

## PSCamera Tango Python Class

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### **PSCamera Class Identification :**

Contact : at mail.desy.de - tnunez  
 Class Family : Acquisition  
 Platform : Unix Like  
 Bus : Socket  
 Manufacturer : Photonic Science  
 Manufacturer ref. : Gemstar Xray CCD

### **PSCamera Class Inheritance :**

- [Tango::DeviceImpl](#)
  - PSCamera

### **PSCamera Class Description :**

Class for controlling PS CCD Camera

### **PSCamera Properties :**

**There is no class properties**

Device Properties			
Name	Description	Type	Default Value
IPAdress	IP Adress	String	none
PortNb	Port Number	int	5000

PSCamera Class Commands				
Name	Input type	Output type	Level	Description
<a href="#">State</a>	DEV_VOID	DEV_STATE	OPERATOR	This command gets the device state (stored in its <i>device_state</i> data member) and returns it to the caller.
<a href="#">Status</a>	DEV_VOID	CONST_DEV_STRING	OPERATOR	This command gets the device status (stored in its <i>device_status</i> data member) and returns it to the caller.
<a href="#">Reset</a>	DEV_VOID	DEV_VOID	OPERATOR	None.
<a href="#">Open</a>	DEV_VOID	DEV_VOID	OPERATOR	None.
<a href="#">Close</a>	DEV_VOID	DEV_VOID	OPERATOR	None.
<a href="#">Snap</a>	DEV_VOID	DEV_VOID	OPERATOR	None.
<a href="#">Save</a>	DEV_VOID	DEV_VOID	OPERATOR	None.
<a href="#">AbortSnap</a>	DEV_VOID	DEV_VOID	OPERATOR	None.
<a href="#">SetCompress</a>	DEV_LONG	DEV_VOID	OPERATOR	Enable(1) or disable(0) the compression (using zlib) of the data returned in Image
<a href="#">SnapAndSave2</a>	DEV_VOID	DEV_VOID	OPERATOR	Snap an image then, start a parallel thread to post-process and save the image using the path: `FileDirectory`\`FilePrefix`+`FileRefNumber`+`.`+`FileFormat`
<a href="#">StartAcquisition</a>	DEV_VOID	DEV_VOID	OPERATOR	Performs Snap and Save NumberOfImages times, with DeltaTime ms between Snaps.

**Command State :**

This command gets the device state (stored in its *device\_state* data member) and returns it to the caller.

State Definition		
Input Argument	Tango::DEV_VOID	none.
Output Argument	Tango::DEV_STATE	State Code
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

### **Command Status :**

This command gets the device status (stored in its *device\_status* data member) and returns it to the caller.

Status Definition		
Input Argument	Tango::DEV_VOID	none.
Output Argument	Tango::CONST_DEV_STRING	Status description
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command Reset :**

Reset Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command Open :**

Open Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command Close :**

Close Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		..
Command allowed for	All states	..

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**Command Snap :**

Snap Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		..
Command allowed for	All states	..

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**Command Save :**

Save Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		..
Command allowed for	All states	..

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**Command AbortSnap :**



AbortSnap Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command SetCompress :**

Enable(1) or disable(0) the compression (using zlib) of the data returned in Image

SetCompress Definition		
Input Argument	Tango::DEV_LONG	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command SnapAndSave2 :**

Snap an image then, start a parallel thread to post-process and save the image using the path:

`FileDirectory` \ `FilePrefix` + `FileRefNumber` + `.` + `FileFormat`

SnapAndSave2 Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command StartAcquisition :**

Performs Snap and Save NumberOfImages times, with DeltaTime ms between Snaps.

StartAcquisition Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		..
Command allowed for	All states	..

PSCamera Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
<a href="#">DeltaTime</a>	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	
<a href="#">NumberOfImages</a>	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	
<a href="#">XBinning</a>	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	
<a href="#">YBinning</a>	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	
<a href="#">SubAreaLeft</a>	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	
<a href="#">SubAreaRight</a>	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	
<a href="#">SubAreaTop</a>	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	
<a href="#">SubAreaBottom</a>	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	
<a href="#">ExposureTime</a>	false	false	Scalar	READ_WRITE	Tango::DEV_FLOAT	OPERATOR	
<a href="#">FileDirectory</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	The capture image is saved at:\n FileDirectory\ `FilePrefix` + `FileRefNumber` + `.` + `FileFormat`
<a href="#">FileSuffix</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	The captured image is saved at:\n FileDirectory\ `FilePrefix` + `FileRefNumber` + `.` + `FileFormat`
<a href="#">FileRefNumber</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	The captured image is saved at:\n FileDirectory\ `FilePrefix` + `FileRefNumber` + `.` + `FileFormat`
<a href="#">FileFormat</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	The captured image is saved at:\n FileDirectory\ `FilePrefix` + `FileRefNumber` + `.` + `FileFormat`
<a href="#">FilePrefix</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	The captured image is saved at:\n FileDirectory\ `FilePrefix` + `FileRefNumber` + `.` + `FileFormat`
<a href="#">Image</a>	false	false	Image	READ	Tango::DEV_LONG	OPERATOR	

**There is no dynamic attribute defined.**

**Attribute DeltaTime :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	ms
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute NumberOfImages :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute XBinning :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set

Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

max_value	1392
min_value	1
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute YBinning :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	1040
min_value	1
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute SubAreaLeft :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set



delta_time	
delta_val	

**Attribute SubAreaRight :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute SubAreaTop :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute SubAreaBottom :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

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**Attribute ExposureTime :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_FLOAT
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

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**Attribute FileDirectory :**

The capture image is saved at: \\n\FileDirectory\`FilePrefix`+`FileRefNumber`+`.`+`FileFormat`

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

### Attribute FileSuffix :

The captured image is saved at: \n`FileDirectory`\ `FilePrefix` + `FileRefNumber` + `.` + `FileFormat`

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

### Attribute FileRefNumber :

The captured image is saved at: \n`FileDirectory`\ `FilePrefix` + `FileRefNumber` + `.` + `FileFormat`

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE

Attribute Properties	
label	
unit	
standard unit	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set

Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute FileFormat :**

The captured image is saved at:\n`FileDirectory`\`FilePrefix`+`FileRefNumber`+`.`+`FileFormat`

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute FilePrefix :**

The captured image is saved at:\n`FileDirectory`\`FilePrefix`+`FileRefNumber`+`.`+`FileFormat`

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set

Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute Image :**

Attribute Definition	
Attribute Type	Image ( 1394 x 1040 )
R/W Type	READ
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

PSCamera Class States	
Name	Description
ON	Default State
RUNNING	The camera is taking images.