

Getting Started with GAL USB3.0 Camera

Ver 2.3.1 2023

— Vision System ———

Installation

Hardware Requirements

GAL camera

- USB3.0 cable
- PC that supports USB3.0 interface

Installation Steps

- 1. Connect the USB 3.0 interface between the camera and the PC via USB 3.0 cable.
- 2. Open Computer Device Manager and find the camera device, as shown in the following figure:



3. Click the corresponding camera model, right-click to run as administrator, as shown below:



4. According to the pop-up window illustration, select the drive path, as shown below:

	×		×
← 圓 更新驱动程序 - GAL-5000-60ucNIR		← ■ 更新驱动程序 - GAL-5000-60ucNIR	
你要如何搜索驱动程序?		浏览计算机上的驱动程序	
→ 自动搜索驱动程序(S)		在以下位置搜索驱动程序:	
Windows 将在你的计算机中搜索最佳可用驱动程序,并将其安装在你的设备上。		→ 浏览(R)	
→ 浏览我的电脑以查找驱动程序(R)]		
手动查找并安装驱动程序。		→ 计我从计算机上的可用驱动程序列表中选取(I)	- I
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	显示所有设备	^	
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	Compute accelerators		
	· DVD/CD-ROM 驱动器		
	- FS CFS 元数据服务器筛选器		
	- FS HSM 筛选器		
	🚔 FS 安全性增强器筛选器		
	S 撤消删除筛选器		
	Image: FS 打开文件备份筛选器		
	FS 防病毒筛选器		
	🚔 FS 复制保护筛选器		
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← ■ 更新驱动程序 - GAL-5000-60ucNIR	
选择要为此硬件安装的设备驱动程序 遭造定硬件设备的厂商和型号,然后单击"下一步"。如果手头有包含要安装的驱动程序的磁 调单击"从磁盘安装"。	≞ ,
「商 型号 (Generic USB Hub) (IEEE 1667 兼容 ACT) (IEEE 1667 兼容接收器) (Standard system devices) ∨ く >	
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(IE (St	制造商文件复制来源(C):	_
	A3. ~ 浏览(I	3)

5. Select the SDK installation package - "Driver" - "USB3.0" - corresponding computer system - select the file ending with .inf, (the following Win10 64-bit system as an example), as shown below:

🌆 查找文件					×
查找范围(I):	x64	~	G	€ 🔁 🕄	
-	名称	^		修改日期	
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桌面					
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1	<				>
网络	文件名(N):	cyusb3. inf		~ 打开(0)	
	文件类型(T):	安装信息 (*.inf)		~ 取消	

6. As shown in the figure below, select the camera driver and click Next to install:

	× ■ 再転転計程序、Vicion Datum Galavy Ganadis LICB2 0 Driver
选择要为此硬件安装的设备驱动程序	Windows 已成功更新你的驱动程序
"请选定硬件设备的厂商和型号,然后单击"下一步"。如果手头有包含要安装的驱动程序的磁盘, 请单击"从磁盘安装"。	Windows 已安装完此设备的驱动程序:
	Vision Datum Galaxy Generic USB3.0 Driver
☑ 显示兼容硬件(C)	
型号 III Vision Datum Galaxy Generic USB3.0 Driver	
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告诉我为什么驱动程序签名很重要	
下一步(N) 取消	关闭(C)

7. The camera driver is displayed in the list, and the installation is successful:



Main Interface

Open the SDK, find the camera driver (x64 is used here as an example), right-click to run as administrator, as shown in the following figure:

GAL > VTSDK20210423 > x64			ٽ ~
名称 ^	修改日期	类型	大小
📓 CaptureSaveConfig.ini	2021/4/23 11:48	配置设置	1 KB
HQV_AVIProcess64.dll	2021/4/20 16:55	应用程序扩展	34 KB
HQV_DataConvert64.dll	2021/4/20 16:55	应用程序扩展	29 KB
HQV_FilePro64.dll	2021/4/20 16:55	应用程序扩展	2,728 KB
HQV_TinyXML64.dll	2021/4/20 16:54	应用程序扩展	103 KB
HQV_USB64.dll	2021/4/23 10:21	应用程序扩展	160 KB
HQV_USS64.dll	2021/4/20 16:55	应用程序扩展	101 KB
HQVSDK.xml	2020/10/14 21:03	XML 文档	1 KB
KSJApi64.dll	2018/2/12 12:26	应用程序扩展	1,028 KB
MT_KSJBayerFilter_x64.dll	2017/11/6 18:11	应用程序扩展	148 KB
VT_SDK64.dll	2021/4/23 10:41	应用程序扩展	1,256 KB
VTDEMO_CAPTURESAVE_GAL-5000ucNIR.exe	2021/4/23 11:21	应用程序	178 KB
VTDEMO_CAPTURESAVE_U3A0170M64.exe	2021/4/19 10:20	应用程序	170 KB
VTDEMO_CAPTURESAVE64.exe	2021/4/19 10:15	应用程序	136 KB

GAL → VTSDK20210423 → x64				~	5
名称	修改	收日期	类型	大小	
🔄 CaptureSaveConfig.ini	202	21/4/23 11:48	配置设置	1	KB
HQV_AVIProcess64.dll	202	21/4/20 16:55	应用程序扩展	34	KB
HQV_DataConvert64.dll	203	21/4/20 16:55	应用程序扩展	29	KB
HQV_FilePro64.dll			应用程序扩展	2,728	KE
HQV_TinyXML64.dll	打升(0)		应用程序扩展	103	KE
HQV_USB64.dll	👎 以管理员身份运行(A)	应用程序扩展	160	KE
HQV_USS64.dll	🕒 使用 Skype 共享		应用程序扩展	101	KE
HQVSDK.xml	🖺 Edit with PyCharm	ן י	XML 文档	1	KE
KSJApi64.dll	兼容性疑难解答(Y)		应用程序扩展	1,028	KE
MT_KSJBayerFilter_x64.dll	固定到"开始"屏幕(P)	应用程序扩展	148	KE
VT_SDK64.dll	7-Zip	>	应用程序扩展	1,256	KE
VTDEMO_CAPTURESAVE_GAL-5	CRC SHA		应用程序	178	KE
S VTDEMO_CAPTURESAVE_U3A01	-		应用程序	170	KE
VTDEMO_CAPTURESAVE64.exe	€ 复制(C)		应用程序	136	KE
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The main interface of the SDK is shown below.

🕵 Image Capture&Save Demo Application VC++ V1.0.0.3 (Build20201204)		×
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	AWB Once	AWB Reset
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	Frame and Video Savin Location to save frame	ng Options es or video
	D:\Users\Pictures	
	Save one frame every	0 ms
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	SaveFrameToMem	SaveMemoryToFile
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	Sensor/\ S	SensorH
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	Red Coeff 0.01	V
	Blue Coeff 0.01	LoadConfigHre
		SaveConfigFile

Image Acquisition And Setup

1. Click "Device Scan" to search for the device, and after searching for the corresponding camera device, click "Open Device" to connect the camera:

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DeviceInfo			Davies Care	On an Davies	Class Davies	Controls	
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						Get One Frame	
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						Green Coeff 0.01	LoadConfigFile
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Image Acquisition And Setup

2. Click "Capture Start" to open the camera preview

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			Controls		
	Device Scan Open De	Close Device	Capture Start	Capture Stop	
			AWB Once	AWB Reset	
			Get One Frame	VideoRecord	
			Frame and Video Savin Location to save frame	ng Options es or video	
			D:\Users\Pictures		
			Save one frame every	0 ms	
			Format BMP ~ Frames 10000000	SaveFrameToFile	
			Remove first frame w	when full \sim	
			SaveFrameToMem	SaveMemoryToFile	
			Parameters	CaptureSize	
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					AWB Once AWB Reset
					Get One Frame VideoRecord
					Location to save frames or video
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					Format BMP
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					Trigger ExternalTrigger
					Send Trigger
					UserSet Config Userset Select Default

UserSet1

SaveConfigFile

IMX432 Para LoadConfigFile

Userset Load UserSet Default

 NIR Coeff
 2.5

 Red Coeff
 0.01

 Green Coeff
 0.01

 Blue Coeff
 0.01

FrameRate : 56.60 fps FrameCount : 59 BandWidth : 287.68 Mbps

Image Acquisition And Setup

3. Single frame saving

Click the "Get One Frame" button to save a single frame image, which will be directly collected to the root directory of the SDK APP, as shown below:







HQVSDK.xml

HQV_AVIProces s64.dll

KSJApi64.dll



MT_KSJBayerFil ter_x64.dll



HQV_FilePro64. dll

ert64.dll

VT_SDK64.dll



VTDEMO_CAPT URESAVE GAL-5000ucNIR.exe



HQV_TinyXML6

4.dll

VTDEMO_CAPT URESAVE64.exe

HQV_USB64.dll

4. Method of collecting set quantity data to a specified path

Supports saving video stream data as BMP, RAW, JPG, and TIFF image files, select the specified save path:



Set the number of frames to be saved, click "SaveFrameToFile", and the camera will save the corresponding number of frames to the setting path, as shown in the following figure:



5. Store memory data to the specified hard disk path

Support saving video stream data as "Remove first frame when full" (manually stop data before data overwriting after setting memory) or "Drop new frame (Stop Save) when full" (set the full number of frames to stop), select Drop new frame (Stop Save) when full" mode:

Controls Capture Start Capture Stop AWB Once AWB Reset Get One Frame VideoRecord Frame and Video Saving Options Location to save frames or video E:\GAL\VTSDK20210423\x64\采集[:] ... Save one frame every 0 ms Format BMP SaveFrame ToFile Frames 00000000 Remove first frame when full Remove first frame when full Drop new frame(Stop Save) when full

Set the number of frames to be saved, click "SaveFrameToMem", the camera will save the corresponding number of frames to the memory, after saving, the progress bar below turns yellow, click "SaveMemoryToFile", save the set memory image to the specified path, as shown in the following figure:



Technical Support

If you need advice about your camera or if you need assistance troubleshooting a problem with your camera, it's highly recommended to describe your issue in details and contact us via E-mail at support@visiondatum.com

It would be helpful if you can fill-in the following table and send to us before you contact our technical support team.

Camera Model:	Camera's SN:	
Describe the issue in as much detail as possible:		
If known, what's the cause of the issue?		
How often did/does the issue occur?		
How severe is the issue?		
Parameter set		

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