Hqps Vibration
User's Guide

HqpsVib Class

Revision: releasetag - Author: taurel
Implemented in C++ - CVS repository: ESRF

Introduction:

This class is used in the HQPS2 project. It is used to get all the data related to the vibration level measued on one Rotabloc and computed vi a DSP (VDSP71). One VDSP71 board maanges vibration for 10 Rotabloc

Class Identification:

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

Class Inheritance:

- Tango::Device_4Impl
  - HqpsVib

Properties:

There is no Class properties.
There is no Device Properties.

States:

States	
Names	**Descriptions**
ON	The device is running
FAULT	There is a problem with the underlying VDSP board (borad in FAULT, Code being loaded...)

Attributes:

Scalar Attributes			
Attribute name	**Data Type**	**R/W Type**	**Expert**
SamplingPeriod: Sampling period to compute the vibration FFT	DEV_SHORT	READ	Yes
FFTAverage	DEV_SHORT	READ	Yes
VibrationRMS: Vibration RMS	DEV_FLOAT	READ	No
Vdsp71BoardDevName	DEV_STRING	READ	Yes

Spectrum Attributes			
Attribute name	**Data Type**	**X Data Length**	**Expert**
VibrationRMSHistory: history of the last computed vibration RMS	DEV_FLOAT	128	No
VibrationFFT: FFT computed on the vibration data	DEV_FLOAT	256	No
VibrationSpeedFFT	DEV_FLOAT	256	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

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