



TANGO
Device
Server

Libera BPM Device Server User's Guide

Libera Class

Revision: release_1_2_6 - Author: nleclercq
Implemented in C++ - CVS repository: tango-ds

Introduction:

IT Libera BPM Device Server

Class Inheritance:

- Tango::Device_4Impl
 - Libera

Properties:

Class Properties		
Property name	Property type	Description
InterlockConfiguration	Array of double	The user defined interlock configuration. This is the configuration that should be applied on the Libera in case the device 'finds' the Libera in its default startup configuration when it is itself starting up or executing its Init TANGO command. This configuration can also be applied using the dedicated "SetInterlockConfiguration" expert command. Parameters mapping: [0] Interlock : mode - [0]: disabled, [1]: enabled, [3]: enabled with gain dependency [1] Interlock : threshold : X low in mm [2] Interlock : threshold : X high in mm [3] Interlock : threshold : Z low in mm (i.e. Y low in the Libera terminology) [4] Interlock : threshold : Z high in mm (i.e. Y high in the Libera terminology) [5] Interlock : overflow limit (ADC threshold) [6] Interlock : overflow duration (num of overloaded ADC samples before raising intlck) [7] Interlock : gain limit in dBm (intlck not active under this limit) - valid range is [-60, 0]
EnableDDOptionalData	Tango::DEV_BOOLEAN	Enables/Disables DD optional data (IxDD and QxDD)
EnableSAOptionalData	Tango::DEV_BOOLEAN	Enables/disables SA optional Data (currently not used)
EnableSAHistoryOptionalData	Tango::DEV_BOOLEAN	Enables/disables SA History optional data (sum history)
EnableADCOptionalData	Tango::DEV_BOOLEAN	Enables/disables ADC optional data (currently not used)
Institute	Tango::DEV_SHORT	0: TANGO_INSTITUTE (GENERIC) 1: ALBA 2: ESRF 3: ELETTRA 4: SOLEIL

Device Properties		
Property name	Property type	Description
LiberaIpAddr	Tango::DEV_STRING	The Libera IP address [no default value]
LiberaPort	Tango::DEV_SHORT	The port on which the generic server handles external requests. Defaults to 23721.
DefaultDDBufferSize	Tango::DEV_LONG	Default [or initial] value for attribute DDBufferSize [in samples]. Defaults to 1024.
Switches	Tango::DEV_SHORT	Switches configuration. The valid range is [0..15]. Defaults to 3.
LiberaMulticastIpAddr	Tango::DEV_STRING	Asynch. notifications (e.g. trigger events) will be send to this addr [no default value]

Location	Tango::DEV_STRING	The BPM location [TL1, BOOSTER, TL2 or STORAGE_RING]. No default value.
EnableExternalTrigger	Tango::DEV_BOOLEAN	Enables (or not) the external trigger source. Influences the TANGO device behaviour not the Libera itself. Defaults to false.
DDTaskActivityPeriod	Tango::DEV_ULONG	Specify the watch-dog (1) or data reading period (2) in ms. Must be in the range [500, 25000] ms. Defaults to 1000. (1) : external trigger enabled - (2) : external trigger disabled.
SATaskActivityPeriod	Tango::DEV_ULONG	Specify the watch-dog (1) or data reading period (2) in ms. Must be in the range [100, 25000] ms. Defaults to 100.
EnableDD	Tango::DEV_BOOLEAN	Specifies whether or not the DD data source should be enabled at startup. Defaults to false.
EnableSA	Tango::DEV_BOOLEAN	Specifies whether or not the SA data source should be enabled at startup. Defaults to false.
SAHistoryLength	Tango::DEV_ULONG	SA history buffer length [in samples]. Defaults to 8196.
DDDecimationFactor	Tango::DEV_USHORT	The DD decimation factor. Allowed values : 1 (no decimation) or 64 (for the so called booster normal mode)
EnableAutoSwitchingIfSAEnabled	Tango::DEV_BOOLEAN	When set to TRUE, auto-switching is automatically enabled when the SA data source is itself enabled
EnabledDSCIfAutoSwitchingEnabled	Tango::DEV_BOOLEAN	When set to TRUE, the Digital Signal Conditioning is automatically enabled when the auto-switching is itself enabled
DefaultSASatNumSamples	Tango::DEV_ULONG	Default number of SA history samples to use for RMS pos. computation. Defaults to 10 (last second in the SA history).
DefaultADCBufferSize	Tango::DEV_LONG	Default [or initial] value for attribute ADCBufferSize [in samples]. Defaults to 1024.
ADCTaskActivityPeriod	Tango::DEV_ULONG	Specifies the data reading period in ms. Must be in the range [500, 25000] ms. Defaults to 1000.
EnableADC	Tango::DEV_BOOLEAN	Specifies whether or not the ADC data source should be enabled at startup. Defaults to false.

DefaultTimePhaseValue	Tango::DEV_LONG	Default value for the machine time phase. Its valid range is [0, RfSfRatio - 1] where RfSfRatio is a machine dependent system property.
InterlockConfiguration	vector	The user defined interlock configuration. This is the configuration that should be applied on the Libera in case the device 'finds' the Libera in its default startup configuration when it is itself starting up or executing its Init TANGO command. This configuration can also be applied using the dedicated 'SetInterlockConfiguration' expert command. Parameters mapping: [0] Interlock : mode - [0]: disabled, [1]: enabled, [3]: enabled with gain dependency [1] Interlock : threshold : X low in mm [2] Interlock : threshold : X high in mm [3] Interlock : threshold : Z low in mm (i.e. Y low in the Libera terminology) [4] Interlock : threshold : Z high in mm (i.e. Y high in the Libera terminology) [5] Interlock : overflow limit (ADC threshold) [6] Interlock : overflow duration (num of overloaded ADC samples before raising intlck) [7] Interlock : gain limit in dBm (intlck not active under this limit) - valid range is [-60, 0]
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Institute	Tango::DEV_SHORT	0: TANGO_INSTITUTE (GENERIC) 1: ALBA 2: ESRF 3: ELETTRA 4: SOLEIL
MaxDDBufferSizeWhenDecimationEnabled	Tango::DEV_LONG	Max. DD buffer size when decimation enabled on DD data source. Defaults to 10000
PassBBAOffsetsToFPGA	Tango::DEV_BOOLEAN	Controls whether or not the BBA offsets are taken into account when computing the offsets passed to the FPGA process
FADataCacheRefreshPeriod	Tango::DEV_ULONG	The cache refresh period in msecs. Defaults to 500 ms (2Hz).

Class Properties Default Values:

Property Name	Default Values</td>
InterlockConfiguration	No default value
EnableDDOptionalData	false
EnableSAOptionalData	false
EnableSAHistoryOptionalData	false
EnableADCOptionalData	false
Institute	0

Device Properties Default Values:

Property Name	Default Values
LiberaIpAddr	No default value
LiberaPort	23271
DefaultDDBufferSize	1024
Switches	3
LiberaMulticastIpAddr	No default value
Location	No default value
EnableExternalTrigger	false
DDTaskActivityPeriod	1000
SATaskActivityPeriod	100
EnableDD	false
EnableSA	false
SAHistoryLength	512
DDDecimationFactor	1
EnableAutoSwitchingIfSAEnabled	true
EnableDSCIfAutoSwitchingEnabled	true
DefaultSASatNumSamples	256
DefaultADCBufferSize	1024
ADCTaskActivityPeriod	1000
EnableADC	false
DefaultTimePhaseValue	No default value
InterlockConfiguration	No default value
EnableDDOptionalData	false
EnableSAOptionalData	false
EnableSAHistoryOptionalData	false
EnableADCOptionalData	false
Institute	0
MaxDDBufferSizeWhenDecimationEnabled	16384
PassBBAOffsetsToFPGA	false
FADataCacheRefreshPeriod	500

States:

States	
Names	Descriptions
UNKNOWN	Device is not [or not properly] initialized
FAULT	Device initialization failed or unrecoverable error
ON	BPM is up and running

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
DDEnabled: DD data source activation flag	DEV_BOOLEAN	READ_WRITE	No
DDBufferSize: The number of samples to be read on DD data source. Influences the size of the associated attributes [such as XPosDD for instance].	DEV_LONG	READ_WRITE	No
DDDecimationFactor: The DD decimation factor	DEV_USHORT	READ_WRITE	No
DDTriggerOffset: DD data offset in num. of turns	DEV_LONG	READ_WRITE	No
DDBufferFreezingEnabled: DD buffer freezing activation flag	DEV_BOOLEAN	READ	No
DDBufferFrozen: DD buffer status	DEV_BOOLEAN	READ	No
DDTriggerCounter: Number of trigger notifications received since last device	DEV_LONG	READ	No
ExternalTriggerEnabled: External trigger activation flag	DEV_BOOLEAN	READ	No
ExternalTriggerDelay: The external trigger signal can be internally hardware delayed. The delay is set in steps of ADC samples of about 9ns.	DEV_LONG	READ_WRITE	No
SAEnabled: SA data source activation flag	DEV_BOOLEAN	READ_WRITE	No
VaSA: Slow Acquisition: Va	DEV_DOUBLE	READ	No
VbSA: Slow Acquisition: Vb	DEV_DOUBLE	READ	No
VcSA: Slow Acquisition: Vc	DEV_DOUBLE	READ	No
VdSA: Slow Acquisition: Vd	DEV_DOUBLE	READ	No
XPosSA: Slow Acquisition: X	DEV_DOUBLE	READ	No
ZPosSA: Slow Acquisition: Z	DEV_DOUBLE	READ	No
SumSA: Slow Acquisition: Sum	DEV_DOUBLE	READ	No

QuadSA: Slow Acquisition: Quad	DEV_DOUBLE	READ	No
CxSA: FOFB X correction sent to the power supply	DEV_LONG	READ	No
CzSA: FOFB Z correction sent to the power supply	DEV_LONG	READ	No
SASatNumSamples: The number of sample in SA history used to compute the SA statistics (Mean, RMS, Peak pos). The most recent samples will be used. The valid range is [2, SAHistoryLength property value].	DEV_LONG	READ_WRITE	No
XMeanPosSA: Slow Acquisition: X Mean Pos.	DEV_DOUBLE	READ	No
ZMeanPosSA: Slow Acquisition: Z Mean Pos.	DEV_DOUBLE	READ	No
XRMSPosSA: Slow Acquisition: X RMS Pos.	DEV_DOUBLE	READ	No
ZRMSPosSA: Slow Acquisition: Z RMS Pos.	DEV_DOUBLE	READ	No
XPeakPosSA: Slow Acquisition: X pos peak to peak amplitude	DEV_DOUBLE	READ	No
ZPeakPosSA: Slow Acquisition: X pos peak to peak amplitude	DEV_DOUBLE	READ	No
SumMeanSA: SA: mean of sum	DEV_DOUBLE	READ	No
ADCEnabled: ADC data source activation flag	DEV_BOOLEAN	READ_WRITE	No
ADCBufferSize: The number of samples to be read on ADC data source. Influences the size of the associated attributes [such as ADCChannelA for instance].	DEV_LONG	READ_WRITE	No
PMOffset: Internal delay of the post mortem trigger. Can be set in the range of +/- 10 ksamples.	DEV_LONG	READ_WRITE	No
PMNotified: Post Moterm notification flag	DEV_BOOLEAN	READ	No
PMNotificationCounter: Number a PM event recieved since last Init	DEV_SHORT	READ	No
InterlockXNotified	DEV_BOOLEAN	READ	No
InterlockZNotified	DEV_BOOLEAN	READ	No
InterlockAttnNotified	DEV_BOOLEAN	READ	No
InterlockADCPreFilterNotified	DEV_BOOLEAN	READ	No
InterlockADCPostFilterNotified	DEV_BOOLEAN	READ	No
XLow: Lower limit of the X position interlock threshold in mm	DEV_DOUBLE	READ	No
XHigh: Upper limit of the X position interlock threshold in mm	DEV_DOUBLE	READ	No
ZLow: Lower limit of the Z position interlock threshold in mm	DEV_DOUBLE	READ	No
ZHigh: Upper limit of the Z position interlock threshold in mm	DEV_DOUBLE	READ	No
AutoSwitchingEnabled: Auto switching status (true=enabled, false=disabled)	DEV_BOOLEAN	READ	No
Switches: Switches selection. Must be in [0, 15] or 255 for auto-switching.	DEV_SHORT	READ_WRITE	No
ExternalSwitching: Determines whether the ADC source switching will be triggered by the internally (false) or be the externally (true) by the machine clock.	DEV_BOOLEAN	READ_WRITE	No

SwitchingDelay: Delay for the ADC source switching.	DEV_LONG	READ_WRITE	No
OffsetTune: Determines the pll offset to tune the BPM. The unit is ~40Hz.	DEV_LONG	READ_WRITE	No
CompensateTune: Determines whether single or double offset tune will be employed. Default value is true, which means that the the double offset tune is employed.	DEV_BOOLEAN	READ_WRITE	No
DSCMode: Digital Signal Conditioning mode 0:OFF - 1:UNITY - 2:AUTO	DEV_SHORT	READ_WRITE	No
AGCEnabled: Enables/disables the Automatic Gain Control	DEV_BOOLEAN	READ_WRITE	No
Gain: The Libera input gain. Can't be change while the AGC is active	DEV_DOUBLE	READ_WRITE	No
HasMAFSupport:			
DEV_BOOLEAN	READ	No	
MAFLength: MAF Delay and MAF Length are two parameters, added to adjustable DDC design. They are used to determine the position and the length of the acquisition window according to the partial fill of the accelerator.	DEV_LONG	READ_WRITE	No
MAFDelay: MAF Delay and MAF Length are two parameters, added to adjustable DDC design. They are used to determine the position and the length of the acquisition window according to the partial fill of the accelerator.	DEV_LONG	READ_WRITE	No
MachineTime: Machine Time value to be applied on the Libera when the SetTimeOnNextTrigger command is executed	DEV_DOUBLE	READ_WRITE	No
TimePhase: The Machine Time Phase	DEV_LONG	READ_WRITE	No
SystemTime: System Time value to be applied on the Libera when the SetTimeOnNextTrigger command is executed Unit is num of secs since 1/1/1970 (Unix system time reference)	DEV_DOUBLE	READ_WRITE	No
SCPLLStatus: The SC PLL lock status	DEV_BOOLEAN	READ	No
MCPLLStatus: The MC PLL lock status	DEV_BOOLEAN	READ	No
HWTemperature: The current Libera hardware temperature	DEV_SHORT	READ	No
Fan1Speed: The current rotation speed of the first hardware cooling fan	DEV_SHORT	READ	No
Fan2Speed: The current rotation speed of the second hardware cooling fan	DEV_SHORT	READ	No
Incoherence: Result of the incoherence calculation. Am alarm will be set on the attribute when an incoherence was detected.	DEV_DOUBLE	READ	No
RefIncoherence: The reference incoherence value registered with the command SetReferenceIncoherence. The reference is used to calculate the alarm with the MaxIncoherenceDrift.	DEV_DOUBLE	READ	No
MaxIncoherence: Maximum incoherence value. Used to create an alarm on the Incoherence attribute.	DEV_DOUBLE	READ_WRITE	No
MaxIncoherenceDrift: Maximum incoherence drift value. Used to create an alarm on the Incoherence attribute.	DEV_DOUBLE	READ_WRITE	No
UpTime: Number of seconds since system boot on the host running this TANGO device	DEV_LONG	READ	No
CpuUsage: CPU usage on the host running this TANGO device	DEV_LONG	READ	No

FreeMemory: Amount of free memory on the host running this TANGO device	DEV_LONG	READ	No
RamFsUsage: Amount of ram-fs allocated bytes on the host running this TANGO device	DEV_LONG	READ	No
UseLiberaSAData: If set to true, the X & Z SA postions are retrieved from the Libera FPGA. Otherwise, they are computed by the Tango device using the button values.	DEV_BOOLEAN	READ_WRITE	Yes
LiberaModel: The Libera Model: 0:Electron, 1:Brillance, 2:Photon	DEV_USHORT	READ	No

Spectrum Attributes			
Attribute name	Data Type	X Data Length	Expert
XPosDD: Turn by turn data: X Pos.	DEV_DOUBLE	250000	No
ZPosDD: Turn by turn data: Z Pos.	DEV_DOUBLE	250000	No
QuadDD: Turn by turn data: Quad	DEV_DOUBLE	250000	No
SumDD: Turn by turn data: Sum	DEV_DOUBLE	250000	No
VaDD: Turn by turn data: Va	DEV_DOUBLE	250000	No
VbDD: Turn by turn data: Vb	DEV_DOUBLE	250000	No
VcDD: Turn by turn data: Vc	DEV_DOUBLE	250000	No
VdDD: Turn by turn data: Vd	DEV_DOUBLE	250000	No
XPosSAHistory: Slow Acquisition: SA X Pos. History	DEV_DOUBLE	16384	No
ZPosSAHistory: Slow Acquisition: SA Z Pos. History	DEV_DOUBLE	16384	No
SumSAHistory: Slow Acquisition: SA Sum Pos. History	DEV_DOUBLE	16384	No
XPosPM: Post Mortem : X pos.	DEV_DOUBLE	16384	No
ZPosPM: Post Mortem : Z pos.	DEV_DOUBLE	16384	No
QuadPM: Post Mortem : Quad	DEV_DOUBLE	16384	No
SumPM: Post Mortem : Sum	DEV_DOUBLE	16384	No
VaPM: Post Mortem : Va	DEV_DOUBLE	16384	No
VbPM: Post Mortem : Vb	DEV_DOUBLE	16384	No
VcPM: Post Mortem : Vc	DEV_DOUBLE	16384	No
VdPM: Post Mortem : Vd	DEV_DOUBLE	16384	No
ADCCChannelA: ADC values for pickup A	DEV_SHORT	250000	No
ADCCChannelB: ADC values for pickup B	DEV_SHORT	250000	No
ADCCChannelC: ADC values for pickup C	DEV_SHORT	250000	No
ADCCChannelD: ADC values for pickup D	DEV_SHORT	250000	No
IaDD: Turn by turn data: Ia	DEV_DOUBLE	250000	No

IbDD: Turn by turn data: Ib	DEV_DOUBLE	250000	No
IcDD: Turn by turn data: Ic	DEV_DOUBLE	250000	No
IdDD: Turn by turn data: Id	DEV_DOUBLE	250000	No
QaDD: Turn by turn data: Qa	DEV_DOUBLE	250000	No
QbDD: Turn by turn data: Qb	DEV_DOUBLE	250000	No
QcDD: Turn by turn data: Qc	DEV_DOUBLE	250000	No
QdDD: Turn by turn data: Qd	DEV_DOUBLE	250000	No
UserData: User defined data	DEV_SHORT	256	No
InterlockConfiguration: The current interlock configuration. The vector mapping is the following: [0] Mode : [0]: disabled, [1]: enabled, [3]: enabled with gain dependency [1] X low threshold in mm [2] X high threshold in mm [3] Z threshold low in mm [4] Z high threshold in mm [5] Overflow limit (ADC threshold) [6] Overflow duration (num of overloaded ADC samples before raising interlock) [7] Gain limit in dBm (no interlock under this threshold)	DEV_DOUBLE	8	No
logs	DEV_STRING	2048	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
GetParameters	DEV_VOID	DEVVAR_DOUBLESTRINGARRAY
UnfreezeDDBuffer	DEV_VOID	DEV_VOID
EnableDDBufferFreezing	DEV_VOID	DEV_VOID
DisableDDBufferFreezing	DEV_VOID	DEV_VOID
EnableDD	DEV_VOID	DEV_VOID
DisableDD	DEV_VOID	DEV_VOID
EnableSA	DEV_VOID	DEV_VOID
DisableSA	DEV_VOID	DEV_VOID
ResetPMNotification	DEV_VOID	DEV_VOID
ResetInterlockNotification	DEV_VOID	DEV_VOID
SetInterlockConfiguration	DEV_VOID	DEV_VOID
EnableADC	DEV_VOID	DEV_VOID
DisableADC	DEV_VOID	DEV_VOID
SetTimeOnNextTrigger	DEV_VOID	DEV_VOID
ReadFADData	DEVVAR_LONGARRAY	DEVVAR_LONGARRAY
WriteFADData	DEVVAR_LONGARRAY	DEV_VOID
SaveDSCParameters	DEV_VOID	DEV_VOID
ReloadSystemProperties	DEV_VOID	DEV_VOID
SetRefIncoherence	DEV_VOID	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::UNKNOWN
- Tango::FAULT
- Tango::ON

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::UNKNOWN
- Tango::FAULT
- Tango::ON

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::UNKNOWN
- Tango::FAULT
- Tango::ON

4 - GetParameters

- **Description:** Retrurns the current gains and offsets (i.e. the parameters used for position computation)

- **Argin:**

DEV_VOID : N/A

- **Argout:**

DEVVAR_DOUBLESTRINGARRAY : The BPM gain and offsets

- **Command allowed for:**

- Tango::ON

5 - UnfreezeDDBuffer

- **Description:** Unfreezes the DD buffer
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

6 - EnableDDBufferFreezing

- **Description:** Enables the DD buffer freezing mechanism
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

7 - DisableDDBufferFreezing

- **Description:** Disables the DD buffer freezing mechanism
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

8 - EnableDD

- **Description:** Enables the so called "data on demand" (i.e. first turns) data source
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

9 - DisableDD

- **Description:** Disables the so called "data on demand" (i.e. first turns) data source
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

10 - EnableSA

- **Description:** Enables the so called "slow acquisition" data source
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

11 - DisableSA

- **Description:** Disables the so called "slow acquisition" data source
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

12 - ResetPMNotification

- **Description:**
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

13 - ResetInterlockNotification

- **Description:** Resets the interlock notification flags to false
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

14 - SetInterlockConfiguration

- **Description:** Change interlock configuration using the InterlockConfiguration class (or device) property. Only modify the interlock configuration, the remaining env. parameters remain unchanged.
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

15 - EnableADC

- **Description:** Enables the so called ADC data source
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

16 - DisableADC

- **Description:** Disables the so called ADC data source
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

17 - SetTimeOnNextTrigger

- **Description:** Applies both machine et system time values on next trigger
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

18 - ReadFAData

- **Description:** Statring from[offset] in FA data block, reads [size of elems] * [num of elems] bytes.
- **Argin:**
DEVVAR_LONGARRAY : The reading parameters: [0]:offset in FA data block, [1]:size of elems, [2]:num of elems
- **Argout:**
DEVVAR_LONGARRAY : The data [as an array of bytes]
- **Command allowed for:**
 - Tango::ON

19 - WriteFAData

- **Description:** Starting from [offset] in Fa data block, writes [size of elems * num of elems]. The actual data to be written starts at index [4] in the input array.
- **Argin:**
DEVVAR_LONGARRAY : The writting parameters: [0]:offset in FA data block, bytes[1]:size of elems, [2]:num of elems, [3, ...]: actual to data to be written
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

20 - SaveDSCParameters

- **Description:** Saves the current DSC parameters
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

21 - ReloadSystemProperties

- **Description:**
- **Argin:**
DEV_VOID : n/a
- **Argout:**
DEV_VOID : n/a
- **Command allowed for:**
 - Tango::ON

22 - SetRefIncoherence

- **Description:** Set the actual incoherence value as reference value for the drift alarm calculation.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

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