



TANGO
Device
Server

FMB Oxford Double Crystal Monochromator Controller User's Guide

FMBOxfDCMCtrl Class

Revision: - Author: tere29
Implemented in C++

Introduction:

Class connecting to the Double Crystal Monochromator Drive from FMB Oxford via RS232

Class Inheritance:

- Tango::Device_4Impl
 - FMBOxfDCMCtrl

Properties:

Device Properties		
Property name	Property type	Description
IpAddr	Tango::DEV_STRING	Ip address of the terminal server
SimulationMode	Tango::DEV_ULONG	0 -> real mode, 1 -> simulation mode

Device Properties Default Values:

Property Name	Default Values
IpAddr	No default value
SimulationMode	No default value

There is no Class properties.

States:

States	
Names	Descriptions
ON	Connection open.
FAULT	Problems in connection.

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
CloseSocket	DEV_VOID	DEV_VOID
WriteGetResponse	DEV_STRING	DEV_STRING
SendCtrlChar	DEV_STRING	DEV_STRING
WriteReadAdrPort	DEV_STRING	DEV_STRING

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::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::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::FAULT

4 - CloseSocket

- **Description:** Close ethernet connection.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::FAULT

5 - WriteGetResponse

- **Description:** Write a command and get an answer.
- **Argin:**
DEV_STRING : Command
- **Argout:**
DEV_STRING : Answer
- **Command allowed for:**
 - Tango::ON
 - Tango::FAULT

6 - SendCtrlChar

- **Description:** Send a control character to the PMAC card & get its response, if any.
- **Argin:**
DEV_STRING : Control character to send:
 - A - abort all motion programs & moves
 - D - disable all PLC & PLCC programs
 - K - kill outputs for all motors
 - L - close rotary program buffer
 - O - do feed hold on all coordinate systems
 - Q - quit all programs at end of calculated moves
 - R - run working programs in all coordinate systems
 - S - step working programs in all coordinate systems
 - U - open rotary program buffer
 - B - report all motor status words to host
 - C - report all coordinate system status words to host
 - F - report all motor following errors (unscaled)
 - G - report global status words in binary form
 - P - report all motor positions (unscaled)
 - V - report all motor velocities (unscaled)
- **Argout:**
DEV_STRING : Command response from controller card, if any.
- **Command allowed for:**
 - Tango::ON
 - Tango::FAULT

7 - WriteReadAdrPort

- **Description:** Write a command and get an answer.
- **Argin:**
DEV_STRING : Command
- **Argout:**
DEV_STRING : Answer
- **Command allowed for:**
 - Tango::ON
 - Tango::FAULT

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