

Vision Sensor FH Series

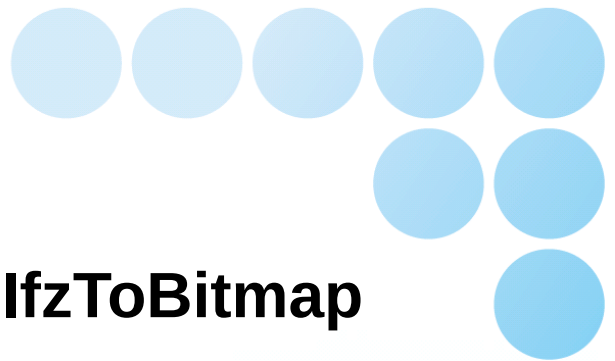


Image Conversion Tool IfzToBitmap Operation Manual

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1. Revision History

Revision Symbol	Revision Date	Reason for Revision and Revised Page
-	Jul. 2013	First edition
-	Nov. 2013	Second edition Addition of the 12M function (p3 to p11, p13)
-	Dec. 2013	Third edition Modification to the range of supported OS (p3)
-	Apr. 2014	Fourth edition Change to English writing in the display language selection menu (p11 to p13)
01	Oct. 2015	Change of the manual format Support for IfzToBitmap software version 1.60 Change of the recommended operating environment
02	Sep. 2022	Revisions for adding safety precautions regarding security
03	Jan. 2024	Change of the recommended operating environment

2. Introduction

2.1. Introduction

Thank you for purchasing FH/FZ5 Series product.

This manual provides information regarding functions, performance and operating methods that are required for using FH/FZ5 Series product. When using FH/FZ5 Series product, be sure to observe the following:

- FH/FZ5 Series products must be operated by personnel knowledgeable in electrical engineering.
- To ensure correct use, please read this manual thoroughly to deepen your understanding of the product.
- Please keep this manual in a safe place so that it can be referred to whenever necessary.

Any part or whole of this operation manual may not be copied, reproduced, or reprinted without permission.

The contents of this manual, including product specifications, are subject to change based on improvements of the product without prior notice. Your understanding is appreciated.

We are committed to providing precise information. Should you have any questions or concerns regarding the contents of this document, please do not hesitate to contact us. When you contact us, please be sure to provide us with the Catalog number printed on the back cover.

2.2. For the Use of This Software

Read this section carefully prior to using this software.

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Other company names and product names are trademarks or registered trademarks of their respective companies.

2.4. Safety Precautions Regarding Security

- Apply the latest security updates on your computer's OS to avoid security risks caused by a vulnerability in the OS.
- Always use the highest version of this software to add new features, increase operability, and enhance security.
- Manage usernames and passwords for this software carefully to protect them from unauthorized uses.
- Set up a firewall (E.g., disabling unused communication ports, limiting communication hosts, etc.) on a network for a control system and devices to separate them from other IT networks. Make sure to connect to the control system inside the firewall.

2.5. Conventions Used in This Manual

Symbols in this manual are used as follows:



Safety Information

Things that should be done or avoided to safely use the product.



Precautions for Use

Things that should be done or avoided to prevent operation failure, malfunction, or undesirable effects on functions and performance of the product. This symbol is given as notes and restrictions.



Useful Information

Things that should be read as needed, such as helpful information to know and informative content for use.



Reference

Location of detailed or related information.

3. The Image Conversion Tool IfzToBitmap

3.1. Overview

The image conversion tool IfzToBitmap is a tool that allows logging image files (byr and IFZ) saved in the FH/FZ/FJ series or FQ series vision sensor to be managed in the following manner:

1. Viewing logging image files: byr, IFZ, and BFZ
2. Converting a logging image file (byr and IFZ) into BMP, JPEG, or TIFF format and saving the converted file.
3. Converting IFZ file that is logged with the setting of multiple imaging into the logging image format (BFZ), which has been added since the software version 5.50 of vision sensor controller.

The supported files are as follows:

Supported file	Description
byr file	Logging image file saved in the FZ vision sensor (except for byr file in ZFX series)
IFZ file	Logging image file saved in FH/FZ/FJ series and FQ series

3.2. Recommended Operating Environment

For the use of IfzToBitmap on PC, the following operating environment is recommended:

CPU	Intel CPU
OS	Windows 10 32bit/64bit Windows 11 32bit
Memory	4GB or more
Hard disk free space	300MB or more
Display screen	Resolution: 1024 × 768 dots Display color: True color (32 bit)
Others	Microsoft .NET Framework 3.5 needs to be installed.

3.3. Functional Overview

Function	Description
Folder selection	Converts a logging image file in the folder into an image that can be viewed on Windows and allows it to be saved. The converted file is saved in the same folder.
File selection	Converts the selected logging image file into an image that can be viewed on Windows and allows it to be saved. The converted file is saved in the folder in which the selected IFZ/byr file lies.
Image display	Selects IFZ /BFZ/byr/jpeg/ bmp/Tiff file, displaying the image on the image display screen.
Thumbnail	Displays the thumbnails of image files in the folder for each image format.

3.4. Precautions for the Use of the Software

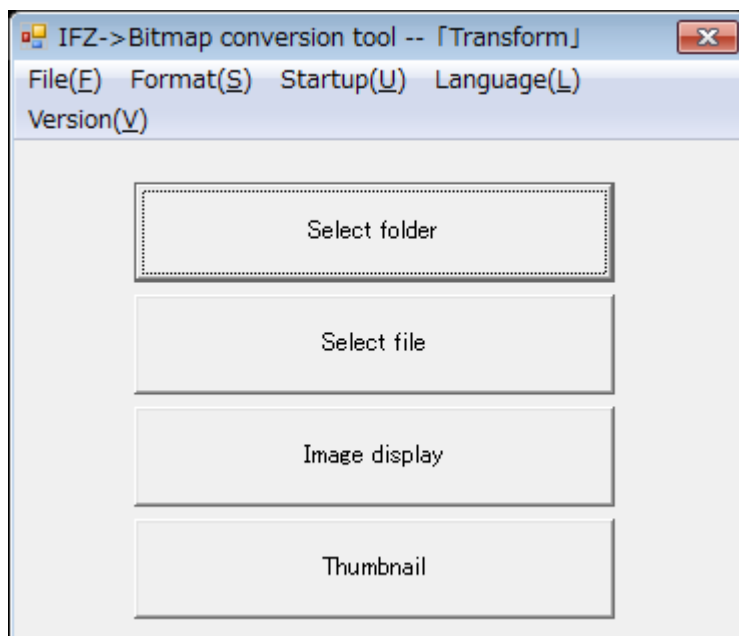
Item	Description
Conversion to BFZ file	IFZ file without multiple imaging, which is a conventional method, can be converted into BFZ file, the imaging of which is counted as one time.
Conversion of IFZ file that is logged with the setting of multiple imaging	The image conversion tool IfzToBitmap allows IFZ file that is logged with the setting of multiple imaging to be converted only to BFZ file. The tool does not support the conversion from IFZ file that is logged with the setting of multiple imaging into Bitmap, JPEG, and TIFF files.

4. Main Window and Menu

4.1. Main Window

Double-clicking IfzToBitmap.exe to start up the image conversion tool IfzToBitmap makes this window appear.

From the menu bar, make the settings for the format of a converted image and the behavior of the image conversion tool IfzToBitmap.

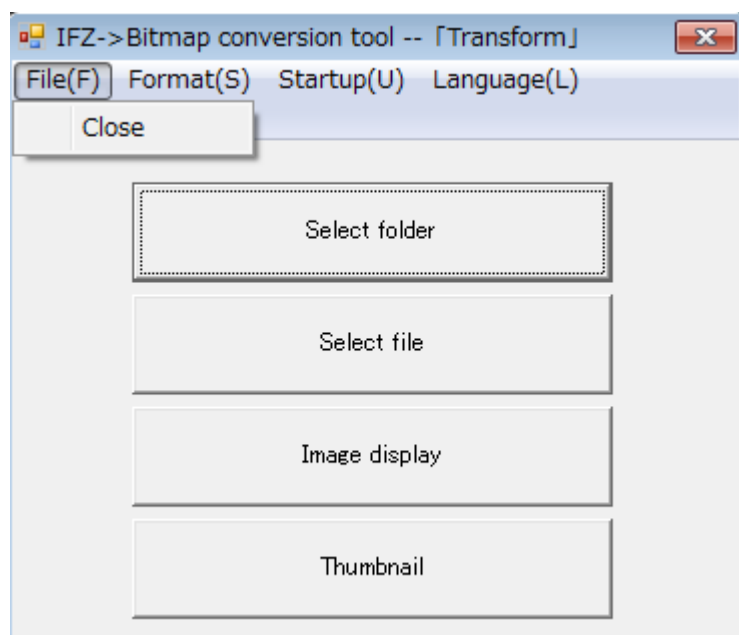


Menu category	Shortcut key	Description
File	[Alt] + [F]	Terminates the image conversion tool IfzToBitmap.
Format	[Alt] + [S]	Sets the image format and image size for saving an image.
Startup	[Alt] + [U]	Sets the behavior when you drag and drop an image file to the main menu, and when you double-click it. Note: With the "Confirm" mode set, dragging a folder to the execution file of the image conversion tool IfzToBitmap makes the confirmation form appear.
Language	[Alt] + [L]	Sets the language.
Version	[Alt] + [V]	Displays the version of the image conversion tool IfzToBitmap.

4.2. Menu

4.2.1. File

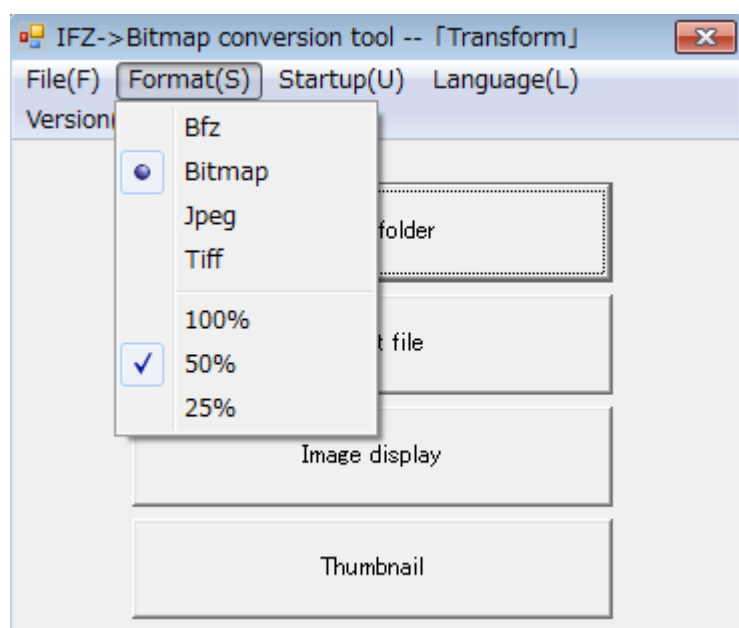
From [File], click [Close] to close the image conversion tool IfzToBitmap.



Menu category	Command item	Description
File	Close	The image conversion tool IfzToBitmap is closed.

4.2.2. Format

From [Format], select the format of a converted image or the image size to reflect them.
The image format and the image size cannot be selected at the same time.



Menu category	Command item	Description
Format (image format)	Bfz	Saved as a BFZ image file.
	Bitmap	Saved as a BMP image file.
	Jpeg	Saved as a JPEG image file.
	Tiff	Saved as a TIFF image file.
Format (image size)	100%	Saved in the same image size.
	50%	Saved with an image magnification of 50%.
	25%	Saved with an image magnification of 25%.

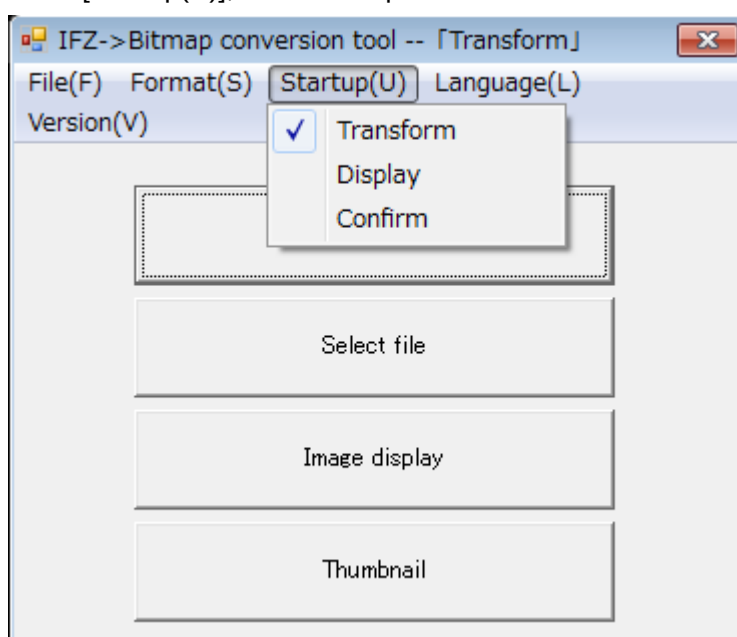


Precautions for use

- Selecting the BFZ format from the image format makes the magnification of image inactive, which cannot be selected. The image is saved in the same size.

4.2.3. Startup

From [Startup(U)], select the operation mode to set it.

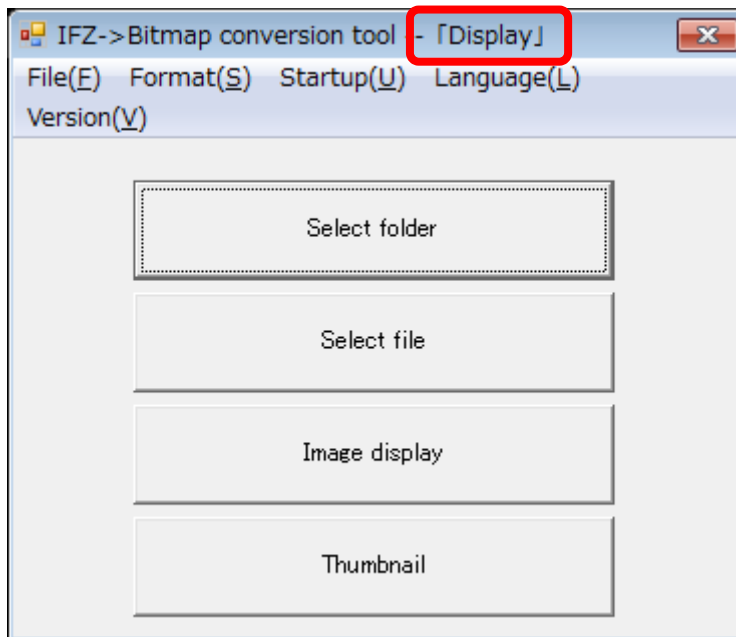


Menu category	Command item	Description
Startup	Transform	Drag and drop an image file or a folder to perform image conversion. (Only IFZ /byr files are converted.)
	Display	Drag and drop an image file to display the image.
	Confirm	Drag and drop an image file to make the confirmation form appear. (Only IFZ /byr files are converted.)



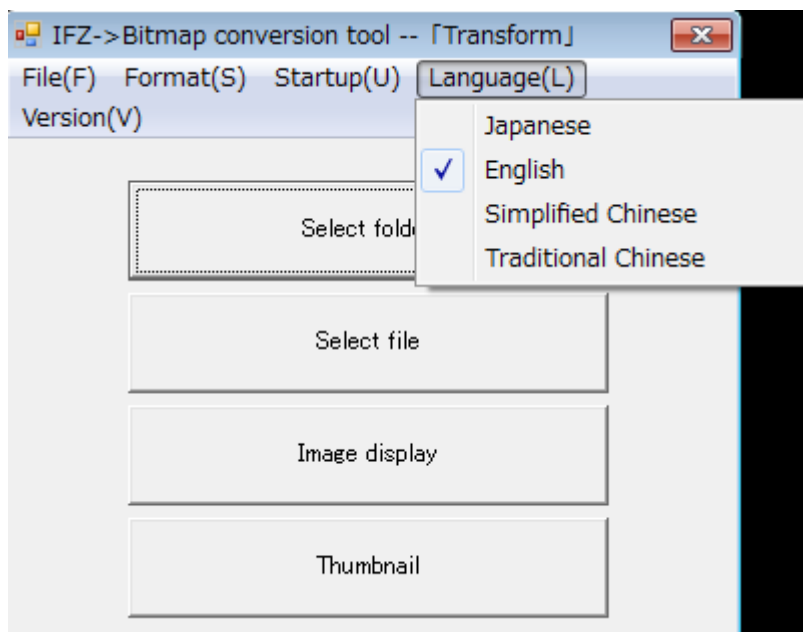
Reference

The operation mode is displayed on the title bar of the image conversion tool IfzToBitmap.



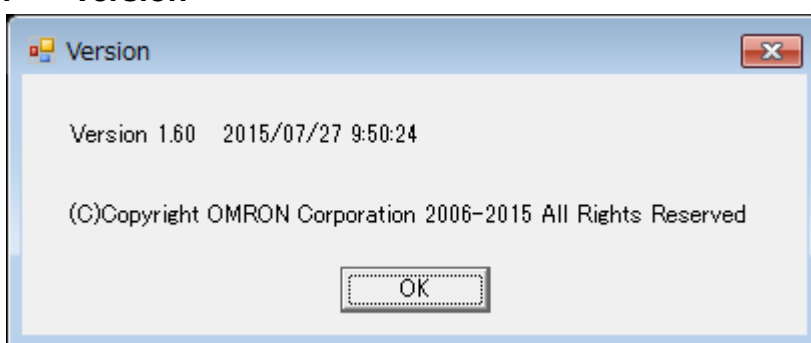
4.2.4. Language

Open the language menu and click the desired language. The display language is changed.



Menu category	Command item	Description
Language	Japanese	The display language of the tool is changed to Japanese.
	English	The display language of the tool is changed to English.
	Simplified Chinese	The display language of the tool is changed to Simplified Chinese.
	Traditional Chinese	The display language of the tool is changed to Traditional Chinese.

4.2.5. Version



Menu category	Command item	Description
Version	—	The version window opens.

5. Folder Selection Function

5.1. Overview

This function converts a logging image file in the folder into an image that can be viewed on Windows.

Only the extension of the file name is changed to the extension of the resulting file.

Example: TestImage.ifz → TestImage.bmp

Converting logging image files produced by multiple cameras results in the multiple image files with "_N" added to the pre-conversion file name for every camera number "N".

Example: TestImage.ifz → TestImage_0.bmp, TestImage_1.bmp

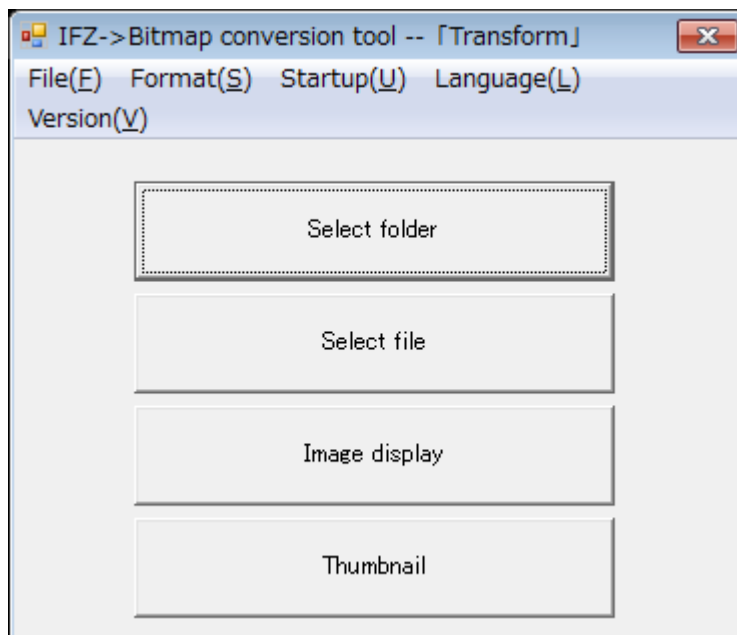


Precautions for use

- Only IFZ/byr files in the selected folder are subject to conversion.
- When you save files, a file of the same name, if any, is overwritten without a prompt to save the file.
- If an IFZ file in the selected folder is a file that is logged without the setting of multiple imaging (conventional IFZ file), the conversion to a BFZ file is regarded as multiple imaging (one time).

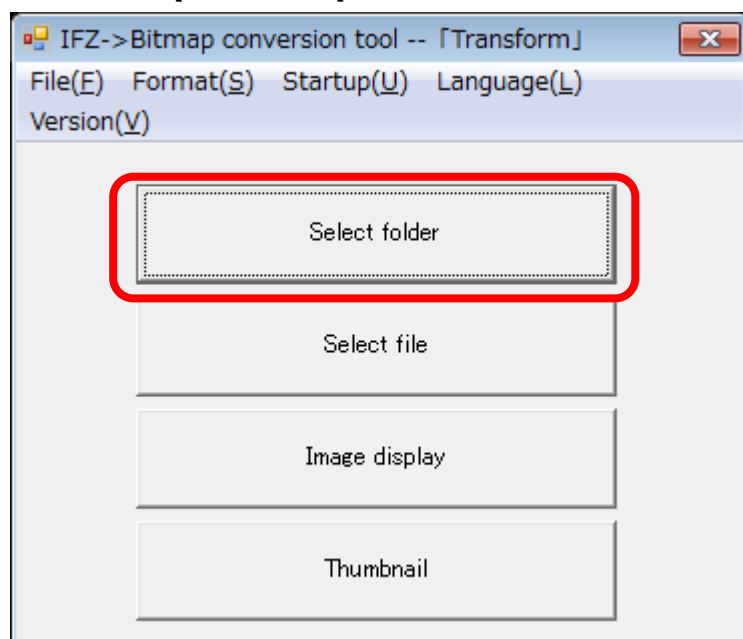
5.2. Operating Procedures

1. Double-click IfzToBitmap.exe to start up the image conversion tool IfzToBitmap.
2. The [IFZ->Bitmap conversion tool] window, which is the main window, appears.

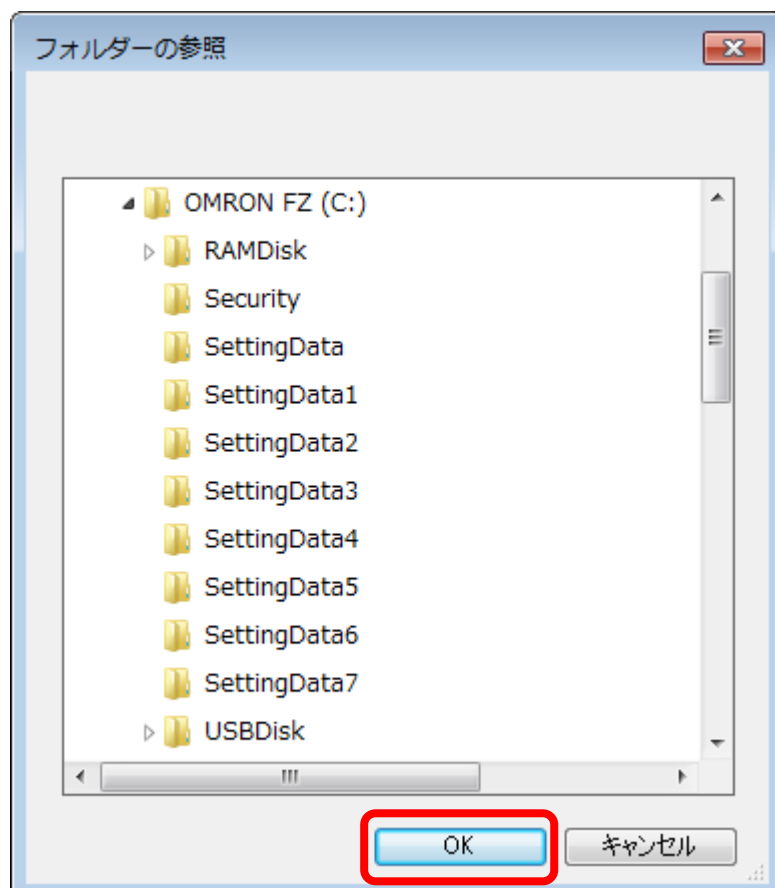


3. If needed, select [Format(S)] to set the format for image conversion and the image size (Reference: ▶4.2.2 Format).

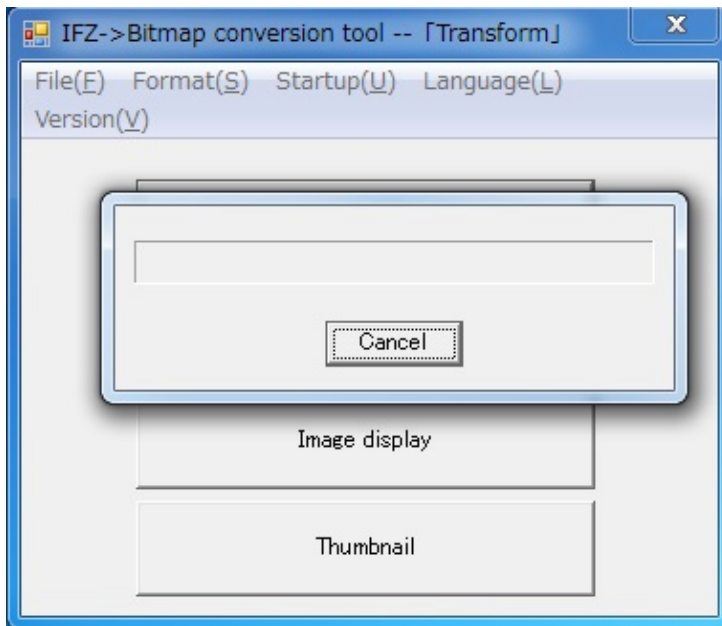
4. Click the [Select folder] button.



5. The [Browse for Folder] window appears.
Select the folder for conversion and click the [OK] button.



6. IFZ/byr files in the selected folder are converted into the image format, which you selected in 4.2.2 Format. The converted files are saved within the same folder.
7. The progress bar appears during the conversion of the file.



8. Upon completion of the conversion, the display returns to the main window.



Reference

When you set the image format and image size for saving images in 4.2.2 Format and set [Transform] in 4.2.3 Start Up, dragging and dropping the folder to be converted onto the main window or IfzToBitmap.exe allows image files contained in the selected folder to be converted.

6. File Selection Function

6.1. Overview

This function converts a selected logging image file into an image that can be viewed on Windows.

Only the extension of the file name is changed to the extension of the resulting file.

Example: TestImage.ifz → TestImage.bmp

Converting logging image files produced by multiple cameras results in the multiple image files with "_N" added to the pre-conversion file name for every camera number "N".

Example: TestImage.ifz → TestImage_0.bmp, TestImage_1.bmp

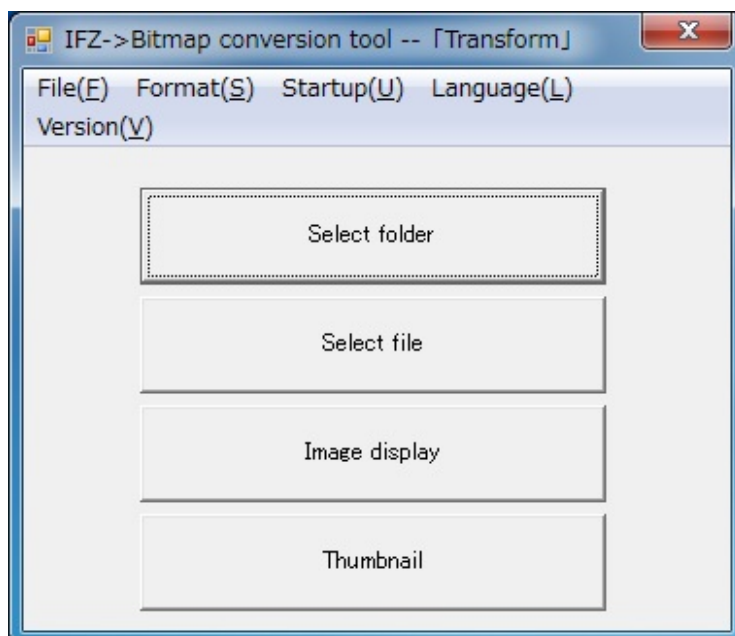


Precautions for use

- Only IFZ/byr files are subject to change.
- When you save files, a file of the same name, if any, is overwritten without a prompt to save the file.

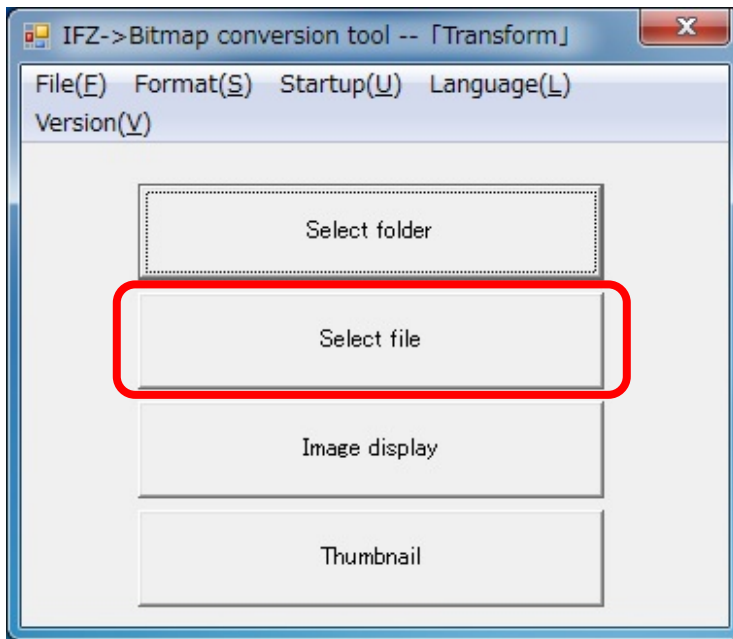
6.2. Operating Procedures

1. Double-click IfzToBitmap.exe to start up the image conversion tool IfzToBitmap.
2. The [IFZ->Bitmap conversion tool] window, which is the main window, appears.

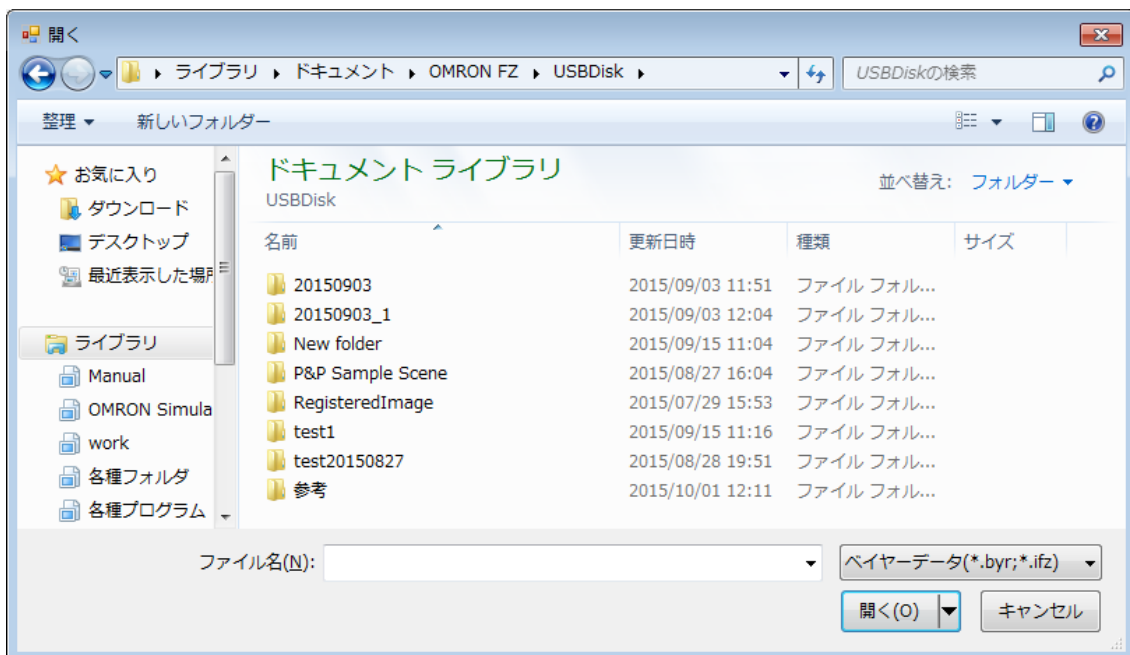


3. If needed, select [Format(S)] to set the format for image conversion and the image size (Reference: ▶4.2.2 Format).

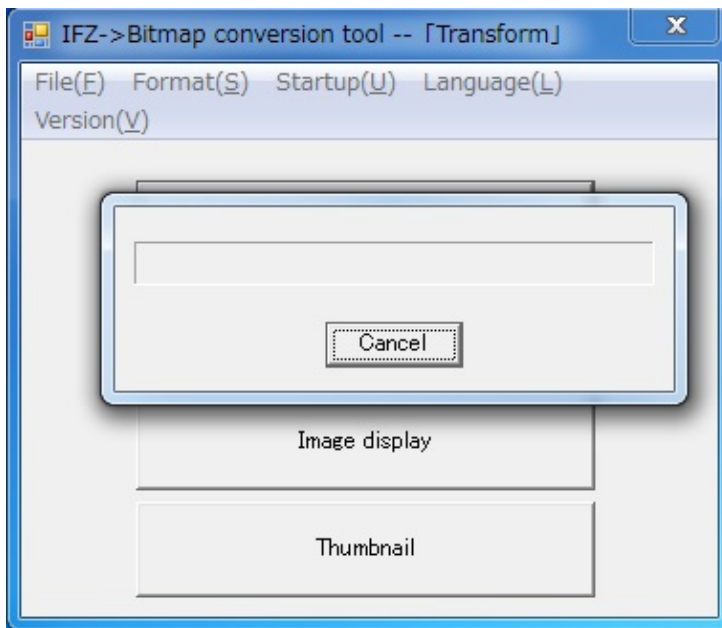
4. Click the [Select file] button.



5. In the file selection window, specify the logging image file to click [Open]. You can specify multiple files if they are contained in the same folder.



6. The progress bar appears during the conversion of the file.



7. Upon completion of the conversion, the display returns to the main window.



Reference

When you set the image format and image size for saving images in 4.2.2 Format and set [Transform] in 4.2.3 Start Up, dragging and dropping the folder to be converted onto the main window or IfzToBitmap.exe allows image files contained in the selected folder to be converted.

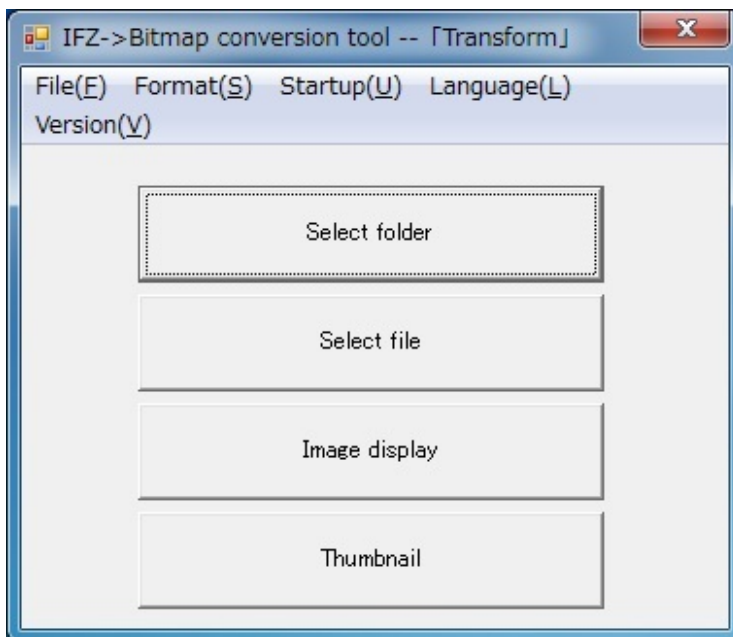
7. Image Display

7.1. Overview

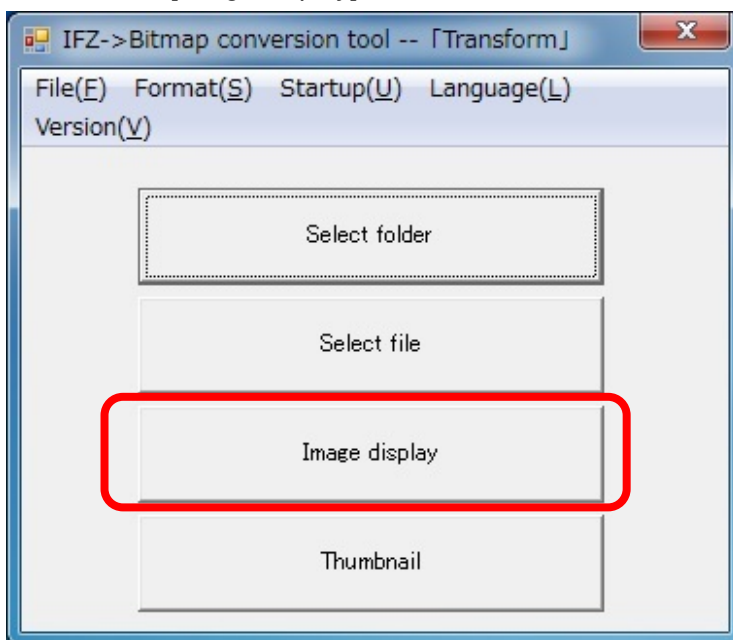
Select IFZ /byr/jpeg/ bmp/tiff files to display them on the image display window.

7.2. Operating Procedures

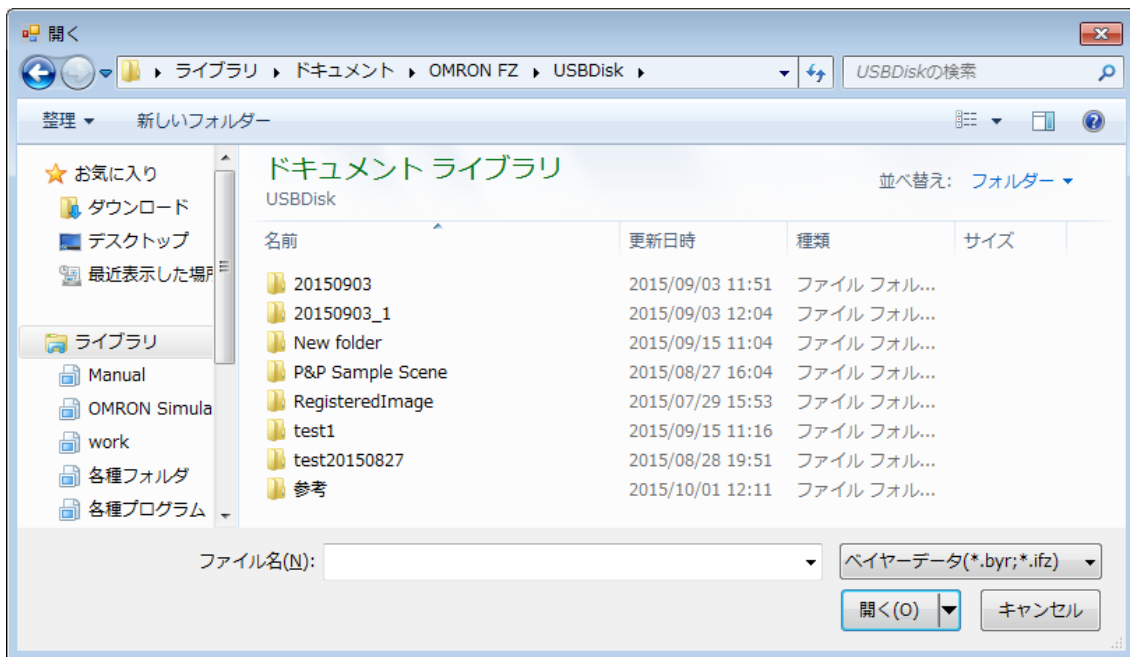
1. Double-click IfzToBitmap.exe to start up the image conversion tool IfzToBitmap.
2. The [IFZ->Bitmap conversion tool] window, which is the main window, appears.



3. Click the [Image display] button.



4. In the file selection window, specify the logging image file and click [Open].



5. The [Image display] window appears.

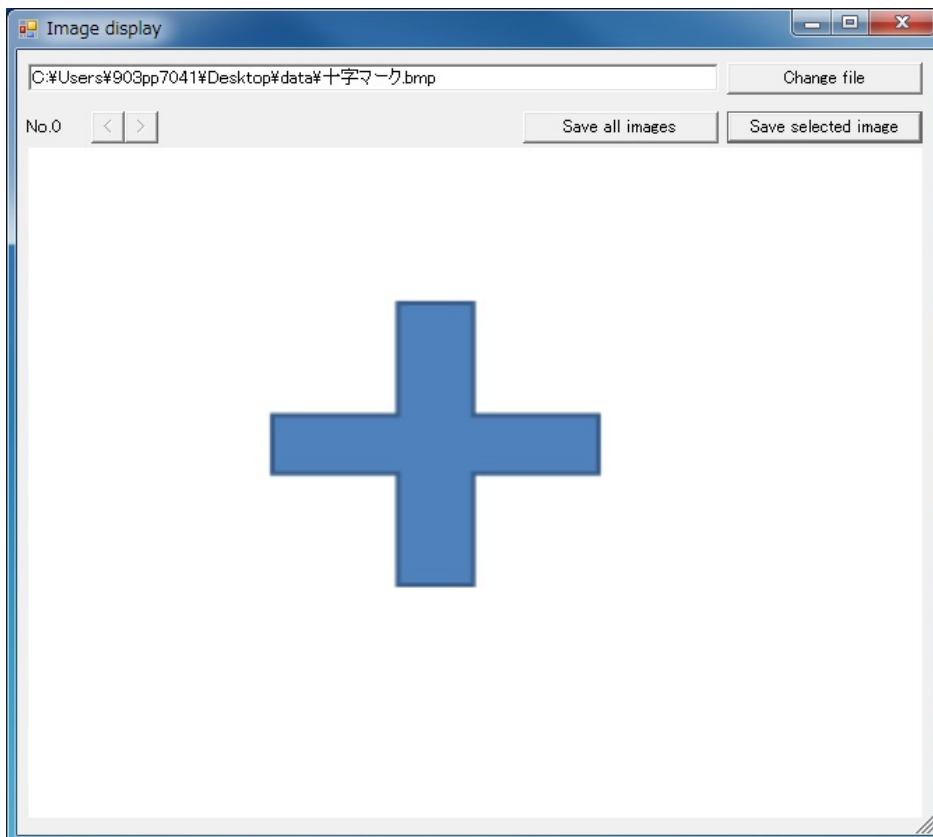


Image display item	Item	Description
Image number	[<]	With a file of multiple camera images, the previous image is shown. There is no distinction between one imaging with two cameras and two imaging with one camera, both of which are managed as two images.
	[>]	With a file of multiple camera images, the next image is shown. There is no distinction between one imaging with two cameras and two imaging with one camera, both of which are managed as two images.
Change file	—	The file of an image to be displayed can be changed.
Save all images	—	With a file of multiple camera images, all the-camera images are saved.
Save selected image	—	With a file of multiple camera images, the image of a specified image number is saved.



Reference

With [Display] set in 4.2.3 Start Up, dragging and dropping the logging image file to be displayed onto the main window or IfzToBitmap.exe allows the image file to be displayed.

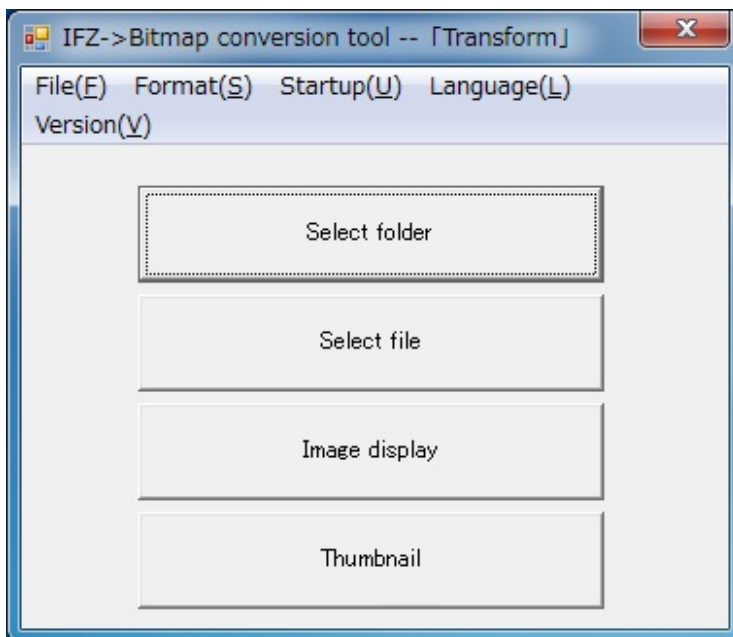
8. Thumbnails

8.1. Overview

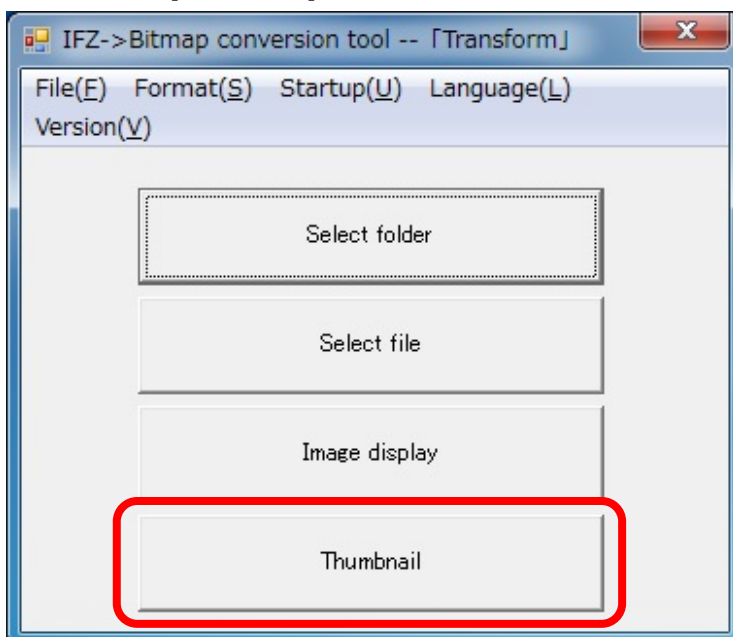
Image files in a specified folder can be displayed as thumbnails from one image format to another.

8.2. Operating Procedures

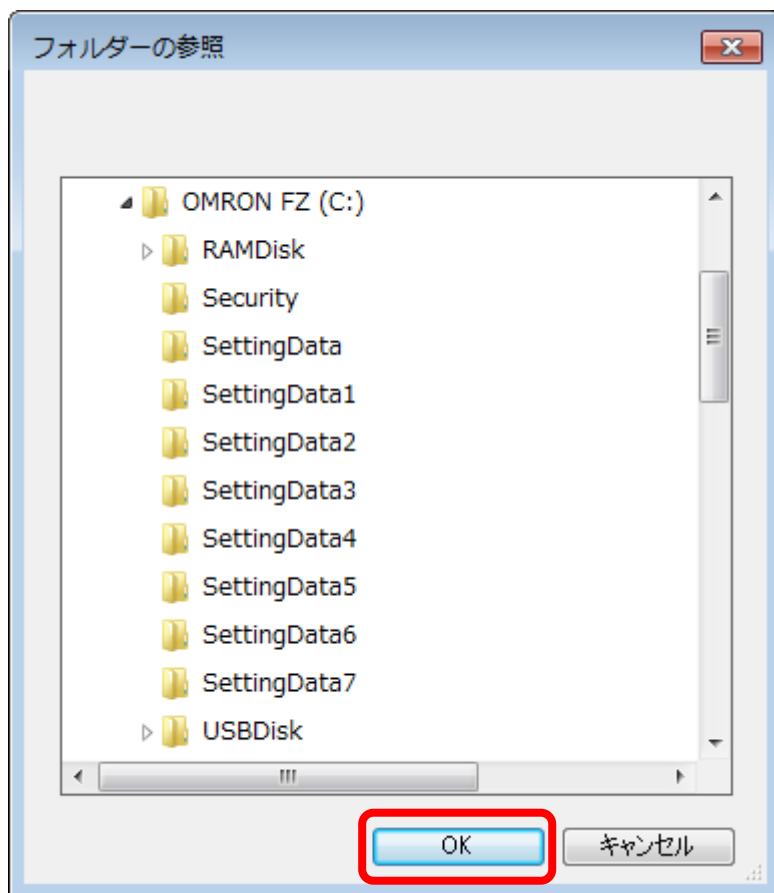
1. Double-click IfzToBitmap.exe to start up the image conversion tool IfzToBitmap.
2. The [IFZ->Bitmap conversion tool] window, which is the main window, appears.



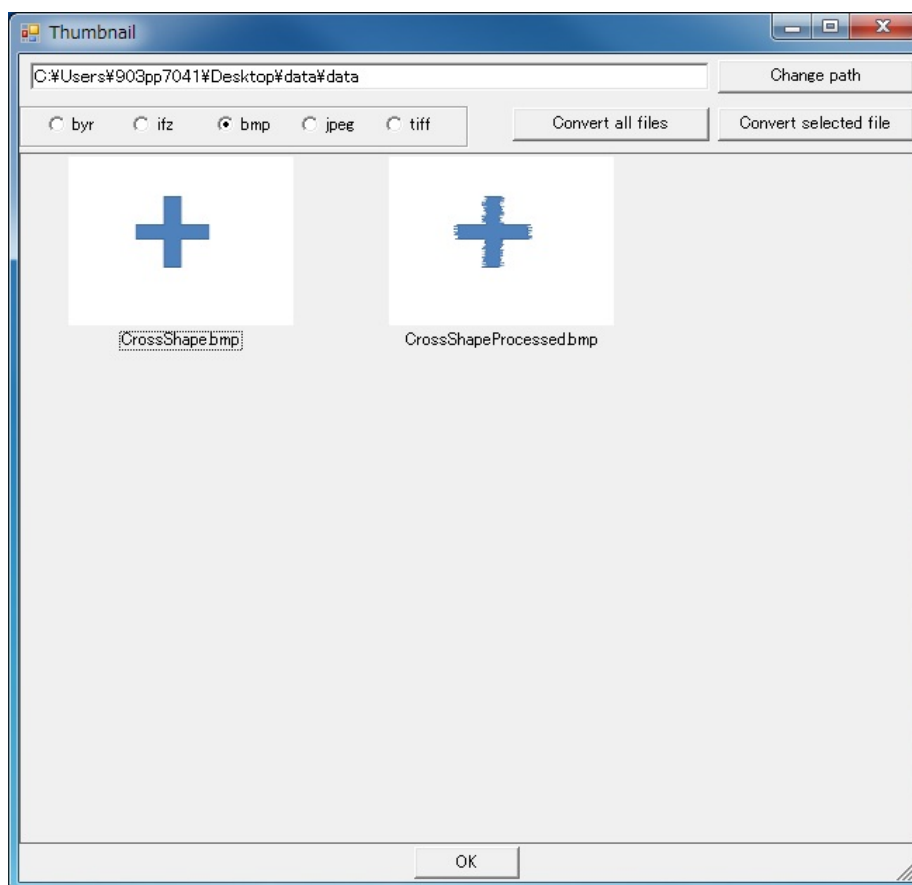
3. Click the [Thumbnail] button.



4. The [Browse for Folder] window appears.
Select the folder that contains the image files and click the [OK] button.
You can specify logging image files and post-conversion image files as image files.



5. The [Thumbnail] window appears.



Thumbnail item	Item	Description
Image types	• byr file • IFZ file • bmp file • jpeg file • tiff file	Select the format of images to be displayed as thumbnails.
Change path	—	You can change the folder for thumbnail display.
Convert all files	—	All the displayed images can be converted.
Convert selected file	—	The specified images, if any, can be converted.



Reference

With [Display] set in 4.2.3 Start Up, dragging and dropping a folder that contains the logging image files, or image files allows the image files to be displayed as thumbnails.

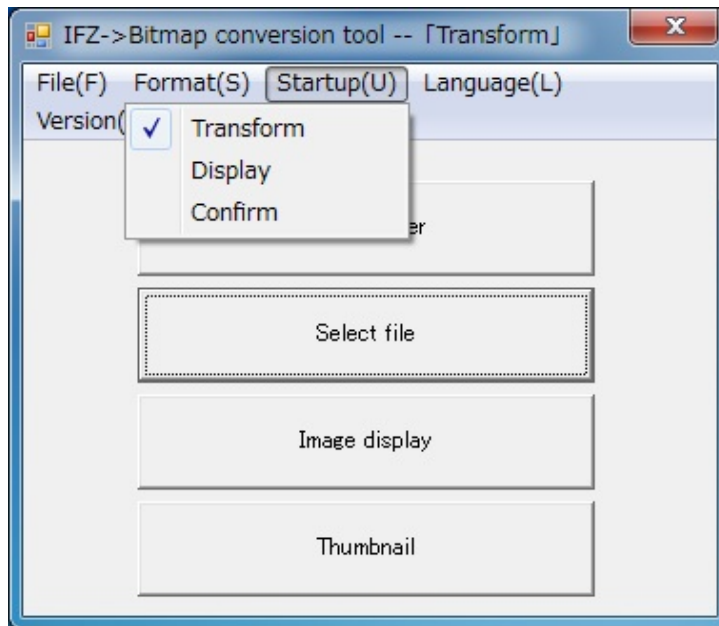
9. Appendices

9.1. Image Conversion from a Command Line

The image conversion can be performed from a command line.

9.1.1. Operating Procedures

1. Double-click IfzToBitmap.exe to start up the image conversion tool IfzToBitmap.
2. From [Startup(U)], select [Transform].



3. From [File(F)], select [Close] to close the image conversion tool IfzToBitmap.
4. Execute IfzToBitmap by a command line.

9.1.2. Options

Option	Description
IfzToBitmap/o:XXX	Specify the destination folder path (XXX). Surround the path name with double quotation marks (" "). (Refer to Example 2.)
IfzToBitmap/f:XXX	Specify the output format (XXX). There are the following output formats: bmp, tiff, jpg, and BFZ. (Refer to Example 4.)
IfzToBitmap/h	The window does not open when activated from a command line. The processing is performed in the background. (Refer to Example 5.)

9.1.3. Command Line Examples

<Ex.1> To convert a single image (img.ifz) in the same folder as IfzToBitmap.exe
IfzToBitmap img.ifz

<Ex.2> To convert images (img.ifz) in the RAMDisk folder in C drive
IfzToBitmap "C:¥RAMDisk¥img.ifz"

<Ex.3> To convert multiple images
IfzToBitmap img1.ifz img2.ifz img3.ifz

<Ex.4> To save img.ifz at C:¥Test as Jpeg format
IfzToBitmap img.ifz /o:"c:¥Test" /f:jpg

<Ex.5> To reject the activation of the window when called from a command line
IfzToBitmap img.ifz /h

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