



TANGO
Device
Server

Multibunch phase control User's Guide

MultibunchPLL Class

Revision: - Author: peru
Implemented in C++ - CVS repository: ESRF

Introduction:

This device server aggregates some TACO and TANGO device servers in order to present a useful interface in matter of multibunch phase control.

Class Identification:

- **Contact** : at esrf.fr - peru
- **Class Family** : Miscellaneous (ESRF Specific)
- **Platform** : Unix Like
- **Bus** : Not Applicable

Class Inheritance:

- Tango::Device_4Impl
 - MultibunchPLL

Properties:

Device Properties		
Property name	Property type	Description
Delay1DeviceName	Tango::DEV_STRING	
Delay2DeviceName	Tango::DEV_STRING	
GainSelectDeviceName	Tango::DEV_STRING	
PLLDeviceName	Tango::DEV_STRING	
OnOffAttrName	Tango::DEV_STRING	
PhaseShifterVoltageAttrName	Tango::DEV_STRING	
PhaseLoopSetpointAttrName	Tango::DEV_STRING	
LimitHighAttrName	Tango::DEV_STRING	
LimitLowAttrName	Tango::DEV_STRING	
GainLevelOutput1AttrName	Tango::DEV_STRING	The name of the attribute #1 corresponding to the output dedicated to the control of the gain.
GainLevelOutput2AttrName	Tango::DEV_STRING	The name of the attribute #2 corresponding to the output dedicated to the control of the gain.
SynchroModeDeviceName	Tango::DEV_STRING	The name of the device associated to the synchro mode.

Device Properties Default Values:

Property Name	Default Values
Delay1DeviceName	No default value
Delay2DeviceName	No default value
GainSelectDeviceName	No default value
PLLDeviceName	No default value
OnOffAttrName	No default value
PhaseShifterVoltageAttrName	No default value
PhaseLoopSetpointAttrName	No default value
LimitHighAttrName	No default value
LimitLowAttrName	No default value
GainLevelOutput1AttrName	No default value
GainLevelOutput2AttrName	No default value
SynchroModeDeviceName	No default value

There is no Class properties.

States:

States	
Names	Descriptions
ON	
OFF	
UNKNOWN	

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
Delay1	DEV_LONG	READ_WRITE	No
Width1	DEV_LONG	READ_WRITE	No
Delay2	DEV_LONG	READ_WRITE	No
Width2	DEV_LONG	READ_WRITE	No
PhaseShifterVoltage	DEV_DOUBLE	READ	No
PhaseLoopSetpoint	DEV_DOUBLE	READ_WRITE	No
GainLevel	DEV_SHORT	READ_WRITE	No
Mode	DEV_STRING	READ_WRITE	No
SynchroMode	DEV_SHORT	READ_WRITE	No

Spectrum Attributes			
Attribute name	Data Type	X Data Length	Expert
ListOfSavedModes	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
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID
SaveCurrentMode	DEV_VOID	DEV_VOID
SaveCurrentModeAs	DEV_STRING	DEV_VOID
DeleteMode	DEV_STRING	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::OFF
 - Tango::UNKNOWN

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::UNKNOWN

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::UNKNOWN

4 - On

- **Description:**

- **Argin:**

DEV_VOID :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::UNKNOWN

5 - Off

- **Description:**

- **Argin:**

DEV_VOID :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::UNKNOWN

6 - SaveCurrentMode

- **Description:** Save parameters for the current mode.

- **Argin:**

DEV_VOID :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::UNKNOWN

7 - SaveCurrentModeAs

- **Description:** Save the parameters for the specified mode name.

- **Argin:**

DEV_STRING :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::UNKNOWN

8 - DeleteMode

- **Description:** Delete the specified mode.

- **Argin:**

DEV_STRING :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::UNKNOWN

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Device Servers : CVS repository on tango-ds project