

Genie Nano GigE 相机

如何在外触发模式下使用 Auto-Brightness 功能?

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第一步: 设置触发模式

1、打开 Sapera CamExpert 软件,将相机属性 I/O Controls 一栏里 Trigger Mode 这一项参数设置为 On 状态,如下图所示:

Parameters - Visibility: Gu	uru	S.	×
Category	Parameter	Value	^
Camera Information	Trigger Selector	Single Frame Trigger(.	
🗆 Sensor Control	Trigger Mode	On	•
Auto-Brightness	Trigger Frames Count	Not Enabled	
	Software Trigger	Press	
	Trigger Source	Line 1	
Counter And Timer Control	Trigger Input Line Activation	Rising Edge	
Advanced Processing	Trigger Overlap	Off	
Cycling Preset	Trigger Delay (in us)	0.0	
Image Format Controls	Line Selector	Line 1	
🗄 Tetadata Controls	Line Name	Input 1	
Acquisition and Transfer	Line Format	Opto-Coupled	
	Line Mode	Input	
Action Control	Line Status	False	
🗄 Event Control	Line Inverter	False	
GigE Vision Transport Layer	Input Line Detection Level	Threshold for TTL	
File Access Control	Input Line Debouncing Period	0	
GigE Vision Host Controls	Output Line Source	Not Enabled	
, , , , , , , , , , , , , , , , , , ,	Output Line Pulse Signal Activation	Not Enabled	
	Output Line Pulse Delay	Not Enabled	\sim

2、在 Sensor Control 这一栏里,将参数 Exposure Alignment 曝光队列执行模式设置为 Reset,如下图 所示:

Parameters - Visibility: Guru				
Category	Parameter	Value	1	
Camera Information	Device Scan Type	Areascan		
🗆 Sensor Control	Sensor Color Type	Monochrome Sensor		
Auto-Brightness	Input Pixel Size	12 Bits/Pixel		
VO Controls	Sensor Width	728		
	Sensor Height	544		
Counter And Timer Control	Acquisition Frame Rate Control Mode	Not Enabled		
Advanced Processing	Acquisition Frame Rate (in Hz)	Not Enabled		
Cycling Preset	Exposure Mode	Timed		
Image Format Controls	Exposure Alignment	Reset	·	
🗄 Tetadata Controls	Exposure Delay (in us)	11.0		
Acquisition and Transfer	Exposure Time (in us)	60002		
Action Control	Actual Exposure Time (in us)	60002.7		
Action Control	Sensor Shutter Mode	Global		
H Event Control	Gain Selector	Digital		
GigE Vision Transport Layer	Gain	1.0		
File Access Control	Gain (Raw)	0		
GigE Vision Host Controls	Black Level Selector	Analog		
5	Black Level (in DN)	17.0		
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第二步: 设置 Auto-Brightness 模式

1、在 Sensor Control → Auto-Brightness 中将 Auto-Brightness Mode 参数设置为 Active, 如下图所示:

Category	Parameter	Value		
Camera Information	Auto-Brightness Mode	Active 🔻		
🗆 Sensor Control	Auto-Brightness Sequence	Off		
Auto-Brightness	Auto-Brightness Target Source	Active		
VO Controle	Auto-Brightness Target	128		
I/O Controis	Auto-Brightness Target Variation	32		
Counter And Timer Control	Auto-Brightness Algorithm	Average		
Advanced Processing	Auto-Brightness Minimum Time Activation (in S)	0.0		
Cycling Preset	Auto-Brightness Convergence Time (in S)	2.0		
Image Format Controls	Auto-Exposure	Continuous		
🗄 Tetadata Controls	Auto-Exposure Time Min Value (in us)	500.0		
Acquisition and Transfer	Auto-Exposure Time Max Value (in us)	60000.0		
Action Control	Automatic Gain Control	Continuous		
Action Control	Auto-Gain Source	Sensor		
Event Control ■	Auto-Gain Max Value	4.0		
GigE Vision Transport Layer	Auto-Gain Min Value	1.0		
File Access Control	<< Less			
GigE Vision Host Controls				

2、根据实际需求设置平均灰度值,如下图所示:

Category	Parameter	Value	
Camera Information	Auto-Brightness Mode	Active	
Sensor Control	Auto-Brightness Sequence	Exposure \ Gain	
Auto-Brightness	Auto-Brightness Target Source	Luminance	
VO Cantrala	Auto-Brightness Target	192 🗄	
I/O Controis	Auto-Brightness Target Variation	32	
Counter And Timer Control	Auto-Brightness Algorithm	Average	
Advanced Processing	Auto-Brightness Minimum Time Activation (in S)	0.0	
Cycling Preset	Auto-Brightness Convergence Time (in S)	2.0	
Image Format Controls	Auto-Exposure	Continuous	
🗄 Tetadata Controls	Auto-Exposure Time Min Value (in us)	500.0	
Acquisition and Transfer	Auto-Exposure Time Max Value (in us)	60000.0	
	Automatic Gain Control	Continuous	
Action Control	Auto-Gain Source	Sensor	
🗄 Event Control	Auto-Gain Max Value	4.0	
GigE Vision Transport Layer	Auto-Gain Min Value	1.0	
File Access Control	<< Less		
GigE Vision Host Controls			

3、将 Auto-Exposure 参数值设置为 Continuous,如下图所示:

Category	Parameter	Value	
Camera Information	Auto-Brightness Mode	Active	
🗆 Sensor Control	Auto-Brightness Sequence	Exposure \ Gain	
Auto-Brightness	Auto-Brightness Target Source	Luminance	
VQ Controls	Auto-Brightness Target	192	
I/O Controis	Auto-Brightness Target Variation	32	
Counter And Timer Control	Auto-Brightness Algorithm	Average	
Advanced Processing	Auto-Brightness Minimum Time Activation (in S)	0.0	
Cycling Preset	Auto-Brightness Convergence Time (in S)	2.0	
Image Format Controls	Auto-Exposure	Continuous 🔻	
🗄 Ietadata Controls	Auto-Exposure Time Min Value (in us)	Off	
Acquisition and Transfer	Auto-Exposure Time Max Value (in us)	Continuous Continuous	
Action Control	Automatic Gain Control		
Action Control	Auto-Gain Source	Sensor	
🗄 Event Control	Auto-Gain Max Value	4.0	
GigE Vision Transport Layer	Auto-Gain Min Value 1.0		
File Access Control	<< Less		
GigE Vision Host Controls			

4、根据现场需求设置好自动曝光时间上限值参数 Auto-Exposure Time Max Value(单位 us)。例如触发 信号频率为 12Hz,可以将曝光时间上限值设置为 80000us,如下图所示:

Category	Parameter	Value	
Camera Information	Auto-Brightness Mode	Active	
🗆 Sensor Control	Auto-Brightness Sequence	Exposure \ Gain	
Auto-Brightness	Auto-Brightness Target Source	Luminance	
VQ Controls	Auto-Brightness Target	192	
I/O Controis	Auto-Brightness Target Variation	32	
Counter And Timer Control	Auto-Brightness Algorithm	Average	
Advanced Processing	Auto-Brightness Minimum Time Activation (in S)	0.0	
Cycling Preset	Auto-Brightness Convergence Time (in S)	2.0	
Image Format Controls	Auto-Exposure	Continuous	
🗉 Tetadata Controls	Auto-Exposure Time Min Value (in us)	500.0	
Acquisition and Transfer	Auto-Exposure Time Max Value (in us)	80000.0	
Action Control	Automatic Gain Control	Continuous	
Action Control	Auto-Gain Source	Sensor	
🗄 Event Control	Auto-Gain Max Value	4.0	
GigE Vision Transport Layer	Auto-Gain Min Value	1.0	
File Access Control	<< Less		
GigE Vision Host Controls	_		
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5、点击 Grab 按钮采集图像。

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.o-M700_1 d	n 1 700	*		🐝 Freeze 🗑 Snap 🗍 Trigger		· İ. I.
a camera :	file (Optional)	+		Position x:225 y:012 Value 205	Frame/sec 11.9 f/s	Resolutior 728 Pixels x 544 Lines Mor
ct Canera	Settings			1 · · · · ·		_
ibility: G	uru		×	- 05		*
	Parameter	Value	^			
on	Device Scan Type	Areascan				
0]	Sensor Color Type	Monochrome Sensor				
	Input Pixel Size	12 Bits/Pixel				Contraction and Contraction
55	Sensor Width	728				
	Sensor Height	544				
er Control	Acquisition Frame Rate Control Mode	Not Enabled				
sing	Acquisition Frame Rate (in Hz)	Not Enabled				
	Exposure Mode	Timed		5 1 14		
ntrols	Exposure Alignment	Reset				
trols	Exposure Delay (in us)	11.0		(III) ecceptions		
ransfor	Exposure Time (in us)	80000		and the second se		and the second second
dister	Actual Exposure Time (in us)	Not Enabled		and the second se		And a second sec
	Sensor Shutter Mode	Global			12	The second se
1	Gain Selector	Sensor			and little and l	
oort Layer	Gain	2.187762				and the second
ol	Gain (Raw)	68				and the second
Controls	Black Level Selector	Analog		A REAL PROPERTY OF THE REAL PR	and the second	and the second se
	Black Level (in DN)	17.0				
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