



TANGO Device Server

Lom500Energy
User's Guide

Lom500Energy Class

Revision: - Author: tkracht
Implemented in C++

Introduction:

a server that operates the Lom axes to set the energy

Class Inheritance:

- Tango::Device_4Impl
  - Lom500Energy

Properties:

Device Properties		
Property name	**Property type**	**Description**
SimulationMode	Tango::DEV_LONG	

Device Properties Default Values:

Property Name	Default Values
SimulationMode	0

There is no Class properties.

States:

States	
Names	**Descriptions**
ON	
MOVING	
FAULT	

Attributes:

Scalar Attributes			
Attribute name	**Data Type**	**R/W Type**	**Expert**
Position: the energy of the Lom500 monochromator	DEV_DOUBLE	READ_WRITE	No
ConstantExit: vertical difference between the xtals, about 1250 mm	DEV_DOUBLE	READ_WRITE	No
PositionSim: no moves involved, setting PositionSim sets the Lin1Sim, Lin2Sim, Pitch1Sim and Pitch2Sim	DEV_DOUBLE	READ_WRITE	No
D_Crystal: the crystal spacing. from lat1, lat2	DEV_DOUBLE	READ_WRITE	No
UnitLimitMin: the energy of the Lom500 monochromator	DEV_DOUBLE	READ_WRITE	No
UnitLimitMax: the energy of the Lom500 monochromator	DEV_DOUBLE	READ_WRITE	No

Spectrum Attributes			
Attribute name	**Data Type**	**X Data Length**	**Expert**
ResultSim: stores the result of PositionSim, pairs of motor names and positions	DEV_STRING	100	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
StopMove	DEV_VOID	DEV_VOID
Calibrate	DEV_DOUBLE	DEV_LONG
ResetMotor	DEV_VOID	DEV_VOID

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::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::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::MOVING
  - Tango::FAULT

4 - StopMove

- **Description:** stop the Lom

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::ON

- Tango::MOVING
- Tango::FAULT

5 - Calibrate

- **Description:** calibrates the Lom axes

- **Argin:**
  DEV_DOUBLE :

- **Argout:**
  DEV_LONG :

- **Command allowed for:**
  - Tango::ON

6 - ResetMotor

- **Description:** reset one of the Lom axes

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

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