



Instructions for Micro-Manager Driver

V1.0.1



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1. Introduction

This instruction document contains the installation of the driver file and the basic operation of the third-party software to call Camera, which is intended to make it easier for users to use Tucsen's Camera in the third-party software, and this document is disclosed for the above purpose only.

For the development and advanced operation of the third-party software, please consult the technical support of the third-party software.

Updates to the User's Manual:

Tucsen makes no commitment to update or maintain the information currently contained in this document at any time with notice. If changes are made to the product, such changes will be added into the new version of the manual without notice.

2. Micro-Manager Installation

- 1) Please download Micro-Manager from below link;

<https://download.micro-manager.org/nightly/2.0/Windows/>

- 2) Double click the [MicroManager.exe] file to enter the interface of installation;



Figure 2-1

- 3) Click the [Next>] to enter the interface of selecting destination location;

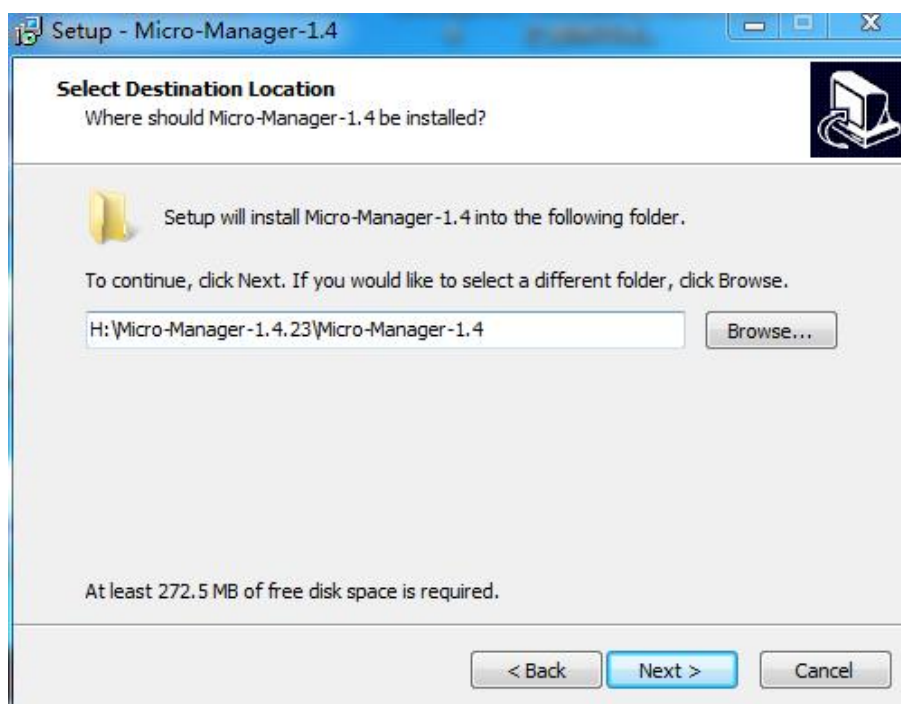


Figure 2-2

- 4) After select the install folder and click [Next>]. Follow the steps of the installation wizard and click Finish to complete the installation;



Figure 2-3

3. Driver download and installation

Please download the latest sCMOS camera driver from Tucsen official website. Double-click the downloaded driver and follow the steps of the installation wizard.

[Tucsen camera software download - Tucsen](#)

4. Load camera settings of Micro-Manager

- 1) Put all the files of the Micro-Manager driver into [C:\Windows\System32]. The 64-bit and 32-bit should correspond correctly respectively. Most Micro-Manager V2.0 versions can ignore this step.

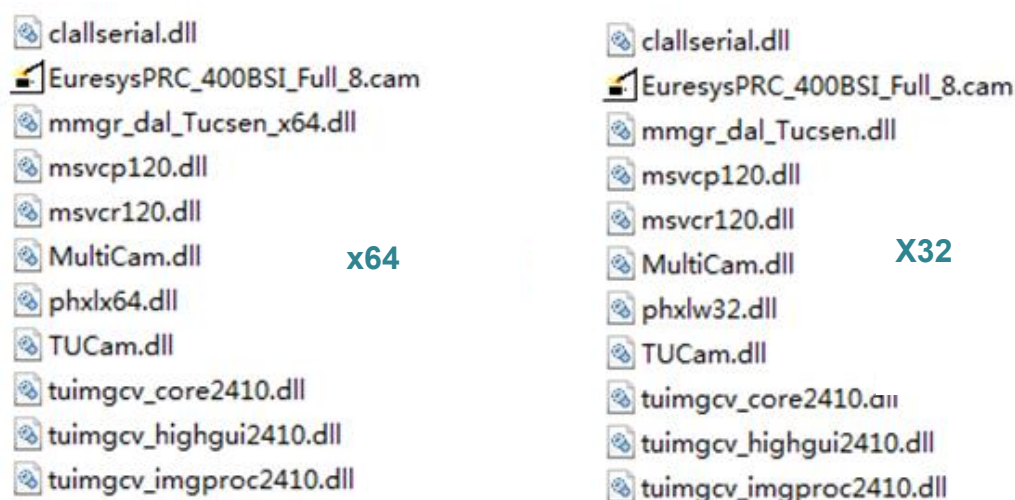


Figure 4-1

- 2) Connect the power and the data cable of the camera;
- 3) Double click the Micro-Manager icon to open it;
- 4) A dialog box appears that allows the user to select the file to configure the camera;
- 5) Start the camera for the first time, select (none) if there is no corresponding configuration file, and click OK;



Figure 4-2

- 6) Select [Tools>Hardware Configuration Wizard] to enter [Hardware Configuration Wizard] interface. Select [Create new configuration] and click [Next >];

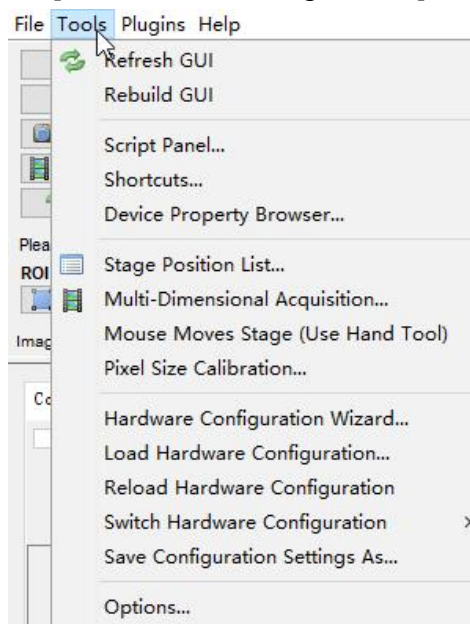


Figure 4-3

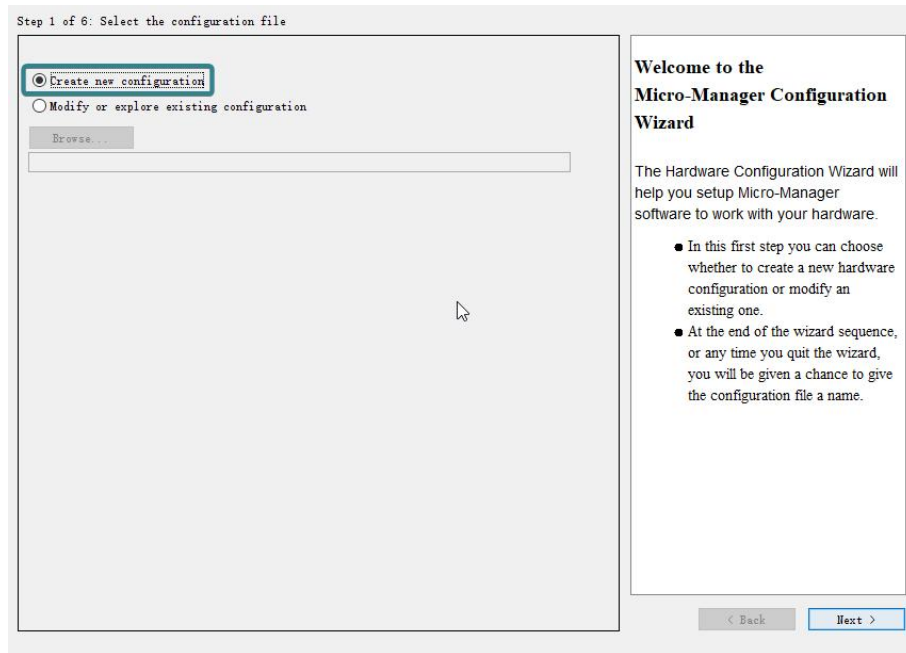


Figure 4-4

- 7) Step 2 of 6: Add or remove devices. Find the [TUCam] in Available Devices, open it and select [TUCam/TUCSEN Camera];
- 8) Click the [Add] button to enter the [Device: TUCam/Library: Tucsen_x64] interface. Click the [OK] and then click [Next >];

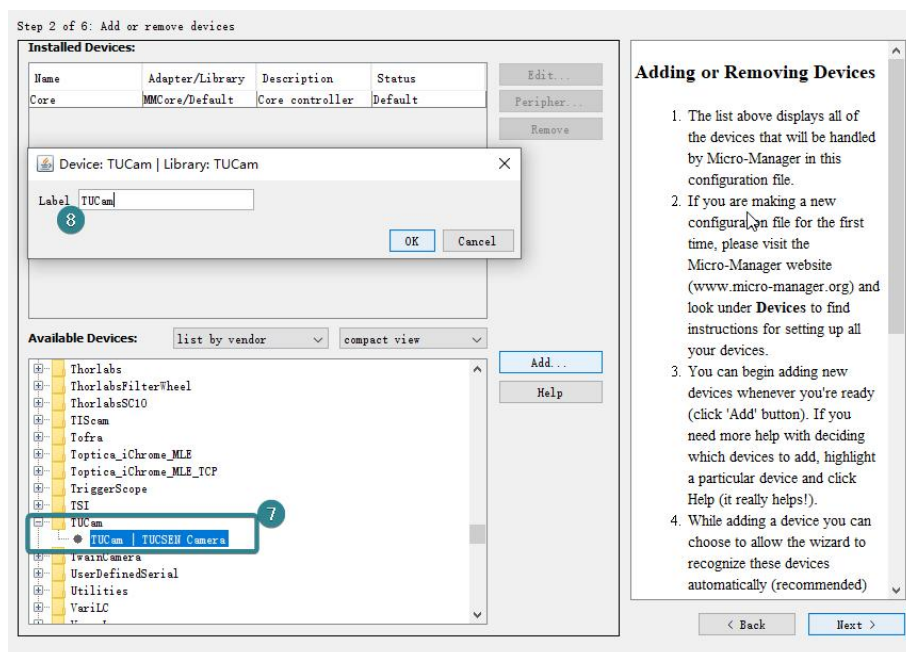


Figure 4-5

- 9) Step 3 of 6: Select default devices and choose auto-shutter setting. Click [Next >];

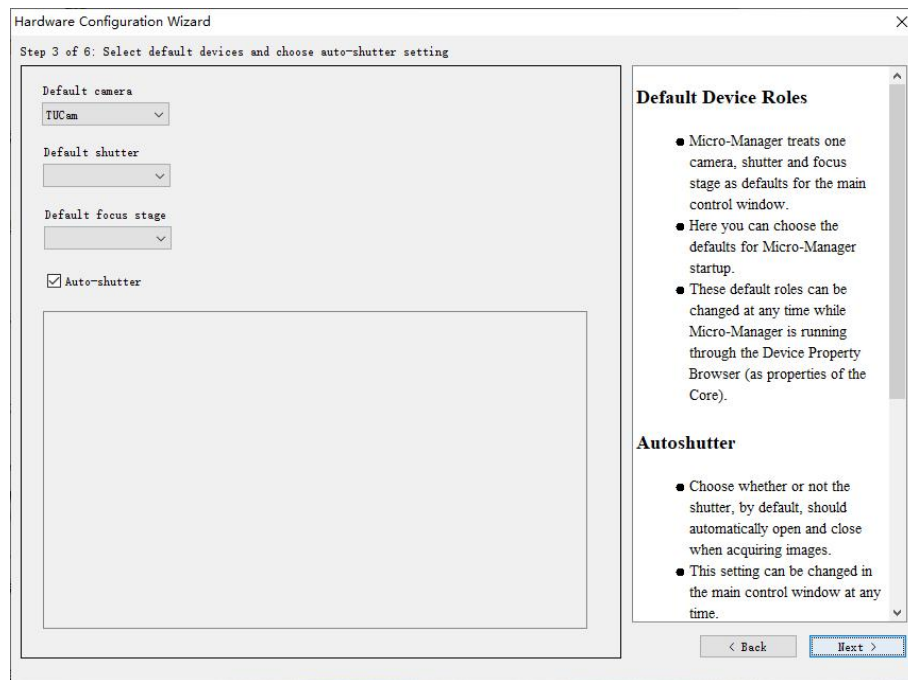


Figure 4-6

10) Step 4 of 6: Set delays for devices without synchronization capabilities. Click [Next >];

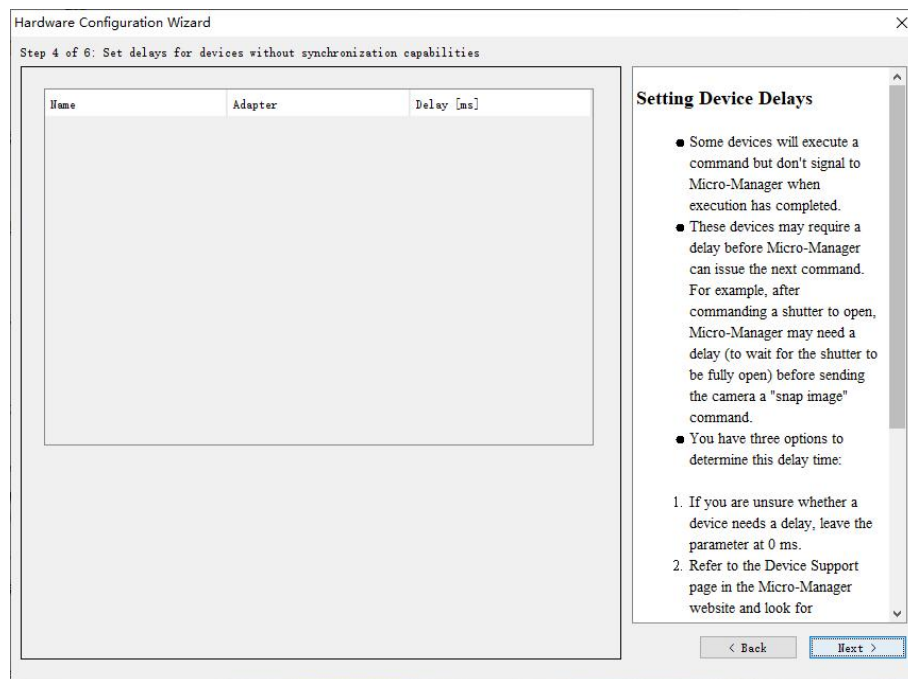


Figure 4-7

11) Step 5 of 6: Set delays for devices without synchronization capabilities. Click[Next >].



Hardware Configuration Wizard

Step 6 of 6: Save configuration and exit

Configuration file:
400BSI V3

☒ Send configuration to Micro-manager.org
Providing the configuration data will assist securing further project funding.

Finished!
You have successfully **completed** the Configuration Wizard and the hardware configuration for your system has been built.

< Back Finish

Figure 4-9

13) Enter the Micro-Manager operating interface;

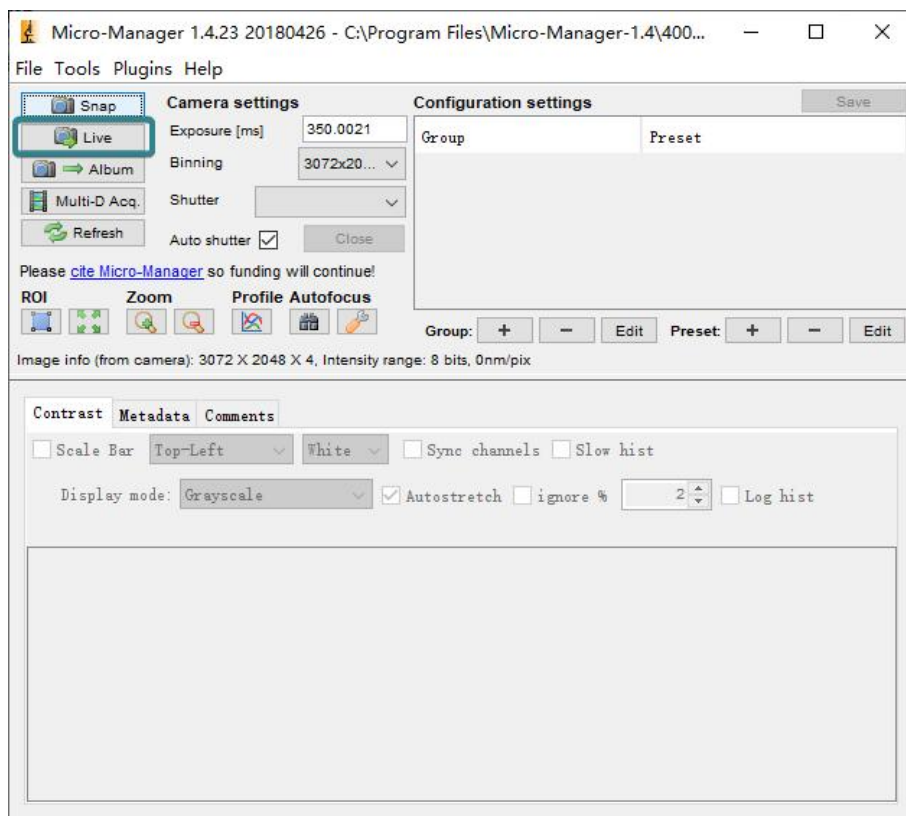


Figure 4-10

14) Click [Live] to enter the preview mode and the camera is loaded successfully;

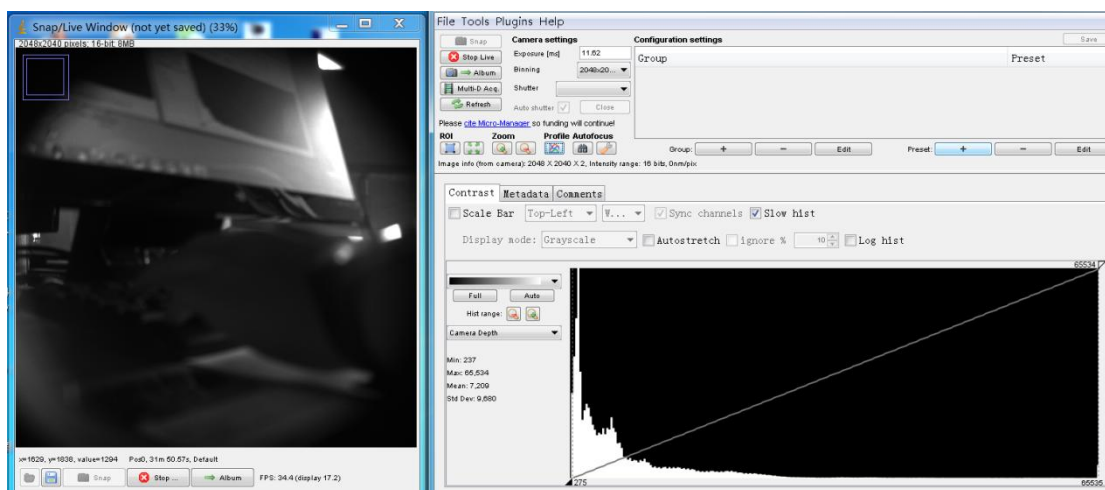


Figure 4-11

5. Multi Cameras

- 1) In Step 2 of 6 in Hardware Configuration, double click the TUCam to load the first camera. Note that the name cannot be changed.

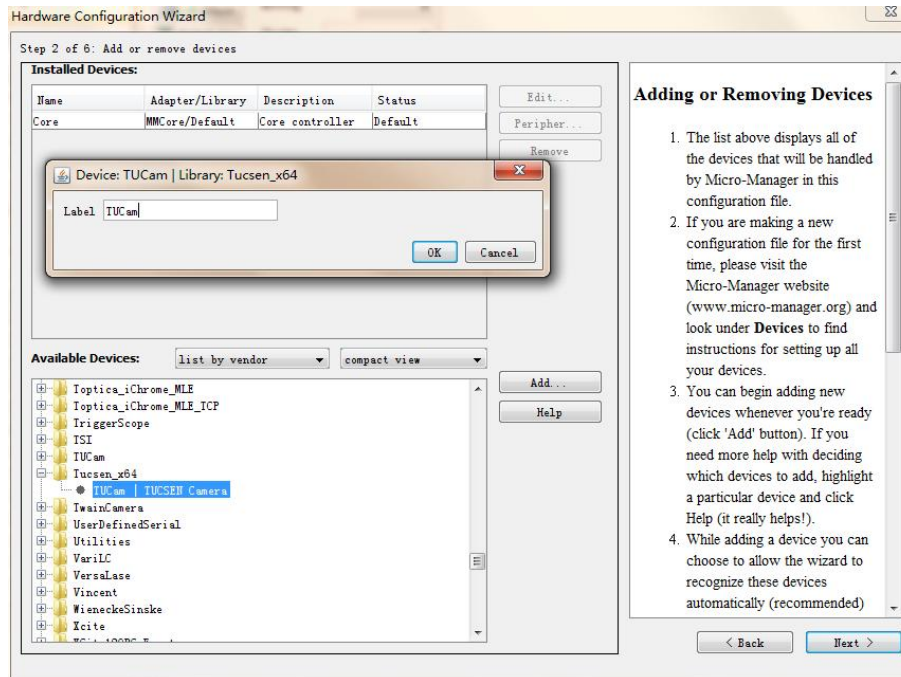


Figure 5-1

- 2) Double click the TUCam again to load the second camera. Note that the name cannot be changed, too.

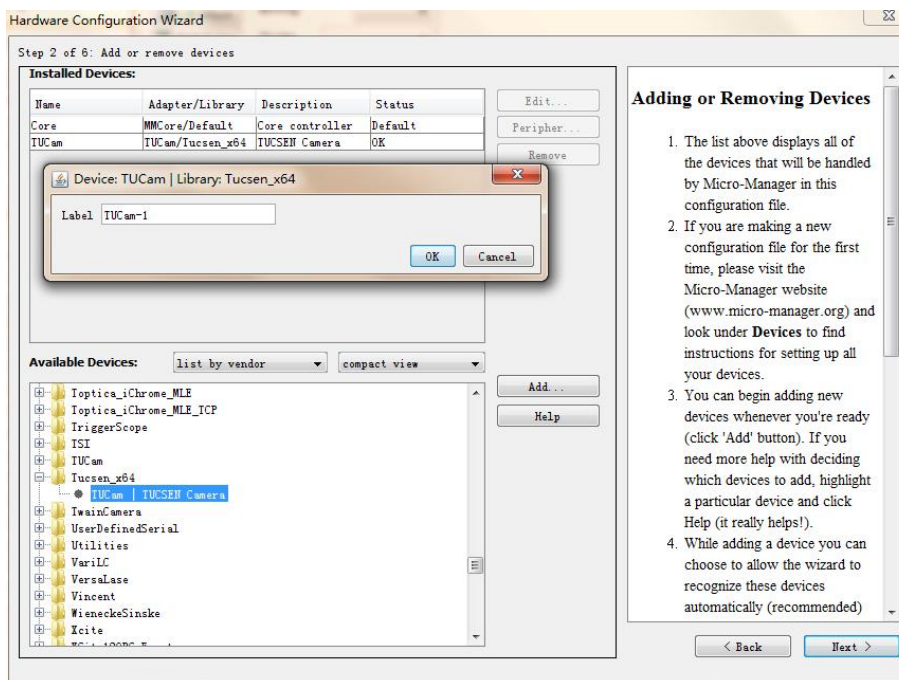


Figure 5-2

3) Double click the Multi Camera in Utilities to load it.

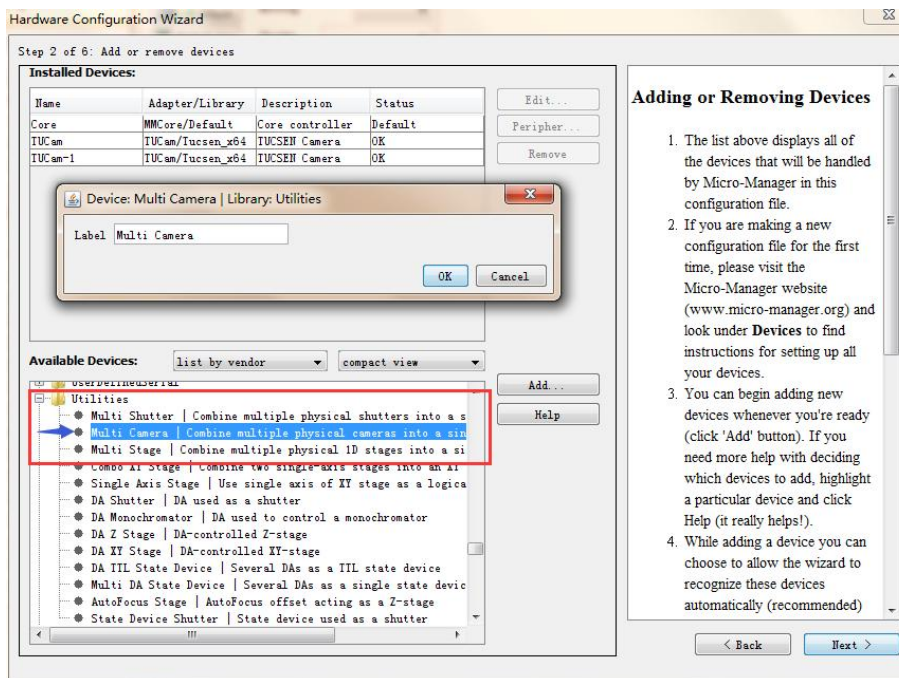


Figure 5-3

4) Click Next button to complete the configuration.

5) Define the sequence of cameras.

TUCam-1-Trigger Mode	<input type="checkbox"/>	Off
Multi Camera-Binning	<input type="checkbox"/>	0
Multi Camera-Physical Camera 1	<input type="checkbox"/>	Undefined
Multi Camera-Physical Camera 2	<input type="checkbox"/>	Undefined
Multi Camera-Physical Camera 3	<input type="checkbox"/>	Undefined
Multi Camera-Physical Camera 4	<input type="checkbox"/>	Undefined
Multi Camera-TransposeCorrection	<input type="checkbox"/>	0
Core-AutoShutter	<input type="checkbox"/>	
Core-Camera	<input type="checkbox"/>	Multi Camera
Core-ChannelsGroup	<input type="checkbox"/>	

Figure 5-4

Note:

- 1) When using the plug-in, please update the 'TUCam.dll' file in 'C:\Windows\System32' directory to the latest version.
- 2) If the resolution of two cameras is different, preview cannot be done at the same time.
- 3) 64-bit plug-ins are recommended.