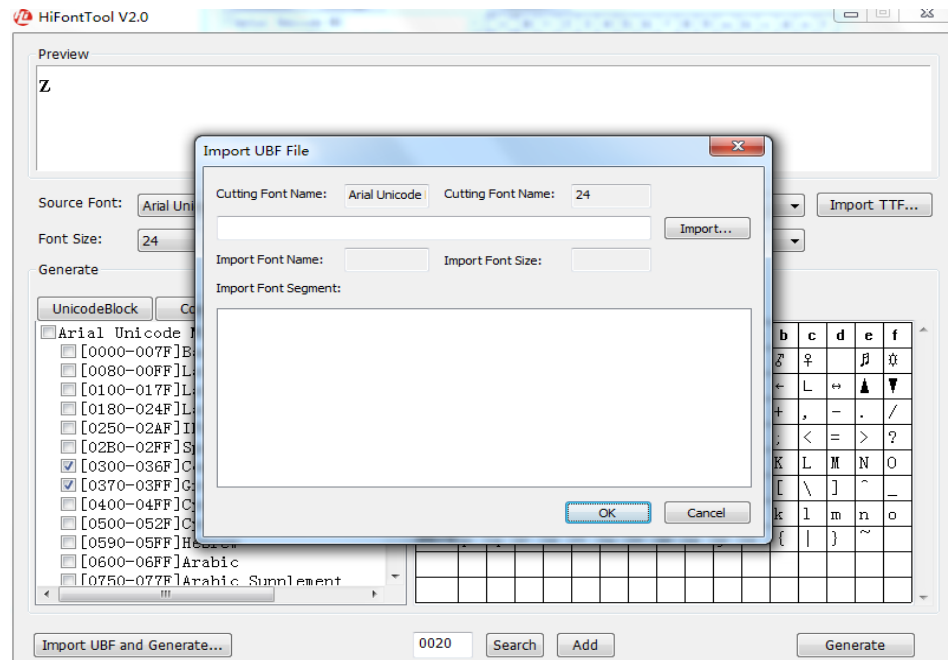


Figure 3-4 Selecting the check boxes before the code segments to be added



Step 2 Click **Import UBF and Generate**. The **Import UBF File** dialog box shown in [Figure 3-5](#) is displayed.

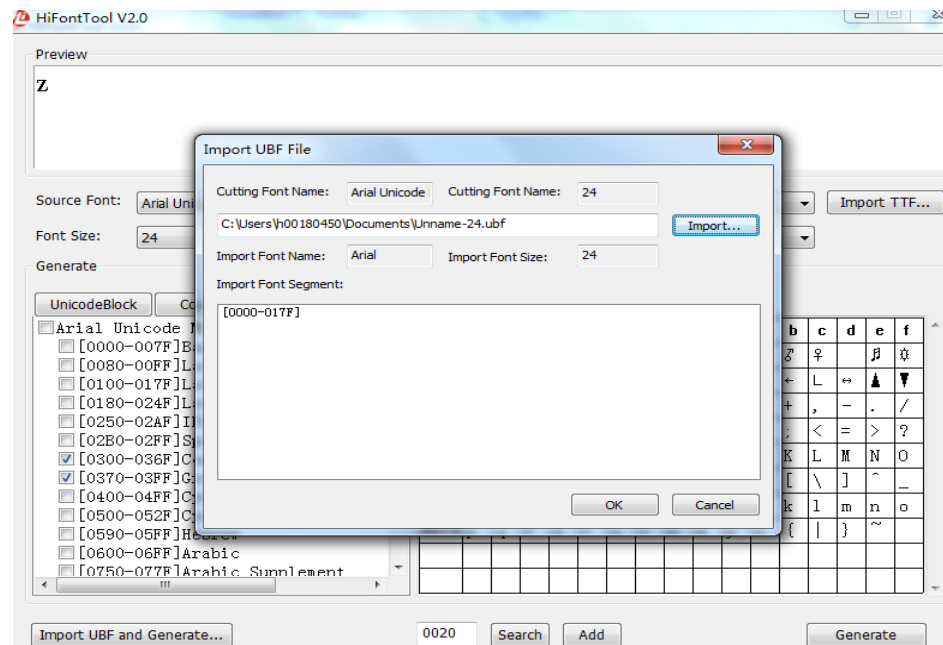
Figure 3-5 Import UBF File dialog box





Step 3 Click **Import** to select the font file to which selected code segments are added, as shown in [Figure 3-6](#).

Figure 3-6 Selecting a font file



Step 4 Click **OK** to save the modified font file.

----End



4 Notes

Note the following when you use the HiFontTool:

- The non-inherent font files (font sources of external font files) must be .ttf or .ttc files (TrueType).
- Each .ttc file has multiple fonts. When a .ttc file is loaded, the fonts are not displayed. Instead, the file is divided into multiple segments by font and then added to the inherent font list. This allows you to select any font.
- The generated .ubf font file cannot be selected as the source font. If you want to process a .ubf font file, you can click **Import UBF and Generate** in the lower left corner to import the file. To delete a code segment from the .ubf font file, import the file, right-click the code segment to be deleted, choose **Delete** from the shortcut menu, and click **OK**. To add code segments to the .ubf font file, select code segments on the main GUI of the HiFontTool, import the font file, and click **OK** to generate a new .ubf file.
- You are advised to use the UnicodeBlock tailoring mode, because this mode is flexible for tailoring fonts in multiple languages and Unicode is the unified font standard in multiple language defined by Microsoft.
- The CodePage tailoring mode is intuitive for tailoring the fonts in multiple languages. However, the HiFontTool currently supports only several languages such as Chinese, Japanese, and Korean, and code pages in only one language can be generated at a time.
- During refined tailoring, if you want to cancel some selected code segments in a block or code page, you can delete the code segments or deselect the code segments to use the entire block or code page.