



TANGO
Device
Server

BILT channel interface

User's Guide

BiltCh Class

Revision: BiltCh-Release_1_6 - Author: meyer
Implemented in C++ - CVS repository: ESRF

Introduction:

The Bilt multi channel power supply has three individual channels. This class offers an interface to an individual channel of the power supply.

Class Identification:

- **Contact** : at esrf.fr - meyer
- **Class Family** : Miscellaneous
- **Platform** : Unix Like
- **Bus** : Tango
- **Manufacturer** : itest
- **Reference** : Bilt Module BE548

Class Inheritance:

- Tango::Device_4Impl
 - BiltCh

Properties:

Device Properties		
Property name	Property type	Description
BiltName	Tango::DEV_STRING	Name of the Bilt multi channel power supply device
PoleNumber	Tango::DEV_SHORT	The number of the channel or Pole of the Bilt power supply [0 -2]

Device Properties Default Values:

Property Name	Default Values
BiltName	none
PoleNumber	-1

There is no Class properties.

States:

States	
Names	Descriptions
ON	Magnet is ON, all three channels are ON.
OFF	Magnet is OFF, all three channels are OFF.
FAULT	Error detected by the BILT magnet.
ALARM	Alarm detected on one or more channels.
UNKNOWN	Communication fault

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
Current: The DC current of the selected pole.	DEV_DOUBLE	READ_WRITE	No
Voltage: The measured voltage of the selected pole.	DEV_DOUBLE	READ	No
Impedance: Calculated impedance of the selected pole.	DEV_DOUBLE	READ	No
SetCurrentRMS: Statistic when driven by the Libera. RMS value of the AC setpoint applied on the DAC during the last second. $X = \sqrt{(\text{sum}(\text{setAC}) * \text{sum}(\text{setAC})) / n - ((\text{sum}(\text{setAC})/n) * (\text{sum}(\text{setAC})/n))}$	DEV_DOUBLE	READ	No
SetCurrentAverage: Statistic when driven by the Libera. The average AC setpoint applied to the DAC during the last second. $X = \text{SUM}(\text{setAC})/n$	DEV_DOUBLE	READ	No
FramesPerSecond: Statistic when driven by the Libera. The number of setpoints per second.	DEV_ULONG	READ	No
ErrorPerSecond: Statistic when driven by the Libera. The number of errors detected per second.	DEV_ULONG	READ	No
ErrorCounter: Statistic when driven by the Libera. The total number of errors since the last reset.	DEV_ULONG	READ	No
LocalControl: If true the AC current can be set on the device, otherwise it is driven by the Libera.	DEV_BOOLEAN	READ_WRITE	No
SetCurrentAC: The AC current setpoint in local mode. If driven by the Libera, the attribute attribute value in INVALID.	DEV_DOUBLE	READ_WRITE	No
Temperature1: Temperature 1 of the pole.	DEV_DOUBLE	READ	No
Temperature2: Temperature 2 of the pole.	DEV_DOUBLE	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

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::FAULT
 - Tango::ALARM
 - 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::FAULT
 - Tango::ALARM
 - 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::FAULT
 - Tango::ALARM
 - Tango::UNKNOWN

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