

NetumScan Pro Software Manual

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1. Foreword

1. Writing purpose

The purpose of writing this description is to fully describe the functions of the software, so that users can understand the scope and use of the software, and provide necessary information for the maintenance and update of the software.

2. Reference information

Omission

3. Terms and abbreviations

- Png: a bitmap format that uses lossless compression algorithms designed to replace the GIF and TIFF file formats, while adding some features that the GIF file format does not have. PNG uses a lossless data compression algorithm derived from LZ 77, which is generally applied in JAVA programs, web pages, or S60 programs, due to its high compression ratio and the small volume of generated files.
- Jpg: the product of the JPEG standard, developed by the International Organization for Standardization (ISO), is a compression standard for continuous tone still images. The [1] JPEG format is the most commonly used image file format, with the suffix name of. jpg or. jpeg
- Bmp: English Bitmap (bitmap), which is the standard image file format in the Windows operating system, and can be supported by a variety of Windows applications. With the popularity of Windows operating systems and the development of rich Windows applications, BMP bitmap formats are naturally widely used. This format is characterized by its highly informative and barely compressed images, but this leads to its inherent disadvantage- -taking up too much disk space. Therefore, BMP is more popular on single machines.
- Tif: Label Image file Format (Tag Image File Format, TIFF) is a flexible bitmap format that stores images including photos and art drawings. It was originally developed by Aldus Corporation and Microsoft Corporation for PostScript printing. TIFF became a popular high-level color image format along with JPEG and PNG. The TIFF format is widely supported in the industry, such as Adobe's Photoshop, The GIMP Team's GIMP, Ulead PhotoImpact and Paint Shop Pro, desktop printing and page typesetting applications like QuarkXPress and Adobe InDesign, scanning, fax, word processing, optical character recognition, and other applications. Adobe, which got the PageMaker printing app from Aldus, controls the TIFF specification.
- Gif: The full name of GIF is Graphics Interchange Format, which can be translated as a graphic exchange format to display index color images in hypertext logo language (Hypertext Markup

Language), and is widely used on the Internet and other online service systems. GIF is a public standard for an image file format.

- Mp 4: A set of compressed coding standards for audio and video information, developed by the International Organization for Standardization (ISO) and the Moving Picture Experts Group (MPEG) under the International Electrotechnical Commission (IEC). The first edition was adopted in October 1998 and the second edition was adopted in December 1999. The main uses of the MPEG-4 format are online streaming, CD, voice delivery (video calls), and television broadcasting.
- Original image [Original]: Keep the original image taken by the camera without any processing.
- Grayscale [Gray scale]: also known as gray scale diagram. The relationship between white and black is divided into several logarithmic levels, called gray scale. Gray scale is divided into 256 orders.
- Black and white (binarized) [black and white (Binarization)]: The software sets pixel values less than the threshold to 0 and 255 by either automatic or manual threshold.
- Black and white (without background color) [black and white (Include stamp)]: The software passes the automatic threshold or manual threshold to set the pixel value below the threshold value to 255, and keeps red and blue.

2. Software overview

1. Software use

The development of this software is to facilitate the use of high racket meter equipment for documents, contracts, certificates, and other related files electronic.

2. Software running

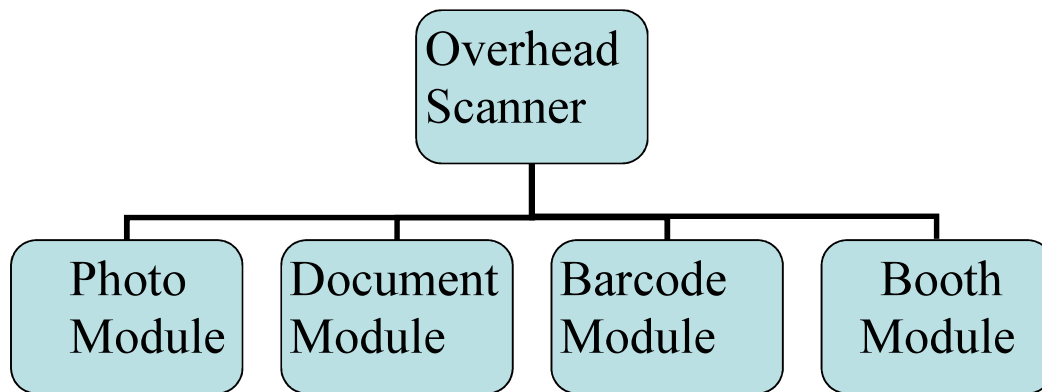
This software is installed on PC and its compatible machine, using WINDOWS 7 SP1 and above operating system. Net framework 4.6.1, After the software is installed, directly click the corresponding icon to display the main interface of the software and conduct the required software operation.

3. System configuration

This software requires to run on the PC and its compatible machine, requiring Intel ® Core ™ i3 or later CPU, 4GB + memory, 100G + hard disk.

Software needs to have WINDOWS 7 SP1 and above.

4. Software structure



1. Photo module: mainly use high camera for manual / timing / automatic photo, save pictures in various formats, and simple electronic file operation.

2. Document module: mainly use high camera for manual photo / timing photo / automatic photos, save various formats of pictures, multiple pictures combined save independent files, id id, identified by OCR recognition engine, and then save into TXT / PDF / Word / Excel file, recognition rate in the definition of the photos, clear picture recognition rate can be as high as 99%, support more than 100 languages.

3. Barcode module: mainly use high camera to take manual / timing / automatic photos, identify through the barcode identification engine, get the barcode content in the picture, save the content into text / picture / text + picture / picture / PDF / Excel and other formats.

4. Booth module: mainly use the high shot instrument for shooting preview display, mark and modify the preview display, and save the preview area display recorded into video.

3. Software operation

1. Software installation

Click directly to open the software installation package NetumScan Pro Install.EXE (automatically installed during installation. Net framework 4.6.1 Environment); after entering the installation interface, follow the installation instructions.

2. Run the steps

2.1. Find the software shortcut on the desktop, double-click or right-click to open the software.



2.2. Enter the main interface, select required modules and conduct corresponding operation.



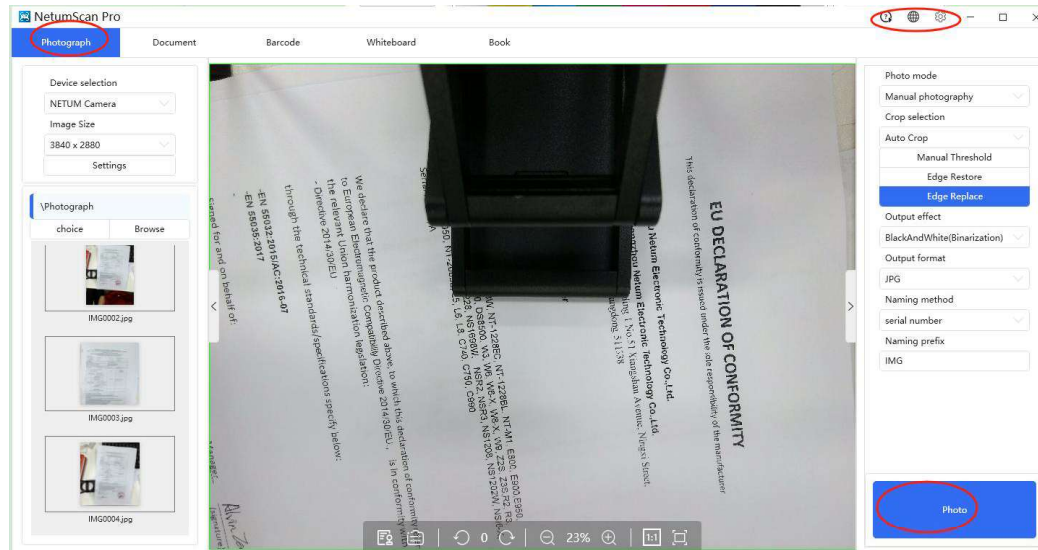
2.3. After completing the scanning operation, click the close button in the upper right corner to close the software.

3. Function declaration

- Operation preparation: You need to open the high-meter device and put it on the black background cushion or black hard shell, and use the USB cable to connect to the USB port on the

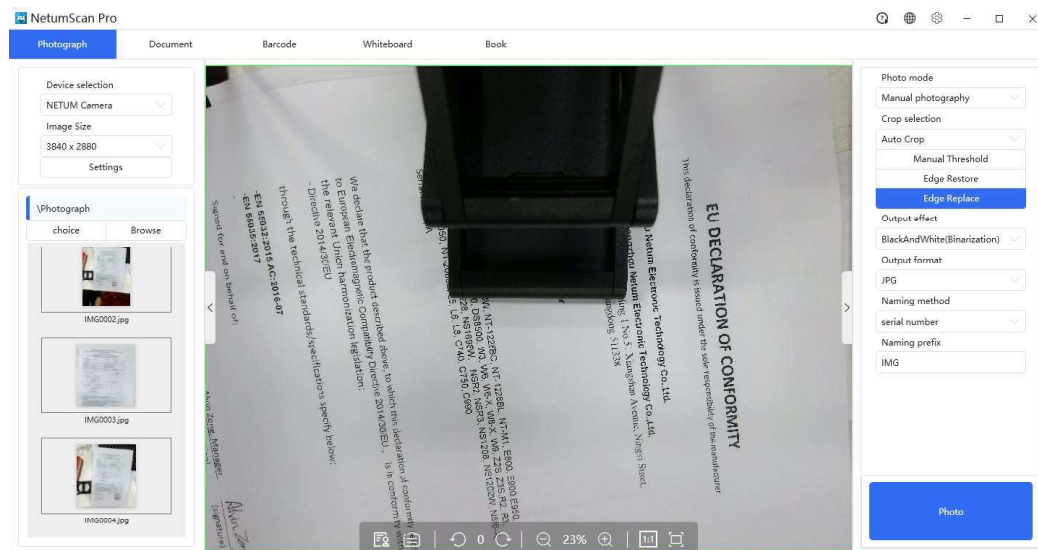
computer.

- Description of the interface area division:



- Module navigation bar: It is used to select the operating function module.
- Equipment control area: used to control the relevant operation of the meter.
- Task management area: to manage pictures and files of products produced by camera operation.
- Preview operation area: used to display the real-time preview and view operations.
- Photo Control Area: Related operation for selecting scan photo parameter settings.
- Device setting area: for selecting the software language, software theme, and other advanced parameter setting operations.

3.1 Photo module



1. Function declaration:

a) Photo mode:

- Manual photo taking: use the mouse to click the [photo] button to take photos.
- Automatic photography: the software detects and determines whether the data file is replaced according to the changes of the preview picture.
- Timing photos: the software automatically takes photos according to the selected timing interval.

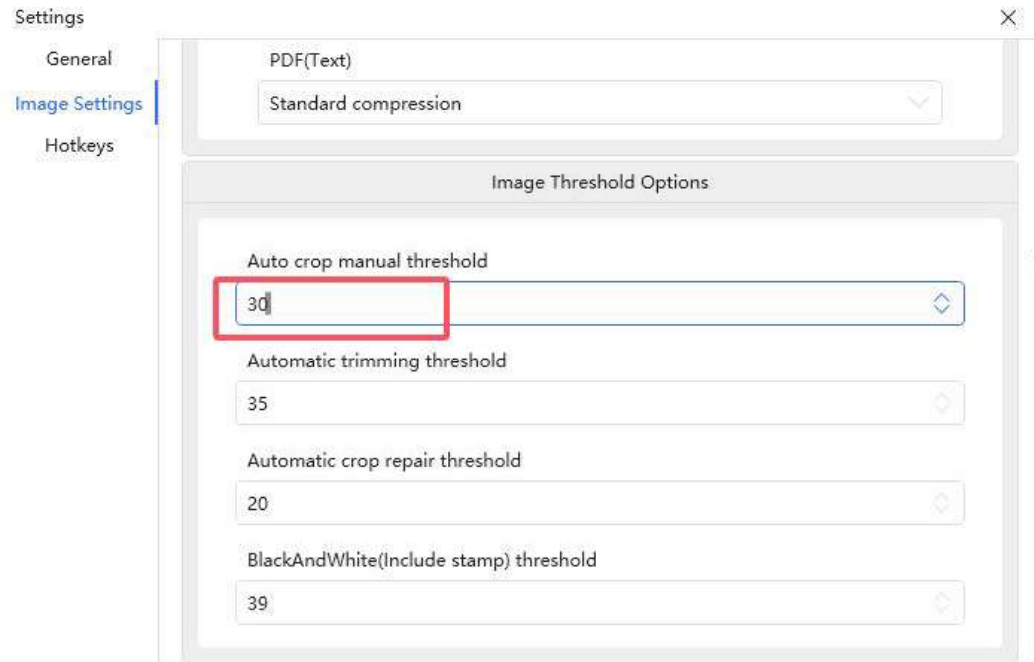
b) Timing interval:

- The options are: 3,5,7, and 10
- **Note This option requires [photo mode] to select for [auto photo] [manual photo] to display.**

c) Cropping selection:

- No cropping: keep the original size of the picture taken by the high camera unchanged.
- Automatic cropping: The software automatically cuts into a picture according to the content of the picture (the file background is black).
- Automatic cropping (multi-image): the software automatically cuts into multiple pictures according to the content of the picture (the file background is black).
- Customization: The software obtains the area according to the automatic cropping algorithm, and displays 4 points on the preview operation area, which can move the position of the area point through the mouse.
- Custom (rectangle): The software obtains the maximum rectangular area, and displays 4 points on the preview operation area. You can move the position of the area point through the mouse (other points will move according to the position of the moving point, to ensure that the area is rectangular).

d) Manual threshold: After checking, the automatic cropping algorithm will cut the automatic cropping manual threshold in the setting.



➤ Note This option requires [crop selection] to be [auto crop], [auto crop (multiple images)] to display.

e) Intelligent trimming: The software will process the automatically cropped image twice, and cut the black edge that still exists.

f) Intelligent repair: The software will automatically process the trimmed image twice, and repair the black edge still existing into white.

➤ Note: [intelligent trimming], [intelligent repair] operations will be processed according to the automatic trimming threshold in the setting.

g) Output effect:

- Original image [Original]
- Grayscale [Gray scale]
- Black and white (binary) [black and white (Binarization)]
- Black edge (undercolor) [black and white (Include stamp)]

See terms and abbreviations for details

h) output format:

For specific description of png / jpg / bmp / tif, see terms and acronyms

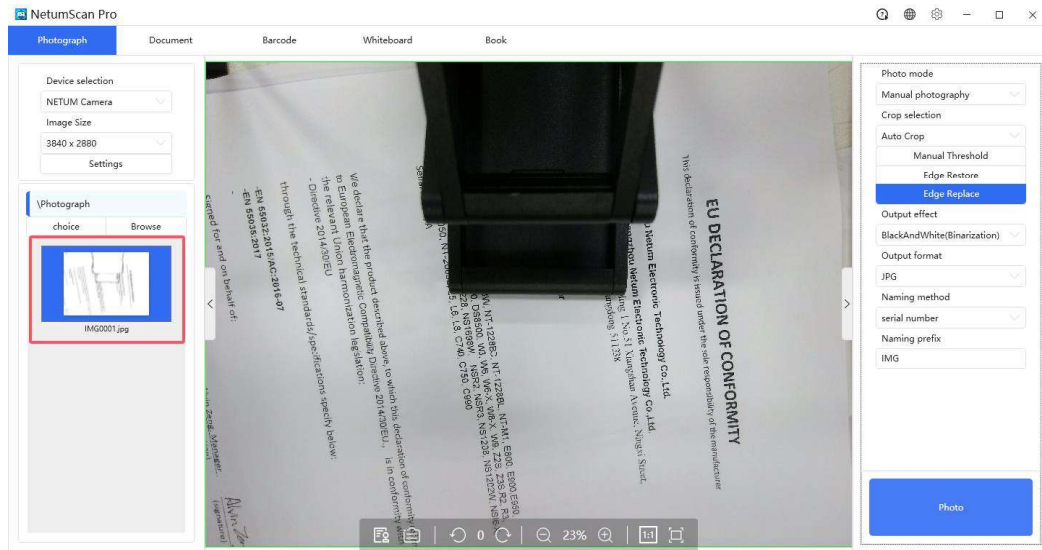
i) Name method:

- Serial number: from the growing water serial number suffix.
- Date time: a string suffix with the content of the current date time [yyyyMMddHHmmssfff].
- No suffix: No suffix is required.

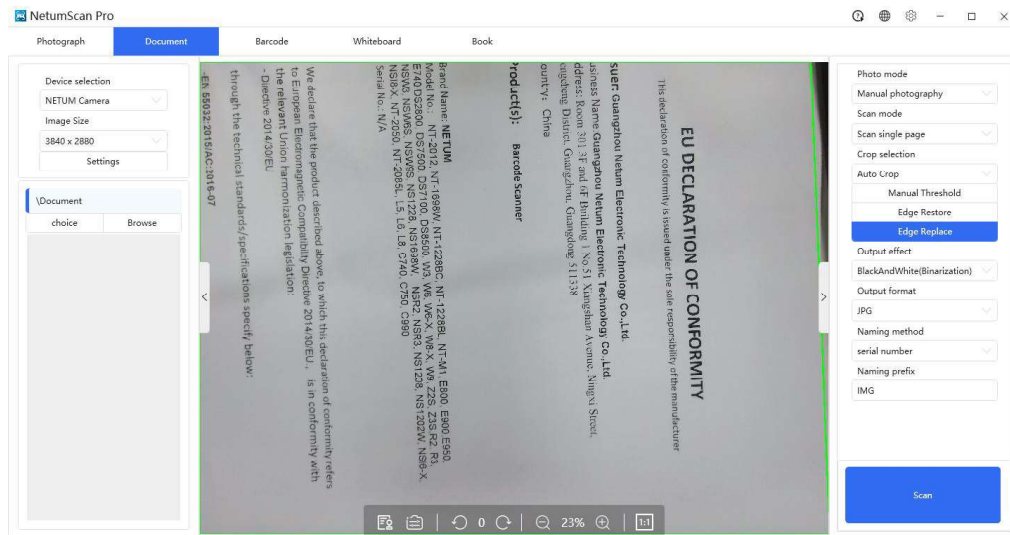
j) Naming prefix: the content of the prefix for the saved file name.

2. operating process

- Open the software and enter the "Photo-taking" module.
- Select Photo Mode, Cut Selection, Output Effect, Output Format, Naming Method and enter Named Prefix.
- Click the photo button to take photos, the software will take photos according to the setting options, save the picture to the specified folder, and display it in the task management area on the left side of the software.



3.2 Document module



1. Function declaration:

- Photo mode:
 - Manual photo taking: use the mouse to click the [photo] button to take photos.
 - Automatic photography: the software detects and determines whether the data file is replaced according to the changes of the preview picture.
 - Timing photos: the software automatically takes photos according to the selected

timing interval.

b) Timing interval:

➤ The options are: 3,5,7, and 10

➤ **Note** This option requires [photo mode] to select for [auto photo] [manual photo] to display.

c) Scan pattern:

➤ Scan single page: Scan an image and export it to a file.

➤ Scan multiple pages: record the scanned pictures in a temporary queue, and after the scan, click export file to complete the scan.

➤ Scan ID: record the photo of the front and back of the certificate into the temporary queue. After the scan, click on the export file to complete the scan.

➤ Front and back (left and right horizontal spelling): the two pictures of the left and right splicing way combined into a picture.

➤ Front and back (top and down vertical): install the two pictures up and down to merge and export into one picture.

➤ **Note:** The temporary queue area is displayed on the right of the photo control.

d) Cropping selection:

➤ No cropping: keep the original size of the picture taken by the high camera unchanged.

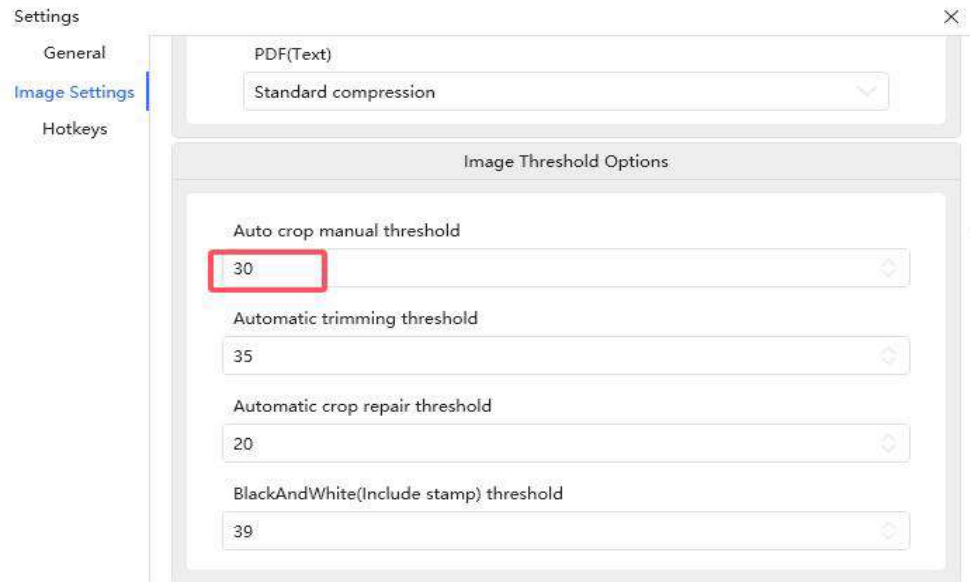
➤ Automatic cropping: The software automatically cuts into a picture according to the content of the picture (the file background is black).

➤ Automatic cropping (multi-image): the software automatically cuts into multiple pictures according to the content of the picture (the file background is black).

➤ Customization: The software obtains the area according to the automatic cropping algorithm, and displays 4 points on the preview operation area, which can move the position of the area point through the mouse.

➤ Custom (rectangle): The software obtains the maximum rectangular area, and displays 4 points on the preview operation area. You can move the position of the area point through the mouse (other points will move according to the position of the moving point, to ensure that the area is rectangular).

e) Manual threshold: After checking, the automatic cropping algorithm will cut the automatic cropping manual threshold in the setting.



➤ Note This option requires [crop selection] to be [auto crop], [auto crop (multiple images)] to display.

f) Intelligent trimming: The software will process the automatically cropped image twice, and cut the black edge that still exists.

g) Intelligent repair: The software will automatically process the trimmed image twice, and repair the black edge still existing into white.

➤ Note: [intelligent trimming], [intelligent repair] operations will be processed according to the automatic trimming threshold in the setting.

h) Output effect:

- Original image [Original]
- Grayscale [Gray scale]
- Black and white (binary) [black and white (Binarization)]
- Black edge (undercolor) [black and white (Include stamp)]

See terms and abbreviations for details

i) output format:

See png / jpg / bmp / tif / pdf / text / word / excel

j) Recognition language: Set up the language of the OCR text recognition engine to recognize the image.

The supported languages are as follows:

Abkhaz,Adyghe,Afrikaans,Agul,Albanian,Altai,Arabic(SaudiArabia),Armenian (Eastern),Armenian(Grabar),Armenian(Western),Avar,Aymara,Azeri(Cyrillic),Azeri (Latin),Bashkir,Basque,Bemba,Blackfoot,Breton,Bugotu,Bulgarian,Burmese,Buryat,Belarusian,Catalan,Chamorro,Chechen,ChineseSimplified,ChineseTraditional,Chukchee,Chuvas, Corsican,CrimeanTatar,Croatian,Crow,Czech,Danish,Dargwa,Dungan,Dutch,English, Eskimo (Cyrillic),Eskimo (Latin),Estonian,Even,Evenki,Faroese,Farsi,Fijian,Finnish,Dutch

(Belgian),French,Frisian,Friulian,ScottishGaelic,Gagauz,Galician,Ganda,Georgian,German,German(NewSpelling),German(Luxembourg),Greek,Guarani,Hani,Hausa,Hawaiian,Hebrew,Hungarian,Icelandic,Indonesian,Ingush,Irish,Italian,Japanese,Kabardian,Kalmyk,Karachay-balkar,Karakalpak,Kashubian,Kawa,Kazakh,Khakass,Khanty,Kikuyu,Kirghiz,Kongo,Korean,Koryak,Kpelle,Kumyk,Kurdish,Lak,Sami(Lappish),Latin,Latvian,Latvian Gothic,Lezgi,Lithuanian,Luba,Macedonian,Malagasy,Malay(Malaysian),Malinke,Maltese,Mansi,Maori,Mari,Maya,Miao,Minangkabau,Mohawk,Romanian(Moldova),Mongol,Mordvin,Nahuatl,Nenets,Nivkh,Nogay,Norwegian(Bokmal),Norwegian(Nynorsk),Nyanja,Ojibway,Old Slavonic,Old English,Old French,Old German,Old Italian,Old Spanish,Ossetian,Papiamento,TokPisin,Polish,Portuguese,Portuguese(Brazilian),Occitan,Quechua(Bolivia),Rhaeto-Romanic,Romanian,Romany,Rwanda,Rundi,Russian (Old Spelling),Russian,Samoan,Selkup,Serbian(Cyrillic),Serbian(Latin),Shona,Dakota,Slovak,Slovenian,Somali,Sorbian,Sotho,Spanish,Sunda,Swahili,Swazi,Swedish,Tabasaran,Tagalog,Tahitian,Tajik,Tatar,Thai,Jingpo,Tongan,Tswana,TunTurkish,Turkmen(Cyrillic),Turkmen(Latin),Tuvinian,Udmurt,Uighur(Cyrillic),Uighur(Latin),Ukrainian,Uzbek(Cyrillic),Uzbek(Latin),Cebuano,Vietnamese,Welsh,Wolof,Xhosa,Yakut,Yiddish,Zapotec,Zulu,Japanese (Modern),Korean (Hangul),Russian with accent,Norwegian

k) Name method:

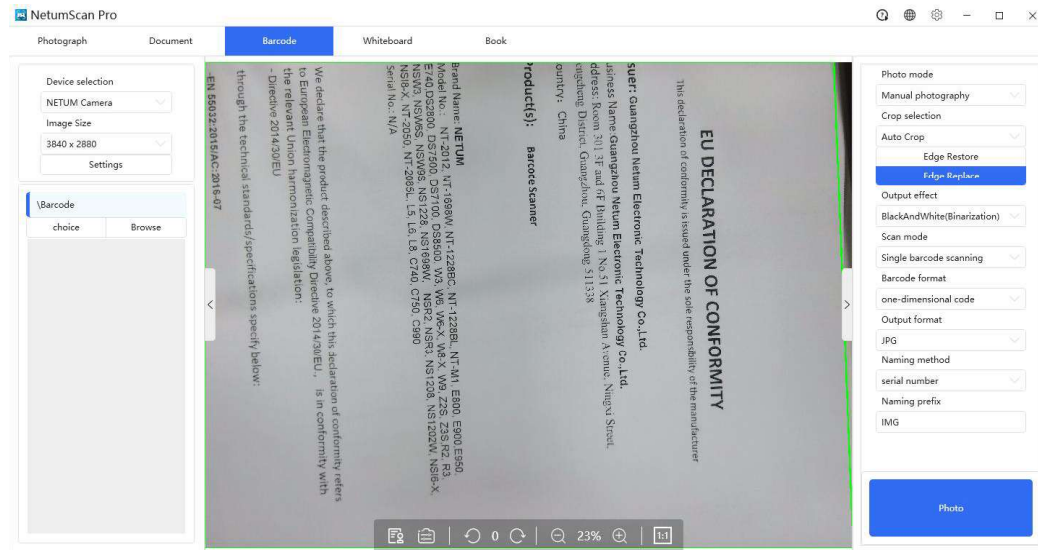
- Serial number: from the growing water serial number suffix.
- Date time: a string suffix with the content of the current date time [yyyyMMddHHmmssfff].
- No suffix: No suffix is required.

l) Naming prefix: the content of the prefix for the saved file name.

2. operating process

- a) Open the software and enter the "Photo-taking" module.
- b) Select Scan Mode, Photo Mode, Cut Selection, Output Effect, Output Format, Naming Method and enter Named Prefix.
- c) Click the photo button to take a picture, the software will scan according to the setting options, save the picture to the specified folder, and display it in the task management area on the left side of the software.

3.3 Barcode module



1. Function declaration:

a) Photo mode:

- Manual photo taking: use the mouse to click the [photo] button to take photos.
- Automatic photography: the software detects and determines whether the data file is replaced according to the changes of the preview picture.
- Timing photos: the software automatically takes photos according to the selected timing interval.

b) Timing interval:

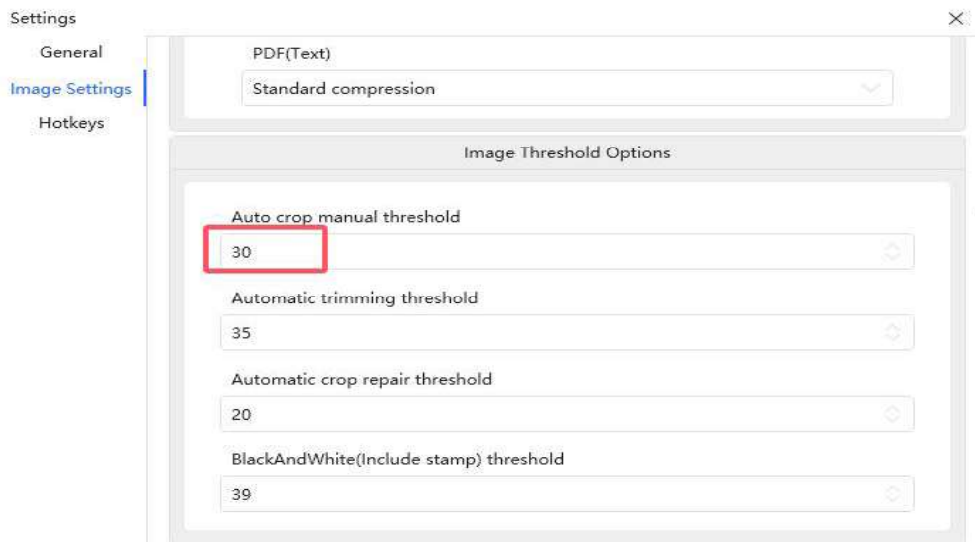
- The options are: 3,5,7, and 10
- **Note This option requires [photo mode] to select for [auto photo] [manual photo] to display.**

c) Cropping selection:

- No cropping: keep the original size of the picture taken by the high camera unchanged.
- Automatic cropping: The software automatically cuts into a picture according to the content of the picture (the file background is black).
- Automatic cropping (multi-image): the software automatically cuts into multiple pictures according to the content of the picture (the file background is black).
- Customization: The software obtains the area according to the automatic cropping algorithm, and displays 4 points on the preview operation area, which can move the position of the area point through the mouse.
- Custom (rectangle): The software obtains the maximum rectangular area, and displays 4 points on the preview operation area. You can move the position of the area point through the mouse (other points will move according to the position of the moving point, to ensure that the area is rectangular).

d) Manual threshold: After checking, the automatic cropping algorithm will cut the automatic

cropping manual threshold in the setting.



➤ **Note** This option requires [crop selection] to be [auto crop], [auto crop (multiple images)] to display.

e) Intelligent trimming: The software will process the automatically cropped image twice, and cut the black edge that still exists.

f) Intelligent repair: The software will automatically process the trimmed image twice, and repair the black edge still existing into white.

➤ **Note:** [intelligent trimming], [intelligent repair] operations will be processed according to the automatic trimming threshold in the setting.

g) Output effect:

- Original image [Original]
- Grayscale [Gray scale]
- Black and white (binary) [black and white (Binarization)]
- Black edge (undercolor) [black and white (Include stamp)]

See terms and abbreviations for details

h) Scan pattern:

- Single code scanning: there are multiple barcodes in the picture, and only one of them is resolved.
- Multiple code scanning: there are multiple barcodes in the picture, and all the bar codes in the picture will be resolved.

i) Barcode format:

- One-dimensional code: Code128, Code93, Code39, Code25, EAN 13, EAN 8, UPCA, UPCE, Codabar, Databar, ShortCode128.
- QR code: PDF417, DataMatrix,, MicroPDF417, QRCode.

j) Output format:

For specific description of png / jpg / bmp / tif, see terms and acronyms

k) Name method:

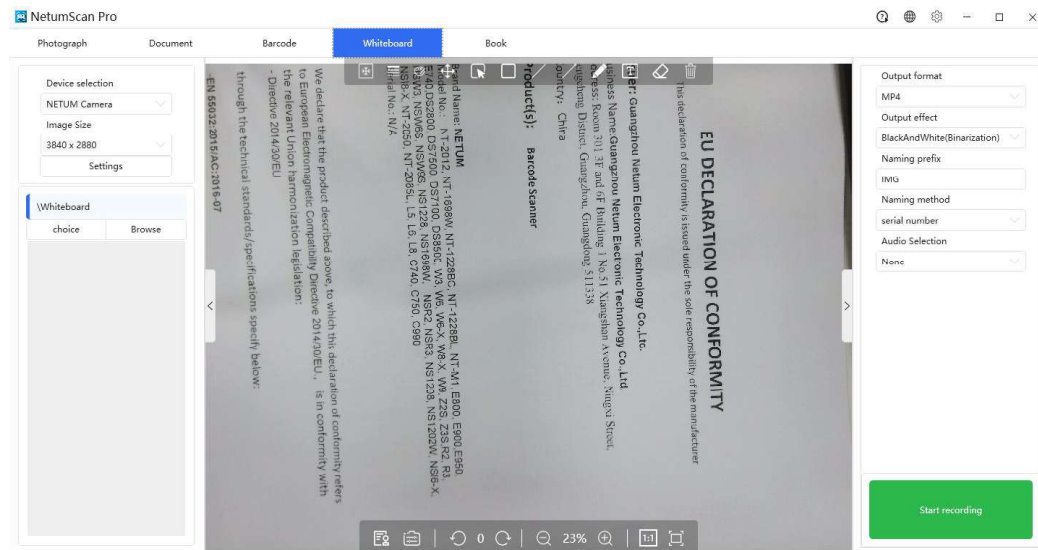
- Serial number: from the growing water serial number suffix.
- Date time: a string suffix with the content of the current date time [yyyyMMddHHmmssfff].
- No suffix: No suffix is required.

l) Naming prefix: the content of the prefix for the saved file name.

2. Operating process

- a) Open the software and enter the "Photo-taking" module.
- b) Select Photo Mode, Cut Selection, Output Effect, Output Format, Naming Method and enter Named Prefix.
- c) Click the photo button to take photos, the software will take pictures according to the set options, save the picture to the specified folder,

3.4 Booth module



a) Output format:

For specific description of png / jpg / bmp / tif / / avi / mp / and 4 / flv, see terms and abbreviations

b) Output effect:

- Original image [Original]
- Grayscale [Gray scale]
- Black and white (binary) [black and white (Binarization)]
- Black edge (undercolor) [black and white (Include stamp)]

See terms and abbreviations for details

c) Name method:

- Serial number: from the growing water serial number suffix.
- Date time: a string suffix with the content of the current date time [yyyyMMddHHmmssfff].

➤ No suffix: No suffix is required.

d) Naming prefix: the content of the prefix for the saved file name.

e) Audio selection: Select the source of the recording of the video sound

1. Operating process

a) Open the software and enter the "booth" module

b) Select Photo Format, Output Effect, Record Screen Format, Audio Selection, Named Prefix, Naming Method, and enter Named Prefix.

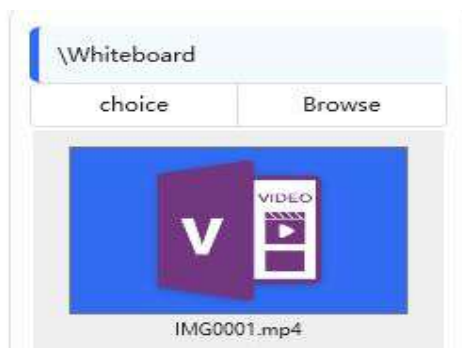
c) Click the photo button to take photos, the software will take photos according to the set options, save the picture to the specified folder, and display it in the task bar on the right side of the software. Click the record button to record the video. Save the video to the specified folder after the recording completes.

3.5 Preview the operation area

- Left-hand turn 90 degrees: control the preview real-time display direction.
- Right turn 90 degrees: control preview real-time display direction.
- Zoom in: Zoom in to preview the real-time display of pictures.
- Zoom down: shrink down the preview real-time display picture.
- Adapt the screen: Scale the picture in real time according to the screen size.
- Full-screen: Enter the full-screen display interface.
- Watermark: enter the watermark setting form.
- Focus: control the high beat meter to refocus.
- Lock the video: lock the real-time preview screen, and save the screen unchanged.
- Move: Move real-time preview for viewing enlarged images.
- Select handwriting: Select the drawing handwriting that has been drawn.
- Rectangle drawing: Draw a rectangular drawing shape
- Line drawing: Draw a line drawing shape
- Arrow drawing: Draw the arrow drawing shape
- Pencil drawing: Draw the pencil drawing shape
- Text drawing: Draw text drawing shapes
- Eraser tool: Clear the selected drawing shape
- Clear all drawings: Clear preview of all drawing shapes in the display area

3.6 Task management area

Display and manage scan tasks to view file properties

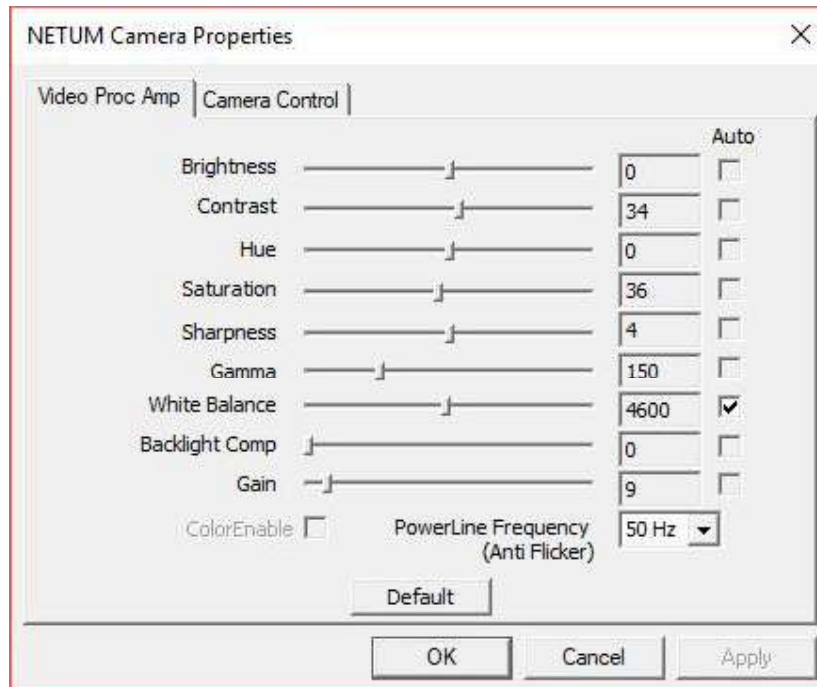


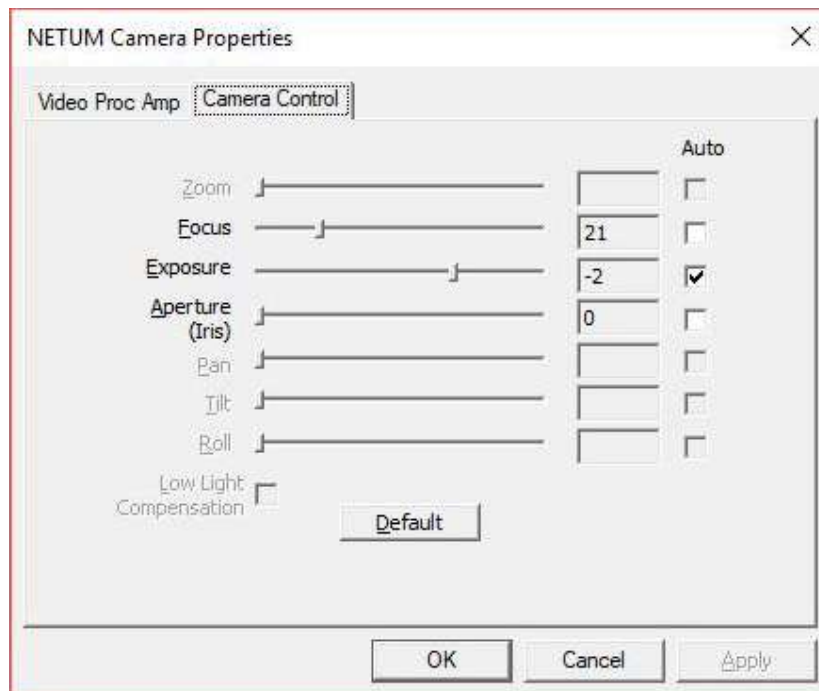
- Title: Show the save path of the task management file.
- Select: Switch over the save path of the task management file.
- Browse: Open the save path for the task management file.
- Right-click menu (Open: open the file in task management.
- Right-click menu (copy: Copy files in task management.
- Right-click menu (Rename: Rename files in task Management.
- Right-click menu (Delete: delete files in task management.

3.7 Equipment control area



- Device selection: select the high racket meter to be controlled
- Resolution: The resolution displayed by the option high-shot meter
- Settings: Change the camera camera configuration.

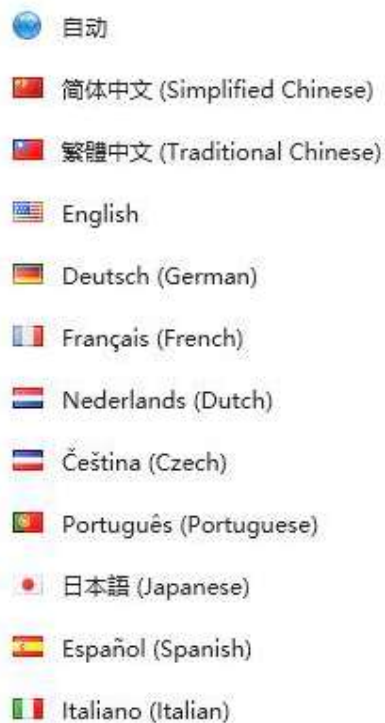




- Fill light: the fill light used to control the high beat meter.

3.8 Software Settings

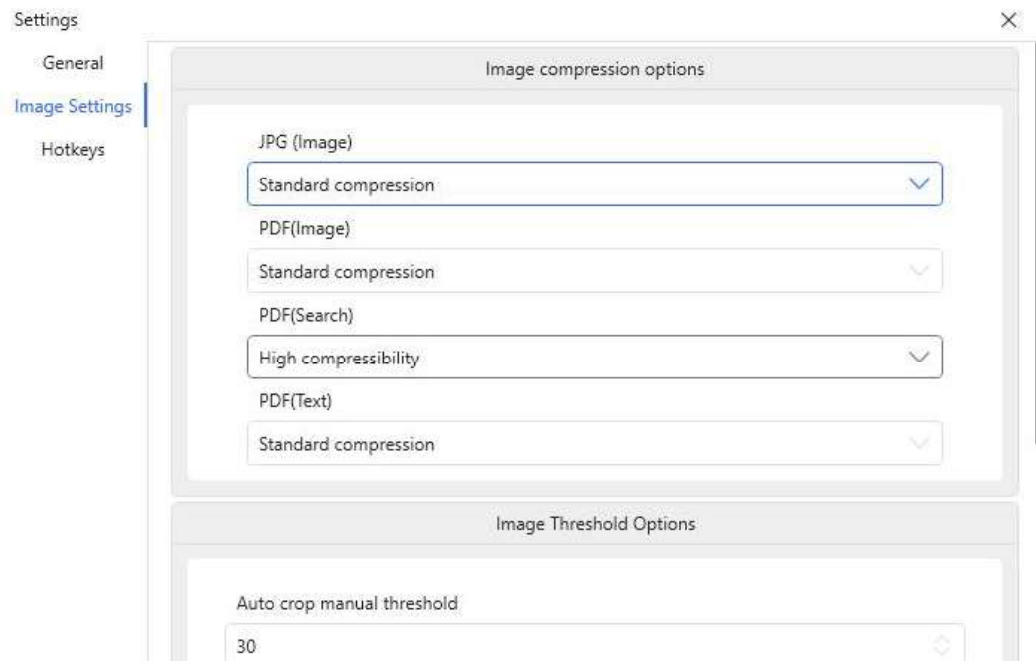
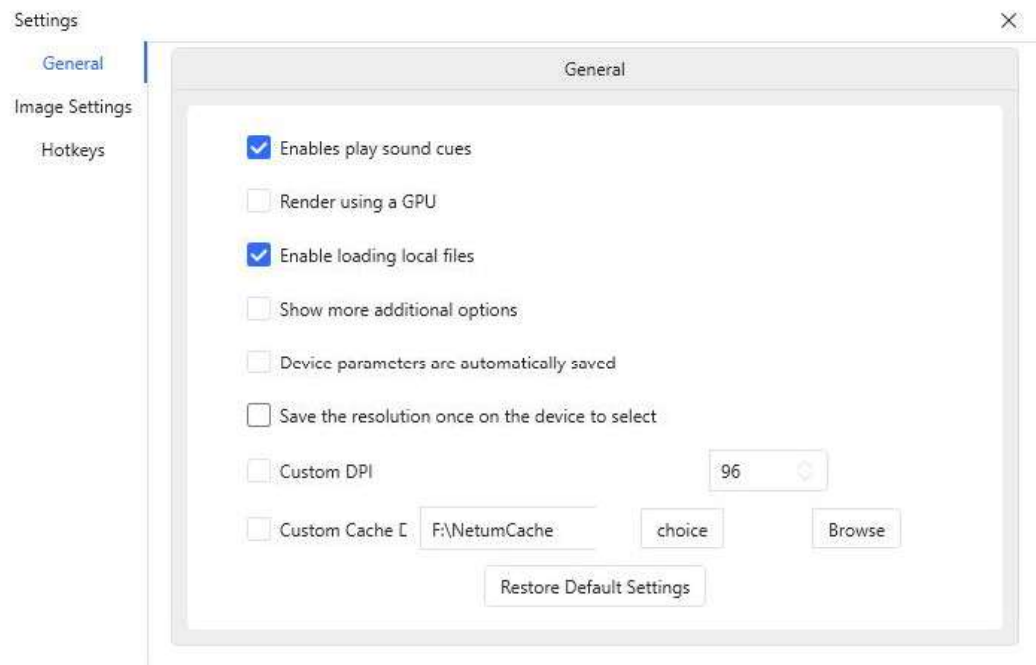
1. Language switch: switch the software interface display language



2. Software Settings

- Topic: Switch between the software interface color theme.

➤ Set up:



➤ About: Display the relevant information about the software



4. Software maintenance

1. The convention of the programming

This software program is a single running software.

2. Error and correction methods

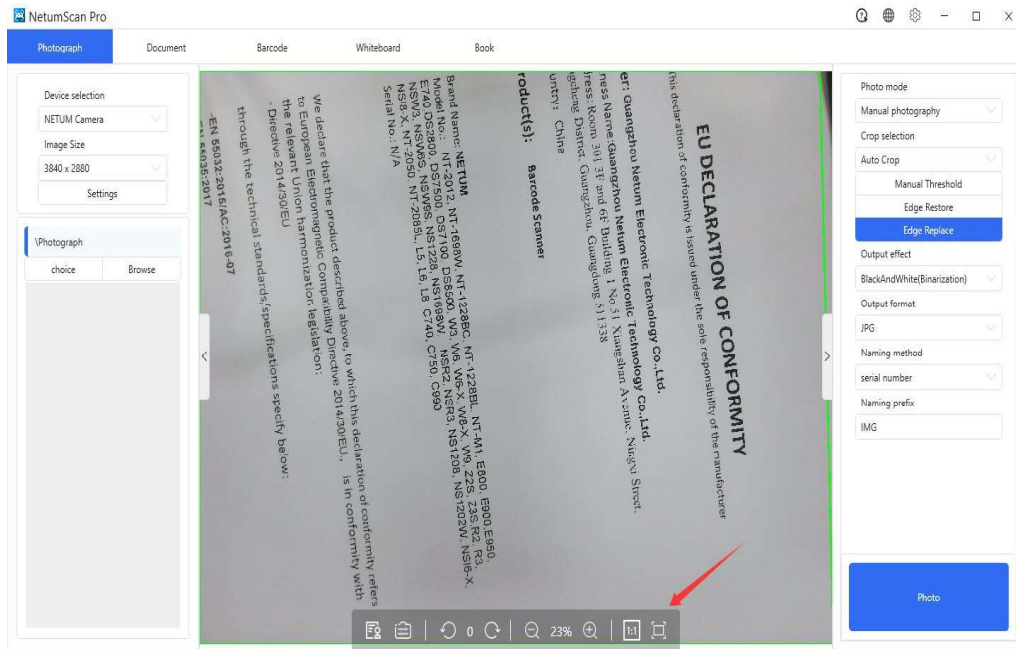
Because the input data may not meet the software requirements, the software may make errors and remind you to run the program according to the software requirements; the possible problems are shown in the following table:

Problem description	Problem types	Resolution
1. After the high camera is connected to the computer, the device cannot see the preview picture after opening the software, but the device and resolution of the high camera are displayed normally	Hardware type	Change the USB port or connect the USB cable to the main computer

5. F&Q

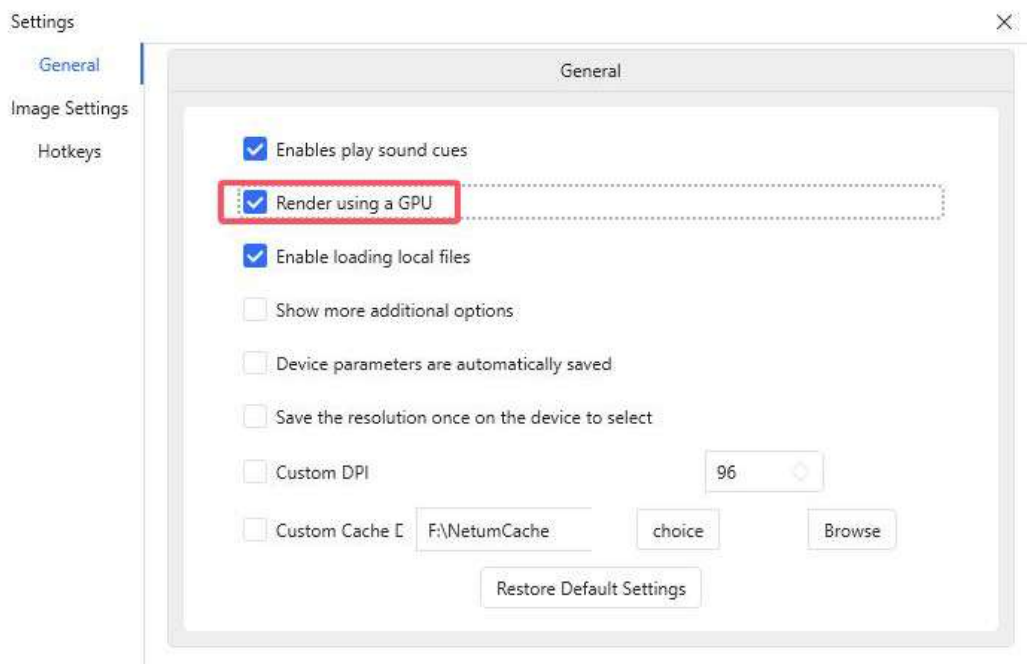
(1) Open the software on the computer with a relatively small display resolution, and the real-time preview screen is too small, so it is inconvenient to view the preview image?

A: In this case, it is recommended to set the photo parameters and click the full-screen button to take a picture in full-screen mode.



(2) Computer configuration is too low, no graphics card, the software appears lag phenomenon, how to solve?

A: Please enable the software rendering in the settings of the software, and then restart into effect.



(3) I need to record the resolution of the device opened before the software is closed. How to do it?

A: Please enable the last selection resolution of the save device in the settings of the software.

