



TANGO
Device
Server

Meteor Wrapper User's Guide

MeteorWrapper Class

Revision: MeteorWrapper-Release_2_0 - Author: meyer
Implemented in C++ - CVS repository: ESRF

Introduction:

This is a wrapper for the TACO Meteor2 device server which can be used to handle video or exposure time cameras.

Class Inheritance:

- Tango::Device_4Impl
 - MeteorWrapper

Class Description:

This is a wrapper for the TACO Meteor2 device server which can be used to handle video or exposure time cameras.

Properties:

Device Properties		
Property name	Property type	Description
Wago_name	Tango::DEV_STRING	Name of the WAGO device
Output_module	Tango::DEV_SHORT	index of the wago module 750-504 to move the camera
Output	Tango::DEV_SHORT	channel on the WAGO output module to move the camera
Camera_name	Tango::DEV_STRING	Name of the Taco device for the camera.

Device Properties Default Values:

Property Name	Default Values
Wago_name	No default value
Output_module	No default value
Output	No default value
Camera_name	No default value

There is no Class properties.

States:

States	
Names	Descriptions
ON	The camera is insterted in the beam and ready to take images
OFF	The cmera is extracted from the beam
MOVING	The camera is aquiring an image.
FAULT	A frame grabber fault was detected

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
ExposureTime: The maximum exposure time to be used for image calibration.	DEV_DOUBLE	READ_WRITE	No
Threshold: Threahold in pixel intensity (8bits) on the image.	DEV_LONG	READ_WRITE	No
MaxExposureTime: The maximum exposure time to be used for image calibration.	DEV_DOUBLE	READ_WRITE	No
MaxCalibrationInterval	DEV_LONG	READ_WRITE	No
MinCalibrationInterval	DEV_LONG	READ_WRITE	No
CalibratedIntensity	DEV_LONG	READ	No
Nu_of_BeamSpots	DEV_LONG	READ	No
BeamIntensity: Beam Intensity divided by the exposure time	DEV_DOUBLE	READ	No
NormBeamIntensity: Beam Intensity divided by the exposure time	DEV_DOUBLE	READ	No
X_BeamCenter	DEV_DOUBLE	READ	No
Y_BeamCenter	DEV_DOUBLE	READ	No
X_BeamSize_Fwhm	DEV_DOUBLE	READ	No
Y_BeamSize_Fwhm	DEV_DOUBLE	READ	No
X_BeamSize	DEV_DOUBLE	READ	No
Y_BeamSize	DEV_DOUBLE	READ	No
ImageDepth: The image depth in bits.	DEV_LONG	READ	No
LiveModeState: Shows whether the camera is in live mode or not.	DEV_SHORT	READ	No
AutocalibrationState: Shows whether the atocalibration is on or off.	DEV_SHORT	READ	No
InsertionState: Shows whether camera is inserted or extracted from beam.	DEV_SHORT	READ	No

Image Attributes				
Attribute name	Data Type	X Data Length	Y Data Length	Expert
Image: Last aquired image	DEV_SHORT	760	578	No

Commands:

More Details on commands....

Device Commands for Operator Level		
Command name	Argument In	Argument Out
Init	DEV_VOID	DEV_VOID
State	DEV_VOID	DEV_STATE
Status	DEV_VOID	CONST_DEV_STRING
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID
Start	DEV_VOID	DEV_VOID
Stop	DEV_VOID	DEV_VOID
Read	DEV_VOID	DEVVAR_CHARARRAY
LiveModeOn	DEV_VOID	DEV_VOID
LiveModeOff	DEV_VOID	DEV_VOID
WriteFile	DEV_VOID	DEV_VOID
Calibrate	DEV_VOID	DEV_VOID
AutoCalibrationOn	DEV_VOID	DEV_VOID
AutoCalibrationOff	DEV_VOID	DEV_VOID
SetROI	DEVVAR_LONGARRAY	DEV_VOID
GetROI	DEV_VOID	DEVVAR_LONGARRAY
SetFileParameters	DEVVAR_STRINGARRAY	DEV_VOID
GetFileParameters	DEV_VOID	DEV_VOID
FullImageSize	DEV_VOID	DEVVAR_LONGARRAY

1 - Init

- **Description:** This commands re-initialise a device keeping the same network connection. After an Init command executed on a device, it is not necessary for client to re-connect to the device. This command first calls the device *delete_device()* method and then execute its *init_device()* method. For C++ device server, all the memory allocated in the *nit_device()* method must be freed in the *delete_device()* method. The language device desctructor automatically calls the *delete_device()* method.
- **Argin:**
DEV_VOID : none.

- **Argout:**
DEV_VOID : none.

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::MOVING
- Tango::FAULT

2 - State

- **Description:** This command gets the device state (stored in its *device_state* data member) and returns it to the caller.

- **Argin:**
DEV_VOID : none.

- **Argout:**
DEV_STATE : State Code

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::MOVING
- Tango::FAULT

3 - Status

- **Description:** This command gets the device status (stored in its *device_status* data member) and returns it to the caller.

- **Argin:**
DEV_VOID : none.

- **Argout:**
CONST_DEV_STRING : Status description

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::MOVING
- Tango::FAULT

4 - On

- **Description:** Insert the camera into the beam
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

5 - Off

- **Description:** Extract the camera from the beam
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

6 - Start

- **Description:** Start the camera to take an image with the actual exposure time.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING

- Tango::FAULT

7 - Stop

- **Description:** Stop the image acquisition
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

8 - Read

- **Description:** Read the last acquired image.
- **Argin:**
DEV_VOID :
- **Argout:**
DEVVAR_CHARARRAY :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

9 - LiveModeOn

- **Description:** Set the camera to live mode. The camera acquires permanently images.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::MOVING
- Tango::FAULT

10 - LiveModeOff

- **Description:** Stop the live mode for the camera.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

11 - WriteFile

- **Description:** Write the actual image to a file.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

12 - Calibrate

- **Description:** Calibrate the maximum intensity to the calibration interval.
- **Argin:**
DEV_VOID :
- **Argout:**

DEV_VOID :

- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

13 - AutoCalibrationOn

- **Description:** Switch on the automatic calibration at every image acquisition
- **Argin:**
DEV_VOID :

- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

14 - AutoCalibrationOff

- **Description:** Switch off the automatic image calibration.
- **Argin:**
DEV_VOID :

- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

15 - SetROI

- **Description:** Set the region of interest on the image.
- **Argin:**

DEVVAR_LONGARRAY :

- **Argout:**
DEV_VOID :

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::MOVING
- Tango::FAULT

16 - GetROI

- **Description:** Read the actual region of interest applied.

- **Argin:**
DEV_VOID :

- **Argout:**
DEVVAR_LONGARRAY :

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::MOVING
- Tango::FAULT

17 - SetFileParameters

- **Description:** Set the file parameters for image file saving.

- **Argin:**
DEVVAR_STRINGARRAY :

- **Argout:**
DEV_VOID :

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::MOVING
- Tango::FAULT

18 - GetFileParameters

- **Description:** Read the file parameters applied for image saving.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

19 - FullImageSize

- **Description:** Get the full image size in width and height
- **Argin:**
DEV_VOID :
- **Argout:**
DEVVAR_LONGARRAY :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING
 - Tango::FAULT

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