

How to use  
Panasonic Fisheye Camera Plugin  
For Milestone XProtect

Edition 1.0 R01

July. 6, 2018

Panasonic Corporation

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## Revision Record

Version	Revised Date	Chapter	Content of Revision
1.0 R01	July. 6, 2018	All	Release Edition

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## 1. Preface

### 1.1. What's Panasonic Fisheye Camera Plugin

Panasonic Fisheye Camera Plugin for the 360 degree Network Camera (Hereinafter described as Dewarp Plugin) is the software plugin for Milestone XProtect which is provided to help to develop the application to dewarp the fisheye image of Panasonic Corporation Made security products (360 degree Network Camera).

Dewarp Plugin is provided as the dynamic link library (DLL).

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[3] Any problems, consequential inconvenience, or loss or damage, arising out of the reverse compiling or reverse engineering of the product;

[4] Any loss or damage, or claims arising out from loss or leak of PS data including video data in the PC;

[5] Any claim or action for damages, brought by any person or organization being a photogenic subject, due to violation of privacy with the result of that surveillance camera's picture, including saved data, for some reason, becomes public or is used for the purpose other than surveillance;

- This Plugin is provided to dewarp the fisheye image of Panasonic 360 degree network camera. Panasonic prohibit to use this Plugin other than for intended purposes.

### 1.4. Abbreviations

The following abbreviations are used in these operating instructions.

Microsoft® Visual C++ 2015 is described as Visual C++ 2015.

## 2.Supported Device

This Plugin support the following device unit.

Type	Model	Firmware
3M 360 degree Network camera	WV-SF438	2.50 or later
	WV-SW458	2.50 or later
	WV-SF448	2.50 or later
9M 360 degree Network camera	WV-SFV481	2.06 or later
	WV-SFN480	2.06 or later
5M 360 degree Network camera	WV-S4550	1.20 or later
	WV-S4150	1.20 or later
New 9M 360 degree Network camera	WV-X4171	1.50 or later
	WV-X4571	1.50 or later

## 3. System requirements

### 3.1. System Environment

The following table shows the PC specification that is needed for using Dewarp Plugin.

#### Target OS

OS	Microsoft® Windows® 7 Professional SP1 32 bit Edition
	Microsoft® Windows® 7 Professional SP1 64 bit Edition
	Microsoft® Windows® 8.1 Pro 32 bit Edition
	Microsoft® Windows® 8.1 Pro 64 bit Edition
	Microsoft® Windows® 10 Pro 32 bit Edition
	Microsoft® Windows® 10 Pro 64 bit Edition
	Microsoft® Windows® Sever 2012 R2 Standard 64 bit Edition
	Microsoft® Windows® Sever 2012 R2 Standard 32 bit Edition
	Microsoft® Windows® Server2016 Standard 64 bit Edition
	Microsoft® Windows® Server2016 Standard 32 bit Edition

#### Recommended system requirements

Processor	Intel® Core™i7-8700K or more
Memory	16.0GB or more (Dual Channel or more)
Graphics Accelerator	NVIDIA GeForce GTX 1060 or more

#### Supported Client of XProtect Smart Client

Version	Milestone XProtect® Smart Client 2018R1 or later
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### 3.2. Restrictions of Plugin

If the input frame rate is high, there may be a skip the image. It will improve by reducing the input frame rate or reducing the input resolution.

The drawable frame rate of the input image is as follows:

#### Evaluation Environment

Processor	Intel® Core™i7-8700K
Memory	16.0GB (Dual Channel or more)
OS	Microsoft® Windows® 10 Pro 64 bit Edition
Graphics Accelerator	NVIDIA GeForce GTX 1060
Client	Smart Client 2018R2
Codec	H.265 : 5M / New 9M 360 degree Network camera H.264 : 3M / 9M 360 degree Network camera
Number of Screen	Single screen (1x1)

**Drawable frame rate**

Type	Input image size	Dewarp Style				
		Fisheye	1 screen	4-screen	Panorama	Double Panorama
3M 360 degree Network camera	2048x1536	Only JPEG				
	1280x960	30 fps	30 fps	30 fps	30 fps	30 fps
	640x480	30 fps	30 fps	30 fps	30 fps	30 fps
	320x240	30 fps	30 fps	30 fps	30 fps	30 fps
9M 360 degree Network camera	2992x2992(*1)	10 fps	15 fps	15 fps	7.5 fps	7.5 fps
	2816x2816(*2)	7.5 fps	7.5 fps	7.5 fps	7.5 fps	7.5 fps
	2048x2048	15 fps	30 fps	25 fps	10 fps	10 fps
	1280x1280	30 fps	30 fps	30 fps	30 fps	30 fps
	640x640	30 fps	30 fps	30 fps	30 fps	30 fps
	320x320	30 fps	30 fps	30 fps	30 fps	30 fps
5M 360 degree Network camera	2192x2192	15 fps	30 fps	25 fps	10 fps	10 fps
	1280x1280	30 fps	30 fps	30 fps	30 fps	30 fps
	640x640	30 fps	30 fps	30 fps	30 fps	30 fps
	320x320	30 fps	30 fps	30 fps	30 fps	30 fps
New 9M 360 degree Network camera	2992x2992	10 fps	15 fps	15 fps	7.5 fps	7.5 fps
	2192x2192	15 fps	30 fps	25 fps	10 fps	10 fps
	1280x1280	30 fps	30 fps	30 fps	30 fps	30 fps
	640x640	30 fps	30 fps	30 fps	30 fps	30 fps
	320x320	30 fps	30 fps	30 fps	30 fps	30 fps

\*1 Max frame rate is 15 fps

\*2 Max frame rate is 7.5 fps



## 4.How to use

### 4.1.Install XProtect Smart Client

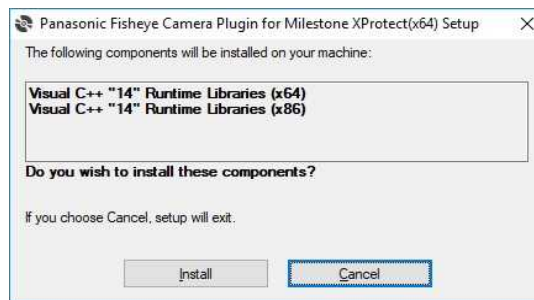
Install Milestone XProtect Smart Client into a PC following the manual of Milestone XProtect.

### 4.2.Install Panasonic Dewarp Plugin

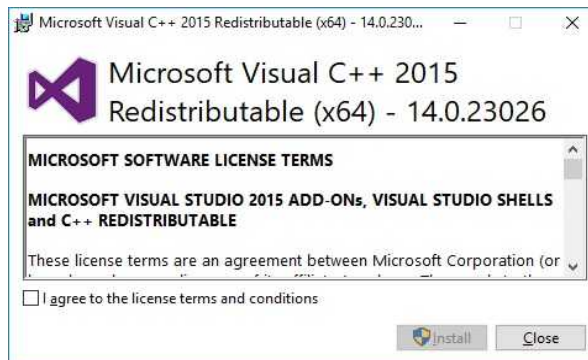
Execute setup.exe of PanasonicFisheyeCameraPlugin\_x64 folder or setup.exe of PanasonicFisheyeCameraPlugin\_x86 folder according to Smart Client environment.

\*If Visual C++ 2015 Redistributable(x64) and Visual C++ 2015 Redistributable(x86) has installed process is skipped STEP1-STEP2.

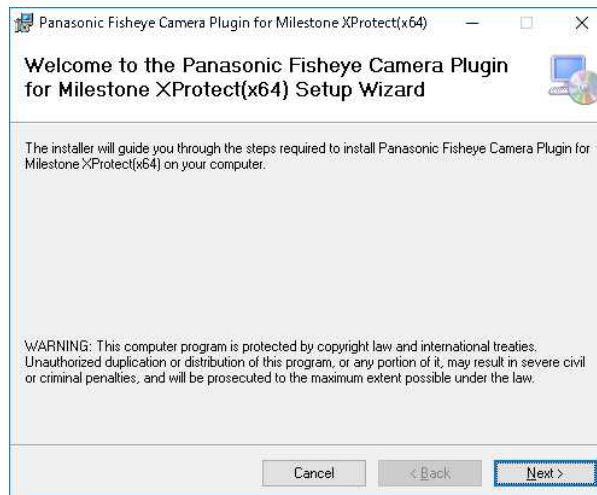
**(STEP1)** Double-click a installer file and click “Install” button.



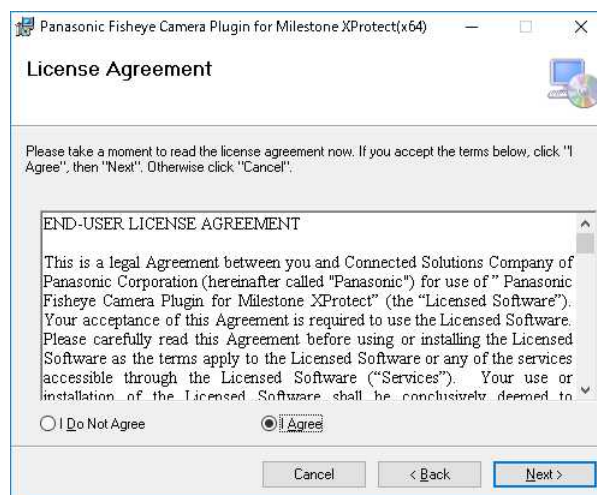
**(STEP2)** Install Visual C++ 2015 Redistributable(x64) and Visual C++ 2015 Redistributable(x86)



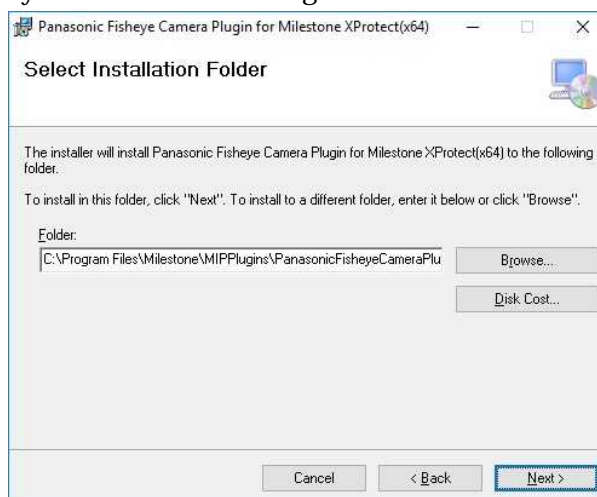
**(STEP3)** Click “Next” button.



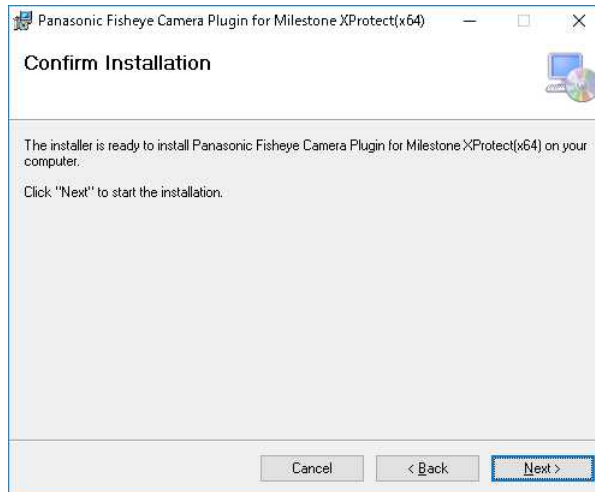
**(STEP4)** Select “I Agree” and click “Next” button.



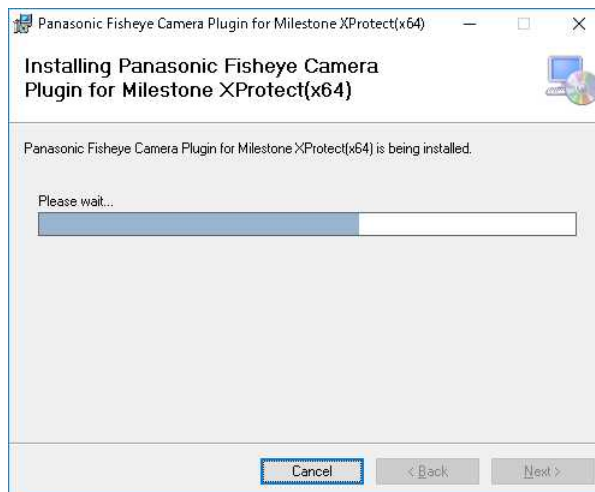
**(STEP5)** Select the directory “Milestone\MIPPlugins” folder and click “Next” button.



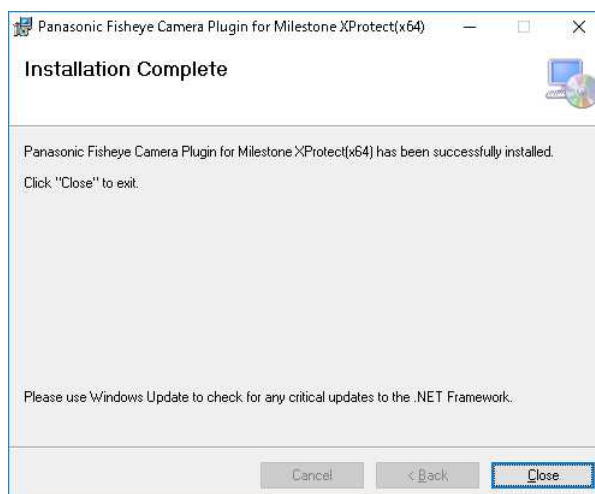
**(STEP6)** Click “Next” button.



**(STEP7)** Running...



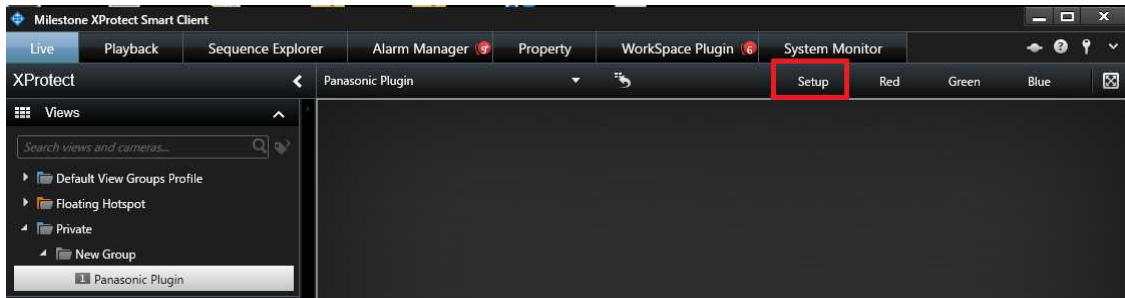
**(STEP8)** When the installation finishes successfully, “Installation Complete” message shows up. Click “Close” button.



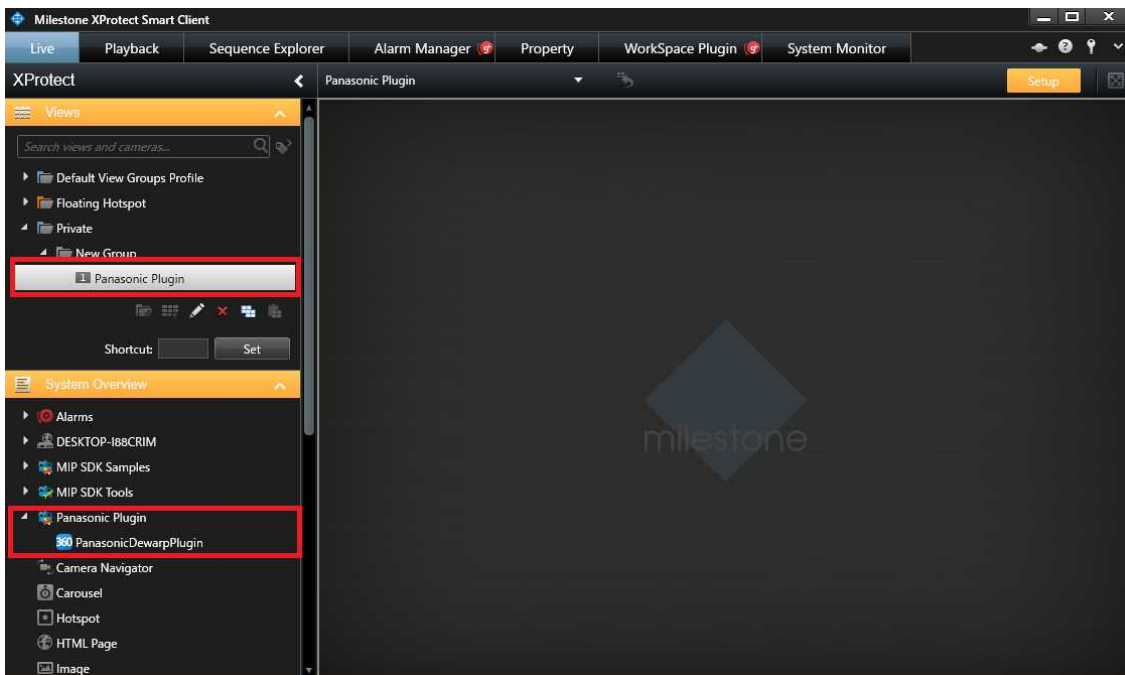
### 4.3. Resitser Dewarp Plugin into Smart Client

Register the Dewarp Plugin to the Smart Client view.

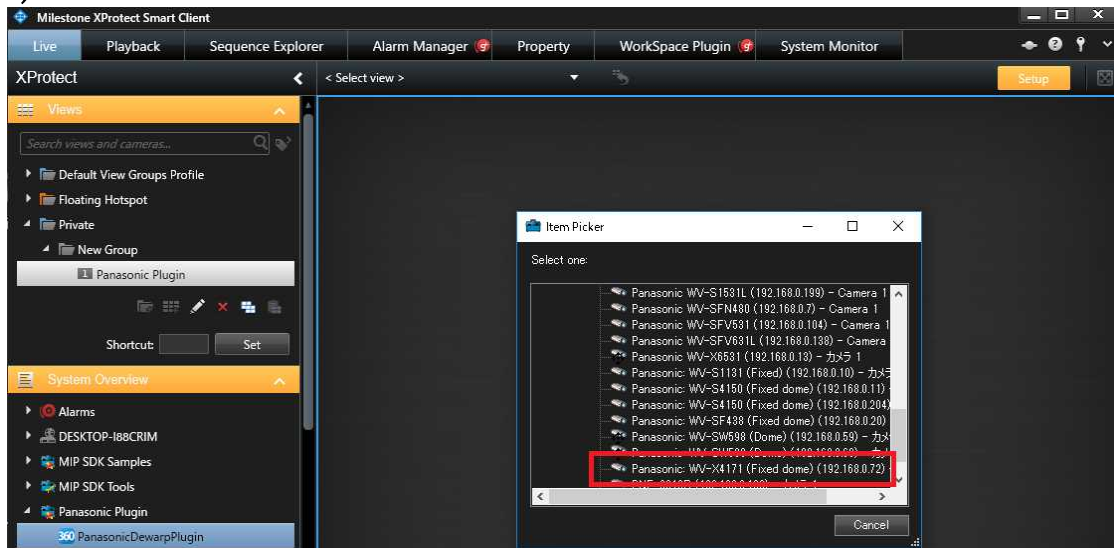
(STEP1) Run XProtect Smart Client and click the “Setup”.



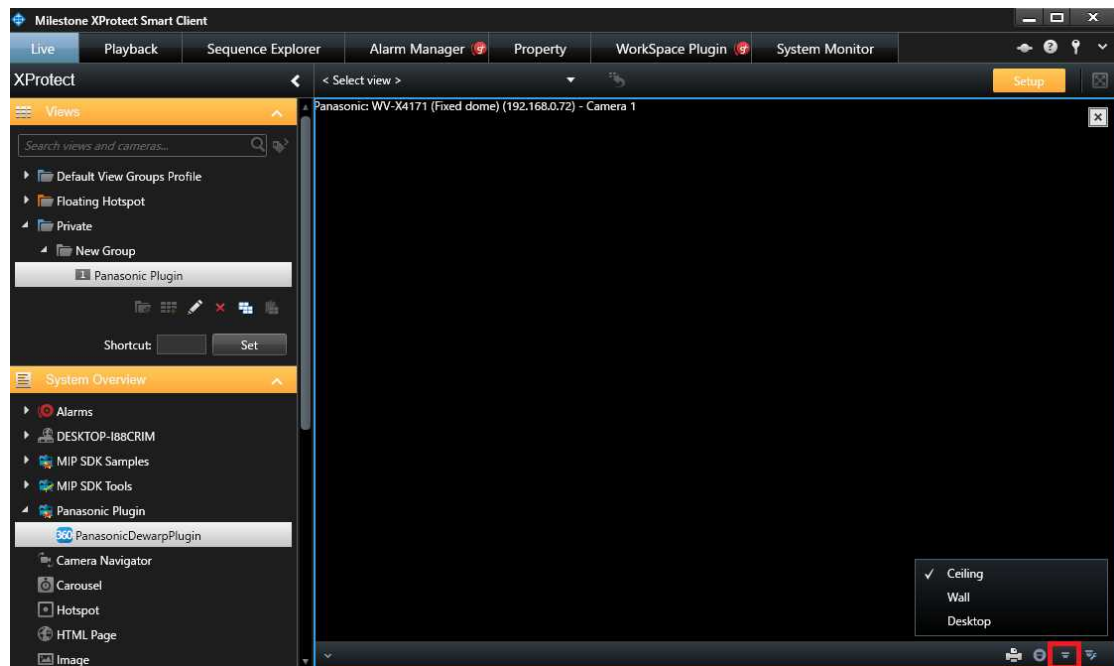
(STEP2) Create new view and drag&drop Panasonic Fisheye Camera Plugin to view from “System Overview”.



**(STEP3)** Select the device from “Item Picker”.



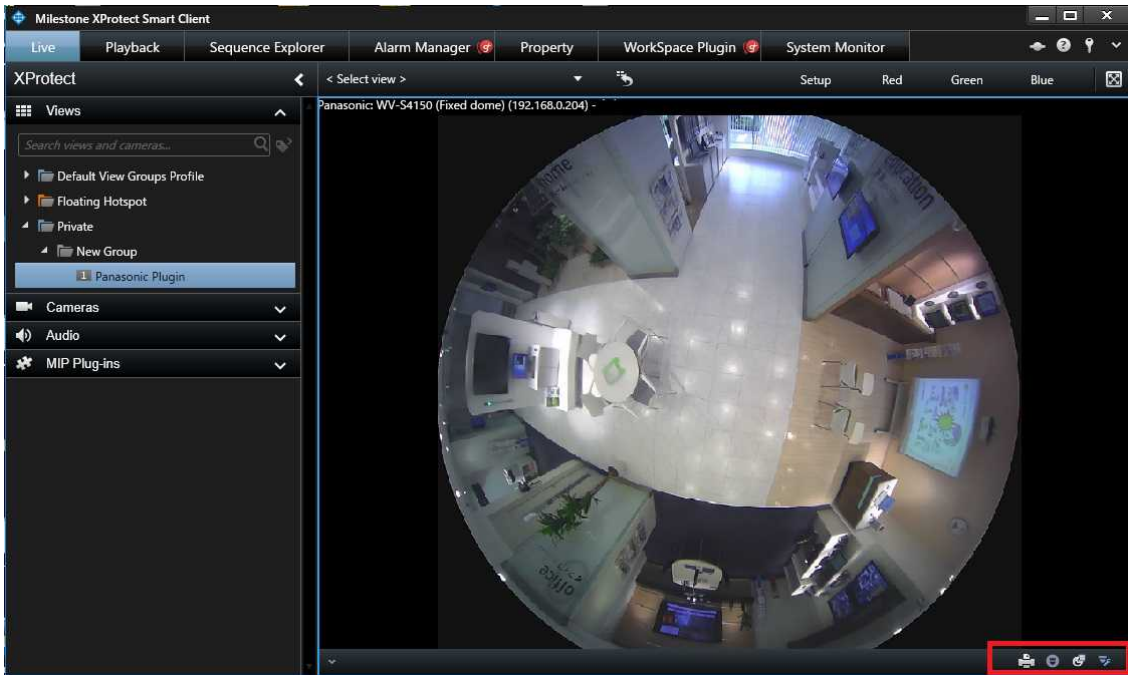
**(STEP4)** Select the installation style from the tool bar if you want to set.



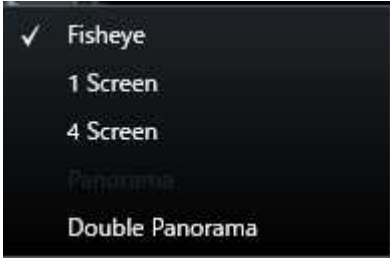
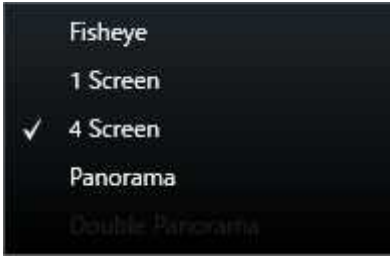





**(STEP5)** Click the “Setup”.

## 4.4. Operate to Dewarping function

### 4.4.1. Toolbar



Icon	Function	Description
	Send to Print	Print the view image
	Dewarp Style	<p>Change the Dewarp Style</p> <p>If installation style is “Ceiling” or “Desktop”</p>  <p>If installation style is “Wall”</p> 

	<p><b>Fisheye Control</b></p>	<p>Show the position of cropping</p> 
	<p><b>Camera Setting</b></p>	<p>Change the device</p>

**4.4.2. Dewarp Style**

Dewarp Style has 4 mode as the following table.

1 Screen	4 Screen
	
Panorama	Double Panorama
	