


TANGO Device Server

GalilGearedAxes User's Guide

GalilGearedAxes Class

Revision: release_2_3_10 - Author: coquet
Implemented in C++

Introduction:

handles 2 motors in geared mode slave motor follows the master with a ratio fixed by property Ratio

Class Inheritance:

- Tango::Device_3Impl
  - GalilGearedAxes

Properties:

Device Properties		
Property name	**Property type**	**Description**
MasterAxis	Tango::DEV_STRING	letter of the master axis, from A to H
SlaveAxis	Tango::DEV_STRING	Letter of the slave axis, A to H
Ratio	Tango::DEV_DOUBLE	ratio between Master and Slave motors Slave speed = master speed * Ratio slave movement = master movement * Ratio

Device Properties Default Values:

Property Name	Default Values
MasterAxis	A
SlaveAxis	B
Ratio	No default value

There is no Class properties.

States:

States	
Names	**Descriptions**
MOVING	performing movement bans any movement request on the axis moving
STANDBY	slit is idle accepting requests
FAULT	Axis fault no movement permitted
ALARM	non blocking default on the axis e.g. limit switch
OFF	no communication with hardware

Attributes:

Scalar Attributes			
Attribute name	**Data Type**	**R/W Type**	**Expert**
masterPosition: position of the master axis	DEV_DOUBLE	READ_WRITE	No
slavePosition: position of the slave axis	DEV_DOUBLE	READ_WRITE	No
isGeared	DEV_BOOLEAN	READ	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
Stop	DEV_VOID	DEV_VOID
SetIndependantMode	DEV_VOID	DEV_VOID
SetGearedMode	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::MOVING
  - Tango::STANDBY
  - Tango::FAULT
  - Tango::ALARM
  - Tango::OFF

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::MOVING
  - Tango::STANDBY
  - Tango::FAULT
  - Tango::ALARM
  - Tango::OFF

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::MOVING
  - Tango::STANDBY
  - Tango::FAULT
  - Tango::ALARM
  - Tango::OFF

4 - Stop

- **Description:** stops any movement on the slit

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::MOVING
  - Tango::STANDBY
  - Tango::FAULT
  - Tango::ALARM
  - Tango::OFF

5 - SetIndependantMode

- **Description:** TURNS OFF THE GEARING MODE

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::STANDBY
  - Tango::FAULT
  - Tango::ALARM
  - Tango::OFF

6 - SetGearedMode

- **Description:** turns ON the GEARING MODE

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::STANDBY
  - Tango::FAULT
  - Tango::ALARM
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  DEV_VOID :

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  - Tango::STANDBY
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  - Tango::ALARM
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Device Commands Description
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