



**TANGO**  
Device  
Server

# MchCorrector User's Guide

## MchCorrector Class

Revision: - Author: yohann.lavigne  
Implemented in C++ - CVS repository: ESRF

### Introduction:

This class is able to control the ESRF Multi Channel Corrector It uses other classes: \*  
PowerSupplyCrate class \* PowerSupplyChannel class \* SRCorrectors class

### Class Identification:

- **Contact** : at esrf.fr - yohann.lavigne
- **Class Family** : PowerSupply
- **Platform** : All Platforms
- **Bus** : Not Applicable

### Class Inheritance:

- Tango::Device\_4Impl
  - MchCorrector

## Properties:

Device Properties		
Property name	Property type	Description
<b>CorrectorNames</b>	Array of string	The list of available corrector device names and their index in the multi channel array. All not assigned indexes will be filled with NaN values.
<b>MchCorrectorChannels</b>	Tango::DEV_SHORT	The number of individual corrector to be handled by the multi channel device.
<b>UpdatePeriod</b>	Tango::DEV_BOOLEAN	The update period for the underlying Taco multi channel corrector devices in milli seconds.

## Device Properties Default Values:

Property Name	Default Values
CorrectorNames	No default value
MchCorrectorChannels	No default value
UpdatePeriod	No default value

**There is no Class properties.**

## Attributes:

Spectrum Attributes			
Attribute name	Data Type	X Data Length	Expert
<b>Current:</b> Array of current values. Not yet available channels are filled with NaN values.	DEV_DOUBLE	256	No
<b>CorrectorStates:</b> The state of the individual corrector devices.	DEV_STATE	256	No
<b>CorrectorNames:</b> The names of the individual corrector devices.	DEV_STRING	256	No

# Commands:

More Details on commands....

Device Commands for Operator Level		
Command name	Argument In	Argument Out
<b>Init</b>	DEV_VOID	DEV_VOID
<b>State</b>	DEV_VOID	DEV_STATE
<b>Status</b>	DEV_VOID	CONST_DEV_STRING
<b>On</b>	DEV_VOID	DEV_VOID
<b>Off</b>	DEV_VOID	DEV_VOID
<b>SetpointCheck</b>	DEVVAR_DOUBLEARRAY	DEV_SHORT

## 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:**

## 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:**

### 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:**

### 4 - On

- **Description:** Switch all corrector on.
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

### 5 - Off

- **Description:** Switch all corrector off.
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

### 6 - SetpointCheck

- **Description:** Check the requested setpoint values for all corrector, against the corrector current limits.
- **Argin:**  
DEVVAR\_DOUBLEARRAY :

- **Argout:**  
**DEV\_SHORT :**

- **Command allowed for:**

TANGO is an open source project hosted by :  
**SOURCEFORGE.NET**®

Core and Tools : CVS repository on tango-cs project  
Device Servers : CVS repository on tango-ds project