

TangoVimba Tango Cpp Class

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TangoVimba Class Identification :

Contact : at desy.de - johannes.blume
 Class Family : Acquisition
 Platform : Unix Like
 Bus : Ethernet
 Manufacturer : none
 Manufacturer ref. :

TangoVimba Class Inheritance :

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

TangoVimba Class Description :

Tango device server for genicam compatible GigE cameras

TangoVimba Properties :

There is no class properties

Device Properties			
Name	Description	Type	Default Value
HostName	host name or ip address of camera	String	""
DynAttrList	for internal use only	String[]	none
VisibleAttributes	<p>Since different cameras support different features (and the same feature may even have different names on a different camera), camera features are dynamically converted into device attributes.</p> <p>Converting all available camera features into attributes will create a quite lengthy and cluttered list, so you can put those features you want to see as device attributes into this list. Only the features mentioned here will be shown as attributes.</p> <p>To find out about the available features of a camera either use a program like VimbaViewer or leave this list empty. Then all features will be shown as attributes.</p> <p>For features which are of type enumeration (e.g. PixelFormat) an additional read-only attribute #Values will be created. This shows the possible values for this feature on this camera.</p>	String[]	none
FrameBuffers	Number of frame buffers for image acquisition (defaults to 4)	short	4
GainFeatureName	Depending on the camera type the name of the Gain feature differs(e.g. `Gain`, `GainRaw`). Please check for the camera you are using and enter the appropriate string here.	String	none
DeviceID	<p>Identifier of camera, this can be:</p> <ul style="list-style-type: none">- the IP address- the mac address (notation e.g. 000F3101C94A)- the ID as reported by Vimba (e.g. DEV_000F3101C94A)- the serial number (e.g. 02-2110A-07625) <p>If DeviceID is given, property Hostname will be ignored.</p>	String	""

StopAcquisition	DEV_VOID	DEV_VOID	OPERATOR	Stop continuous image acquisition
StartSingleAcquisition	DEV_VOID	DEV_VOID	OPERATOR	Acquire single image

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	Device state
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
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	Device status
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command StartAcquisition :

Start continuous image acquisition

StartAcquisition Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		..
Command NOT allowed for	<ul style="list-style-type: none">• FAULT• RUNNING	..

Command StopAcquisition :

Stop continuous image acquisition

StopAcquisition Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		..
Command NOT allowed for	<ul style="list-style-type: none">• ON	..

Command StartSingleAcquisition :

Acquire single image

StartSingleAcquisition Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..

Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> • FAULT • RUNNING 	..

TangoVimba Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
FileDir	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	Directory to store image files in
FilePrefix	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	String prefixed to file names
FileStartNum	false	false	Scalar	READ_WRITE	Tango::DEV_ULONG	OPERATOR	Start number for files
							<p>file postfix (determines file format). Supported file formats at time of writing are:</p> <p> bmp jpg/jpeg png ppm pbm pgm tif/tiff xbm xpm </p> <p>bin: raw data from camera</p> <p>mbin : raw data from camera + header containing some meta information: byte 0-1: header size byte 2-9: recording time in us since 1.1.1970 byte 10-13: Image width</p>

ReadMode	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	<p>are processed before being written to Image attribute</p> <ul style="list-style-type: none"> - flat : pixel = pixel - log10 : pixel = log10(pixel) - sqrt : pixel = sqrt(pixel) <p>This has no effect when reading to RawImage.</p>
FramesProcessed	false	false	Scalar	READ	Tango::DEV_ULONG	OPERATOR	<p>Number of frames processed</p>
TuneMode	false	false	Scalar	READ_WRITE	Tango::DEV_USHORT	EXPERT	<p>Mode for adjusting camera frame rate:</p> <p>0 = no adjustment 1 = frame rate will be set the maximum number of frames the server can process (may produce high cpu loads) 2 = frame rate will be set so that the server will consume max. MaxLoad % cpu time</p>
MaxLoad	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	EXPERT	<p>Max. allowed cpu load if TuneMode is set to 2</p>
							<p>How camera data are written to attributes:</p> <p>0 : nothing is written to any attributes 1 : data are converted to 8-bit greyscale and written to Image8 2 : data are converted to 16-bit greyscale and written to</p>

ViewingMode	false	false	Scalar	READ_WRITE	Tango::DEV_SHORT	OPERATOR	<p>Image16 3: data are not converted and written to ImageRaw (ImageRaw dimensions will always be ImageSize (in bytes) x 1).</p> <p>Note 1: not all pixel formats can be converted to 16-bit greyscale. An exception will be thrown if the current camera pxel format cannot be converted.</p> <p>Note 2: if you change the viewing mode while acquisition is running the acquisition has to be restarted in the server process. This means that a file which is in the process of being written will be closed.</p>
BinComment	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	<p>This goes as a comment into files of type mbin (c.f FilePostfix). Max. length 256 chars.</p>
Image8	false	false	Image	READ	Tango::DEV_UCHAR	OPERATOR	<p>Array of unsigned char representing the acquired image(s). Pixel data will be converted to 8-bit greyscale.</p>
Image16	false	false	Image	READ	Tango::DEV_USHORT	OPERATOR	<p>Array of unsigned short representing the acquired image(s).</p>

							Pixel data will be converted to 16-bit greyscale. Array of unsigned char representing the acquired image(s). Pixel data will be converted to 8-bit greyscale to maximize transfer speed.
ImageRaw	false	false	Image	READ	Tango::DEV_UCHAR	OPERATOR	

TangoVimba Class Dynamic Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
DoubleDynAttr	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	for internal use only
LongDynAttr	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	for internal use only
StringDynAttr	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	for internal use only
BoolDynAttr	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	for internal use only
LongDynAttrR	false	false	Scalar	READ	Tango::DEV_LONG	OPERATOR	for internal use only
DoubleDynAttrR	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	for internal use only
BoolDynAttrR	false	false	Scalar	READ	Tango::DEV_BOOLEAN	OPERATOR	for internal use only
StringDynAttrR	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	for internal use only
StringArrayDynAttrR	false	false	Spectrum	READ	Tango::DEV_STRING	OPERATOR	for internal use only

Attribute FileDir :

Directory to store image files in

Attribute Definition		Attribute Properties		Attribute Event Criteria	
				Periodic	Not

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	true
Write hardware at init.	true
Read allowed for	All states
Write NOT allowed for	• FAULT

label	Image File Path
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

	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	false

Attribute FilePrefix :

String prefixed to file names

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	true
Write hardware at init.	true
Read	

Attribute Properties	
label	Image File Prefix
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

allowed for	All states
Write NOT allowed for	<ul style="list-style-type: none"> FAULT

Push DataReady event by user code	false
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Attribute FileStartNum :

Start number for files

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_ULONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write NOT allowed for	<ul style="list-style-type: none"> FAULT

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	false

Attribute FilePostfix :

file postfix (determines file format). Supported file formats at time of writing are:

- bmp
- jpg/jpeg
- png
- ppm
- pbm
- pgm
- tif/tiff
- xbm

xpm

bin: raw data from camera

mbin : raw data from camera + header containing some meta information:

byte 0-1: header size

byte 2-9: recording time in us since 1.1.1970

byte 10-13: Image width

byte 14-17: Image height

byte 18-21: Horizontal offset

byte 22-25: Vertical offset

byte 26-29: BinningX (if supported by camera)

byte 30-33: BinningY (if supported by camera)

byte 34-37: PixelFormat (cf. vimba doc)

byte 38-39: length of serial number(= X)

byte 40-40+X: serial number of camera as string

after serial number: 2 bytes containing length of comment for file type mbin, cf. Attribute BinComment

after length of comment: comment as string

after comment: image data

Format mbin is not supported on some older cameras due to missing timestamp feature (sometimes a camera firmware update helps).

nx: nexus hdf5 files (see also property XMLTemplate)

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	true
Write hardware at init.	true
Read allowed for	All states
Write NOT allowed for	<ul style="list-style-type: none"> FAULT

Attribute Properties	
label	Image file format
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	false

Attribute FileSaving :

if set to true, acquired images will be saved to files

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_BOOLEAN
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write NOT allowed for	<ul style="list-style-type: none">• FAULT

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	false

Attribute ReadMode :

How image data are processed before being written to Image attribute

- flat : pixel = pixel
- log10 : pixel = log10(pixel)
- sqrt : pixel = sqrt(pixel)

This has no effect when reading to RawImage.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING

Attribute Properties	
label	Read mode
unit	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set

Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write NOT allowed for	<ul style="list-style-type: none"> • FAULT

standard unit	
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	false

Attribute FramesProcessed :

Number of frames processed

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_ULONG
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	false

Attribute TuneMode :

Mode for adjusting camera frame rate:

0 = no adjustment

1 = frame rate will be set the maximum number of frames the server can process (may produce high cpu loads)

2 = frame rate will be set so that the server will consume max. MaxLoad % cpu time

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_USHORT
Display Level	EXPERT
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write NOT allowed for	<ul style="list-style-type: none"> • FAULT • RUNNING

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	2
min_value	0
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	false

Attribute MaxLoad :

Max. allowed cpu load if TuneMode is set to 2

Attribute Definition	

Attribute Properties	

Attribute Event Criteria	
	Not

Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	EXPERT
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write NOT allowed for	• FAULT

label	
unit	
standard unit	
display unit	
format	
max_value	100
min_value	1
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Periodic	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	false

Attribute ViewingMode :

How camera data are written to attributes:

0 : nothing is written to any attributes

1: data are converted to 8-bit greyscale and written to Image8

2: data are converted to 16-bit greyscale and written to Image16

3: data are not converted and written to ImageRaw (ImageRaw dimensions will always be ImageSize (in bytes) x 1).

Note 1: not all pixel formats can be converted to 16-bit greyscale. An exception will be thrown if the current camera pxel format cannot be converted.

Note 2: if you change the viewing mode while acquisition is running the acquisition has to be restarted in the server process. This means that a file which is in the process of being written will be closed.

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

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	

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

Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write NOT allowed for	<ul style="list-style-type: none"> • FAULT

max_value	
min_value	
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	false

Attribute BinComment :

This goes as a comment into files of type mbin (c.f FilePostfix). Max. length 256 chars.

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 NOT allowed for	<ul style="list-style-type: none"> • FAULT

Attribute Properties	
label	Comment for binary file
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	false

Attribute Image8 :

Array of unsigned char representing the acquired image(s).
Pixel data will be converted to 8-bit greyscale.

Attribute Definition	
Attribute Type	Image (16000 x 16000)
R/W Type	READ
Data Type	Tango::DEV_UCHAR
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none">• FAULT

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	true
<ul style="list-style-type: none">• Criteria checked by TANGO	true

Attribute Image16 :

Array of unsigned short representing the acquired image(s).
Pixel data will be converted to 16-bit greyscale.

Attribute Definition	
Attribute Type	Image (16000 x 16000)
R/W Type	READ
Data Type	Tango::DEV_USHORT

Attribute Properties	
label	
unit	
standard unit	
display unit	

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

Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none"> • FAULT

format
max_value
min_value
max_alarm
min_alarm
max_warning
min_warning
delta_time
delta_val

	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	true
• Criteria checked by TANGO	true

Attribute ImageRaw :

Array of unsigned char representing the acquired image(s).
Pixel data will be converted to 8-bit greyscale to maximize transfer speed.

Attribute Definition	
Attribute Type	Image (1024000000 x 1)
R/W Type	READ
Data Type	Tango::DEV_UCHAR
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none"> • FAULT

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	true
• Criteria checked by TANGO	true

Dynamic attribute DoubleDynAttr :

for internal use only

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
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	false

Dynamic attribute LongDynAttr :

for internal use only

Attribute	

Attribute	

Attribute Event Criteria	

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

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

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	false

Dynamic attribute StringDynAttr :

for internal use only

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	false

Dynamic attribute BoolDynAttr :

for internal use only

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_BOOLEAN
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	false

Dynamic attribute LongDynAttrR :

for internal use only

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ

Attribute Properties	
label	
unit	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set

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

standard unit	
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	false

Dynamic attribute DoubleDynAttrR :

for internal use only

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
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	false

Dynamic attribute BoolDynAttrR :

for internal use only

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_BOOLEAN
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	false

Dynamic attribute StringDynAttrR :

for internal use only

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

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	

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

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

max_value	
min_value	
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	false

Dynamic attribute StringArrayDynAttrR :

for internal use only

Attribute Definition	
Attribute Type	Spectrum (100)
R/W Type	READ
Data Type	Tango::DEV_STRING
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	false

TangoVimba Class States

Name	Description
ON	The device is ready to start acquisition
FAULT	something went wrong (check status), acquisition is not possible
RUNNING	Device is acquiring images from the camera
ALARM	Something is not ok, generally problems with saving image files like e.g. a full disk.