

Xphase 相宇

Xphase Panorama Manager

User manual



Software Description

The Xphase Panorama Manager is independently developed by Beijing Xiangmeng Tomorrow Technology Co., Ltd. It has three versions of iOS, Android and Windows and can run on mobile phones, tablets, laptops and desktops. The software has the following features:

- Shooting with WIFI remote Xphase Pro panoramic camera
- Browse and manage the panoramic raw data files (".ori" files) saved in the U disk of the Xphase Pro panoramic camera via WIFI
- Obtain the panoramic raw data files saved in the U disk of the Xphase Pro panoramic camera through WIFI and synthesize them into a panoramic photo file (".pno" file), which is saved in the device where the software is located (mobile phone, tablet, laptop or Desktop)
- Browse and manage the panorama photo files on the device where the software is located
- View the panorama in the device where the software is located by zooming, dragging, and gyroscope tracking
- Upload the panorama in the device where the software is located to the private cloud album, and support the sharing of WeChat friends.

The proprietary features of the iOS and Android versions of the software are

- Synchronize the panorama in the device where the software is located to other computers

The proprietary features of the Windows version of the software are

- Browse and manage local panoramic raw data files and synthesize them into panoramic photo files, saved on the computer where the software is located
- Combine the local panoramic raw file or the "panoramic raw data file saved in the U disk of the Xphase Pro panoramic camera obtained by WIFI into a 16-bit lossless compressed panoramic image (".png" format), and save it in the software. In the computer, white balance and contrast can be configured, and the original color of the sensor can be selected (similar to the SLR camera RAW format) for post-processing through tools such as Photoshop.

Software Installation

1 Equipment requirements

1.1 iOS version of the software requires that the device's operating memory is not less than 2GB (iPhone 6S and later models, iPad Air2 and later models, iPad Mini4 and later models and iPad Pro full range to meet the requirements); in addition, the system version is not lower than iOS10.0

1.2 Android version of the software requires that the device's running memory is not less than 2GB; in addition, the system version is not lower than Android5.0

1.3 Windows version of the software requires the computer's memory is not less than 4GB, 64-bit operating system, the operating system version is not lower than Windows7

2 Software acquisition and installation

2.1 iOS version of the software can be downloaded and installed in the AppStore search Xphase

2.2 The Android version of the software is stored in the U disk inside the camera at the factory, called "PanoCreator.apk", using the "pea pod" and other mobile assistant tools to install it into the phone

2.3 The installation program of the Windows version of the software is stored in the XphasePro folder installed in the U disk of the camera at the factory.

2.3.1 Copy the XphasePro folder to the path you want to install

2.3.2 Run and install vcredist_x64.exe and vc_redist.x64.exe in the XphasePro folder.

2.3.3 If the installer prompts to restart the computer, please restart the computer.

2.3.4 Subsequent tool software can be used

Instructions for use

1 Connect Xphase Pro panoramic camera

1.1 If you need to use the software to access the Xphase Pro panoramic camera, such as shooting through the WIFI remote Xphase Pro panoramic camera, browse and manage the panoramic raw data files saved in the U disk of the Xphase Pro panoramic camera through WIFI, and obtain the U disk of the Xphase Pro panoramic camera through WIFI. The panoramic raw data file saved in the disk and synthesized into a panoramic photo file, you need to first connect the WIFI of the device to the WIFI hotspot of the Xphase Pro panoramic camera before running the software. Proceed as follows:

1.1.1 Turn on the Xphase Pro panoramic camera. For details, please refer to the Xphase Pro Panorama Camera User Manual.

1.1.2 Make the device's WIFI connection hotspot named "XphaseCamera" (no password)

1.2 Start the software. The interface between iOS version and Android version of the software is as follows



Follow these steps to connect camera:

1. Connect "XphaseCamera" with WIFI
2. Click the "CONNECT" button below
3. After "DI-DI-DI-DI" from Camera, double-click camera button to confirm

CONNECT

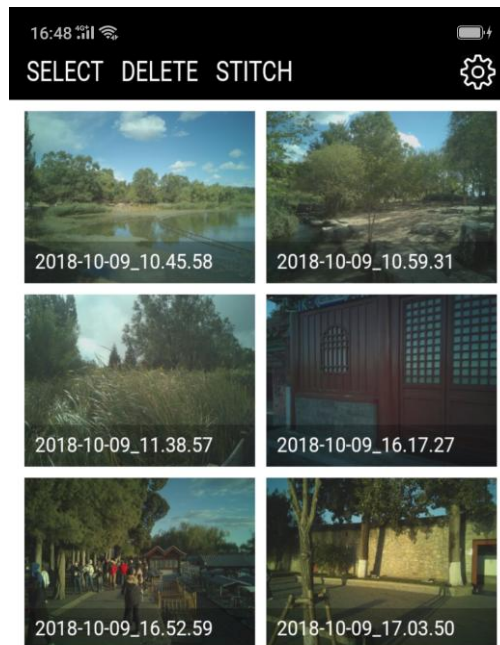


1.3 Click the "Connect" button in the center menu

1.4 After the camera makes a “beep” sound five times (the memory indicator flashes five times in the mute state), double-click the camera shutter button within 3 seconds to permit the connection.

💡 If you double-click the camera shutter button after 3 seconds, the camera will execute as a command delayed by 5 seconds.

1.5 After the connection is successful, the middle area of the software will display a thumbnail list of the panoramic raw data files saved in the U disk of the Xphase Pro panoramic camera, as shown below:



2 Manage the panoramic raw data files saved in the U disk of the Xphase Pro panoramic camera

2.1 Click "Select" in the top menu, click the appropriate option in the pop-up menu, and a selection box will appear in each raw data file thumbnail.

2.2 Click the thumbnail selection box to manually select or deselect the file.

2.3 Click "Delete" in the top menu, and click "Delete selected ORI file" or "Delete selected ORI and PNO files" in the pop-up menu. "Delete selected ORI file" will only delete the panoramic raw data file saved in the U disk of the selected

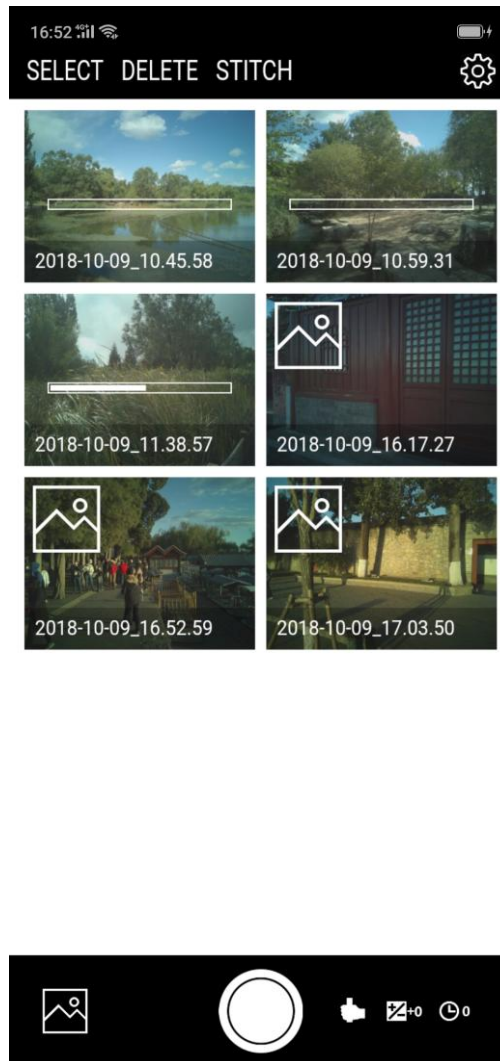
camera. "Delete selected ORI and PNO files" will be deleted together with the corresponding panoramic photo file in the device where the software is located.

3 Acquire the panoramic raw data file saved in the USB flash drive of the Xphase Pro panoramic camera and synthesize it into a panoramic photo file


3.1 Click "Select" in the top menu, click the appropriate option in the pop-up menu, and a selection box will appear in each panorama raw data file thumbnail.

3.2 Click the thumbnail selection box to manually select or deselect the file.



3.3 Click "Splicing" in the top menu, the software will automatically obtain the panoramic raw data files in the U disk of the selected Xphase Pro panoramic camera through WIFI and synthesize them into a panoramic photo file, and save it in the device where the software is located. (Windows version is saved under the "Out" folder)



💡 When multiple files are waiting to be composited, the software will prioritize the latest files.


💡 As shown in the figure above, an empty progress bar will be displayed on the thumbnail of the file waiting to be synthesized; the progress bar on the thumbnail of the file being synthesized will display the progress of the synthesis in real time; the icon  will be displayed on the thumbnail of the synthesized file, click on the icon Will jump to the panorama view page to view the panorama


4 Shooting via WIFI remote Xphase Pro panoramic camera


4.1 To change the shooting mode, click the  /  button below the interface to select the handheld mode or the tripod mode in the pop-up menu.

4.1.1 In handheld mode, to prevent blurring caused by blurring, the camera uses a shorter exposure time. The metering system under low light will increase the ISO value, resulting in increased noise. Better picture quality with a tripod mode in low light

4.1.2 For best image quality in tripod mode, the camera will use as low an ISO as possible. Under the low light, the metering system will set a longer exposure time. At this time, pay attention to ensure that the tripod is stable and does not shake.

4.2 To change the exposure compensation setting, click the  button below the interface to select the appropriate exposure compensation setting in the pop-up menu.

4.3 To change the timer shooting settings, click the  button below the interface to select the appropriate timer shooting settings in the pop-up menu.

4.4 Click the shutter  button below the interface to trigger the shutter, and then try to keep the camera still until the exposure is complete.

4.4.1 When the timer shooting delay is 0, the exposure will be completed and the camera will make a “beep” sound (the memory indicator flashes once in the mute state)

4.4.2 When the timing shooting delay is not 0, the camera will make a “beep” every 1 second for timing (the storage space indicator flashes once every 1 second

in the silent state), and then in the hurry “beepbeepbeepbeepbeep” Exposure starts after five consecutive sounds (the memory indicator flashes five times in the mute state). When the exposure is complete, the camera will make a “click” (the memory indicator flashes once in the mute state)


4.5 Wait for the camera to make two beeps (the memory indicator flashes twice in the mute state), then the camera has finished storing and you can start the next shot.

4.6 After the camera has finished storing, the list of file thumbnails displayed in the middle area of the software will be updated, and the software will automatically obtain the panoramic raw data file just generated in the U disk of the Xphase Pro panoramic camera through WIFI and synthesize it into a panoramic photo file.

💡 You don't have to wait for the panorama to finish, you can start the next shot.

💡 When multiple files are waiting to be composited, the software will prioritize the latest files.

5 Browse and manage the panorama photo files on the device where the software is located

5.1 Click the icon  in the lower left corner of the interface, the software will jump to the panoramic photo file management interface, the interface will display thumbnails of all the panoramic photo files saved in the device where the software is located, as shown below



5.2 Click "Select" in the top menu, click the appropriate option in the pop-up menu, and a selection box will appear in each thumbnail photo file thumbnail.

5.3 Click the thumbnail selection box to manually select or deselect the file.


5.4 Click "Delete" in the top menu, the panorama photo file in the device where the selected software is located will be deleted.

6 Return to the panorama raw data file management interface

6.1 Click "Back" in the top menu in the panoramic photo file management interface, the software will jump back to the panoramic raw data file management


interface.

7 Sync the panorama from the device where the software is located to another computer (iOS and Android versions only)

7.1 First, disconnect the WIFI from the camera hotspot and connect the WIFI to the same router as the computer to be synchronized. Then click the icon  on the top menu in the panorama photo file management interface, the pop-up menu will display the current IP address and password.

7.2 Open the software “Panorama File Synchronization Tool” on the computer to be synchronized, and enter the IP address and password to synchronize the panorama photo files on iOS or Android devices to the computer. For detailed steps, please refer to the Panorama Photo File Synchronization Tool User Manual.

8 View the panorama in the device where the software is located

8.1 Click the icon  on the file thumbnail under the panoramic raw file management interface, or click the file thumbnail under the panoramic photo file management interface, the software will jump to the panorama view page to view the panorama.

8.2 Drag and drop on the panorama to view any direction

8.3 Zooming on a panorama using a zoom gesture or scrolling the mouse wheel on a panorama

8.4 For iOS and Android versions, the top button indicates “zoom in” , “zoom

out" , "start auto rotation or stop auto rotation" , "switch between gyroscope tracking mode and drag mode" , "in the left to right" . Switch between real projection mode and flat picture mode" and "return to panoramic photo file management interface"

💡 In the gyroscope tracking mode, the software calculates the current pose of the device based on the gyroscope output. When the attitude of the device changes, the panorama will change accordingly.

💡 The real projection mode simulates the actual scene seen by the human eye; the flat picture mode displays the original panorama of the composition



8.5 For the Windows version, the upper button indicates "zoom in" , "zoom out" , "start automatic rotation or stop automatic rotation" , "switch between position drag mode and direction drag mode" from left to right respectively. Switch between projection mode and flat picture mode" and "return to panorama photo file management interface"


💡 In the position drag mode, the object pointed by the mouse or the finger always follows the position of the mouse or the finger; in the direction drag mode, the panorama continues to rotate in the direction of the drag.

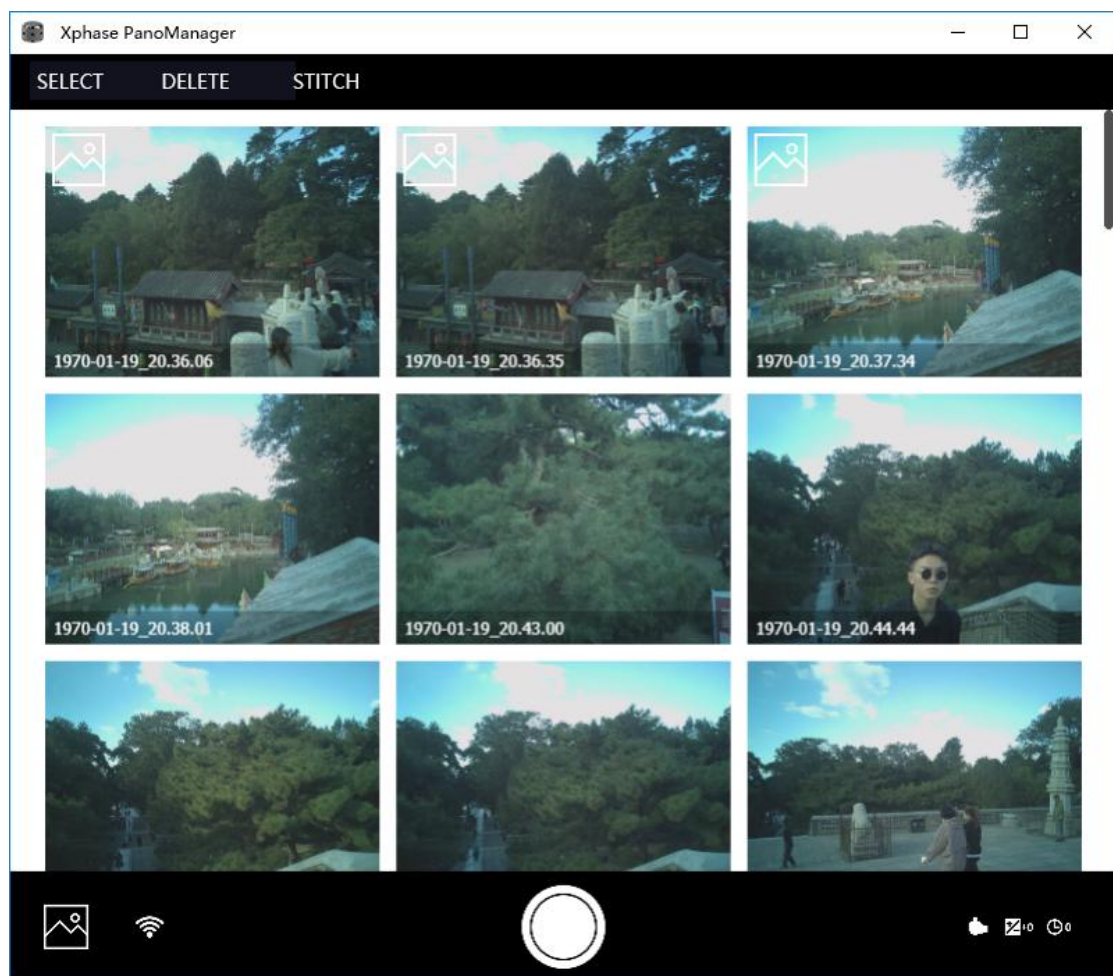


8.6 The lower button from left to right represents "Show previous panorama" and "Show next panorama"

9 Browse and manage local panorama raw data files and composite them into a panorama photo file (Windows version only)

9.1 Windows version of the panoramic raw data file management interface as shown below. Click  or  in the lower left corner of the interface, in the pop-up menu, you can choose to obtain the panoramic raw data file in the U disk of

the Xphase Pro panoramic camera through WIFI or to obtain the local panoramic raw data file. If you choose  , you can select the path containing the panorama raw data file locally in the path selection dialog that pops up. After selecting, the middle area of the software will display a thumbnail list of the panoramic raw data files under the path.






9.2 Click “Select” in the top menu, click the appropriate option in the pop-up menu, and a selection box will appear in each raw data file thumbnail.



9.3 Click the thumbnail selection box to manually select or deselect the file.

9.4 To delete the original data file, click “Delete” in the top menu, click “Delete selected ORI file” or “Delete selected ORI and PNO files” in the pop-up menu,

the local corresponding file will be deleted; The data files are combined into a panorama, click "Splicing" in the top menu, and then select "Splicing Selected Files" in the pop-up menu. The software will then combine the panoramic raw data files into a panoramic photo file and save it in the "Out" file. Under the folder

💡 You can turn off the camera after the shooting is completed, remove the U disk and insert it into the computer, click  or  on the bottom left corner of the interface, select  in the pop-up menu, and select the DCIM path of the U disk in the path selection dialog box that pops up later, the panoramic raw data files of U disk can be managed or synthesized. This method is faster than reading via WIFI and is suitable for situations where the amount of photos is particularly large.

10 Combine panoramic raw data files into 16-bit lossless compressed panoramas (Windows version only)

10.1 Click  or  in the lower left corner of the interface, in the pop-up menu, select whether to obtain the panoramic raw data file in the U disk of the Xphase Pro panoramic camera through WIFI or obtain the local panoramic raw data file.

10.2 Click "Select" in the top menu, click the appropriate option in the pop-up menu, and a selection box will appear in each raw data file thumbnail.

10.3 Click the thumbnail selection box to manually select or deselect the file.

10.4 Click "Splicing" in the top menu, then select "Advanced Mode Stitching" in the pop-up menu, the software will pop up the stitching setting window.

10.5 In the white balance setting area of the splicing setting window, you can select auto white balance or manually adjust the three components of red, green and blue of white balance.

10.6 In the Color Processing Settings area of the Stitch Settings window, you can select Auto Color or Output Sensor Original Color. The original color of the output sensor cancels the two steps of color matrix transformation and gamma transformation compared to the automatic color. The output color value is close to the original color of the sensor (similar to the SLR RAW format, which is proportional to the actual brightness), which is beneficial for depth. Post processing. When you select an automatic color, you can set the value of the contrast enhancement. Contrast-enhanced algorithms try to avoid detail loss due to overflow of brightness values when increasing contrast

10.7 The PNG output stretch setting area of the splicing setup window can be selected to be widened or not widened. When post-processing the panorama, if some operations to change the local brightness (such as large-radius low-intensity Gaussian sharpening) are performed near the boundary of the image, when the processed panorama is rendered in real projection mode, The left and right sides of the panorama are merged together, and the top and bottom edges are each reduced to a point, which causes the junction between the left and right sides and the brightness around the vertex and bottom point to be discontinuous. To alleviate this problem, you can choose the output stretch. The output stretch will copy a portion of the panorama near the left border to the right of the right border,

while generating two circular projections for the top and bottom. When the post-processing output widening panorama is rendered in real projection mode, the left and right sides of the panorama are no longer directly merged, but there is a transition area of the mask gradient, thus alleviating the discontinuity of the merged brightness. Problem; the principle of the upper and lower sides is similar. And if the post-processing only performs the overall operation (such as the overall curve, level adjustment), you do not need to select the output stretch.


10.8 After setting, click "OK" , the software will synthesize the selected panoramic raw data files into a 16-bit lossless compressed PNG format panorama and save it in the "Out" folder, and generate ".Inf" file.

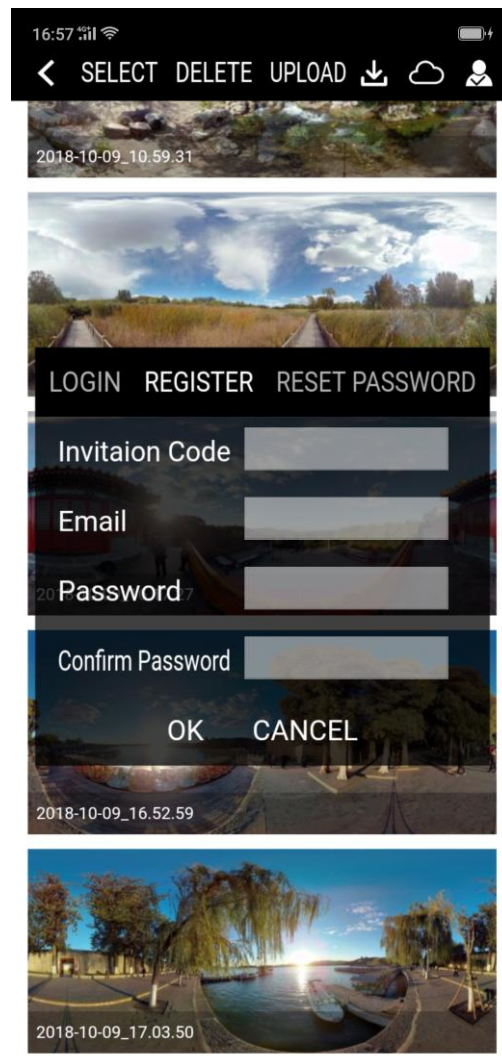
10.9 Use the tools such as Photoshop to post-process the PNG format panorama and save it as ".jpg" format. Import the ".jpg" file together with the corresponding ".inf" file into the software "JPG to PNO Conversion Tool" . Convert to a panorama photo file (".pno" file) for easy browsing and making roaming. Please refer to the "JPG to PNO Conversion Tool User Manual" for specific steps.

11 Upload a panorama to the cloud space

11.1 First make sure that the current device has access to the Internet. If you are currently connecting to the camera via WIFI, you need to disconnect from the camera to access the Internet.

11.2 In the panoramic photo file management interface, click on the upper right


corner of the interface , the software will pop up the registration/login dialog box, as shown below



11.3 If you have not registered yet, select the registration tab, fill in the invitation code (contact customer service when purchasing), email, password and confirmation password, click OK; click "send" on the next page to wait for the server to send verification code to the registered mailbox. . Then enter the verification code and click "OK" to complete the registration. Invitation code can only be registered once


11.4 If you have registered, select the Login tab, fill in the email address and

password in turn and click "OK" to complete the login (the mobile app will record the password and automatically try to log in later when the software is turned on).

After logging in, the icon  will appear


11.5 Click "Select" in the top menu, click the appropriate option in the pop-up menu, and a selection box will appear in each thumbnail photo file thumbnail.

11.6 Click the thumbnail selection box to manually select or deselect the file.

11.7 Click "Upload" in the top menu, and the panorama photo file in the device where the selected software is located will be uploaded to the cloud platform. The progress bar shows the progress of each photo upload. After each photo is uploaded, it still needs to wait for tens of seconds for the server to convert the file in ".pno" format into a format suitable for web browsing. The converted file takes up about half of the file size in the .pno format. Photo thumbnail  will appear after completion

12 Managing Panoramas of Cloud Space

12.1 First make sure that the current device has access to the Internet. If you are currently connecting to the camera via WIFI, you need to disconnect from the camera to access the Internet.

12.2 In the panoramic photo file management interface, click on the upper right corner of the interface , the software will jump to the cloud space management interface, the interface will display thumbnails of all panoramic photos in the cloud space, as shown below



12.3 The bottom menu has three tabs, "All" , "Album List" and "Album" , which represent all the panoramic photos of the cloud space, the list of user-created albums and all the panoramic photos under the selected album. When the "All" tab is selected, the storage space occupied by all panoramas is displayed on the bottom right side.

12.4 Select the "All" tab, click the gray bar containing the text in the lower part of the thumbnail, enter the photo description in the pop-up tab and click "OK" , the photo description will be updated.

12.5 Select the "All" tab, click "Select" in the top menu, and click the

appropriate option in the pop-up menu. A selection box will appear in each panorama photo thumbnail.

12.6 Click the thumbnail selection box to manually select or deselect the file.

12.7 If you click "Delete" in the top menu, the selected panorama will be deleted from the cloud space, and the corresponding storage space will be released. If some albums contain deleted panoramas, the corresponding photos will also be deleted from the album; if the album is empty after deletion, the album will be deleted from the album list.

12.8 If you select a photo and click "New Album" in the top menu and enter the album description in the dialog box that pops up, the selected photo will be created as a new album. Albums are only an index of panoramic photos and do not increase storage space.

12.9 Select the Album List tab to see a list of previously created albums. The thumbnail of the album list is the thumbnail of the first photo of the album

12.10 Click the gray bar containing the text in the lower part of the thumbnail, enter the album description in the pop-up tab and click "OK", the album description will be updated.

12.11 Click "Select" in the top menu, select the album and click "Delete" in the top menu, the selected album will be deleted. Deleting an album only deletes the index of the panorama, and the panorama of the cloud space will not be deleted.


12.12 Click on the thumbnail of the album and the software will switch to the

“Album” tab and display a thumbnail of all the photos under the album.

12.13 Click the gray bar containing the text in the lower part of the thumbnail, enter the photo description in the pop-up tab and click “OK” , the description of the photo in the album will be updated.




12.14 Click “Select” in the top menu, select the photo and click “Delete” in the top menu. The selected photo will be deleted from the photo album. Deleting a photo in an album only deletes the index, and the panorama of the cloud space will not be deleted. If the photo in the album is deleted, the album will be deleted automatically.

12.15 Select the “All” tab, click on the thumbnail of the photo, and the software will jump to the panorama view page to view the panorama. Drag and drop on the panorama to see any direction, zoom in and out using the zoom gesture or scroll the mouse wheel


12.16 To share the photo, click the button  above and the software will automatically generate the QR code of the share link. Screen capture of the interface containing the QR code (the mobile phone can use the screen capture function of the mobile phone itself; the PC can use the screenshot function of WeChat or QQ software), and send the screenshot to WeChat, QQ friends or friends. After the friend receives the long press the picture and recognizes the QR code in the picture, the panorama can be browsed. The interface containing the shared QR code is shown below:






12.17 To get the text of the share link, click on the QR code. A text box will appear below the QR code to display the share link text. Copy and share this link text to your friends

12.18 Click  to exit the panorama view page, you will find the thumbnail of the image you just shared  appears, indicating that the panorama is shared. To cancel sharing, click  the marker and confirm that the panorama will be unshared. Other people can't view the panorama even if they get a share link

12.19 Select the "Album List" tab, click on the thumbnail of the album, and the software will switch to the "Album" tab. Click on the thumbnail of the photo in the album and the software will jump to the panorama view page to view the panorama.

12.20 To share an entire album, click the button  above and the software will automatically generate a QR code for the shared link. Album sharing operation is the same as photo sharing

12.21 Click  to exit the panorama view page, select the "Album List" tab, and you will find that the thumbnail of the album you just shared  appears marked, indicating that the album is shared. To cancel sharing, click  the marker and confirm that the album will be unshared

Beijing Xiang Feng Ming Tian Technology Co., Ltd.

Email: bd@xphase.cn

Tel: +86-10-80748211