

BunchUhr Tango Cpp Class

Contents :

- [Description](#)
- [Properties](#)
- [Commands](#)
 - [State](#)
 - [Status](#)
- [Attributes](#)
 - [Raster1](#)
 - [Delay1](#)
 - [RemoteControl1](#)
 - [Raster2](#)
 - [Delay2](#)
 - [RemoteControl2](#)
 - [Raster3](#)
 - [Delay3](#)
 - [DisplayMachineData](#)
- [States](#)

BunchUhr Class Identification :

Contact : at desy.de - jan.meyer
Class Family : Miscellaneous
Platform : Unix Like
Bus : Serial Line
Manufacturer : DESY MSK
Manufacturer ref. : Petra III Bunch Uhr

BunchUhr Class Inheritance :

- [Tango::DeviceImpl](#)
 - DeviceSerial
 - BunchUhr

BunchUhr Class Description :

Tango server for Petra III Bunch Uhr up from Version 3.04.

BunchUhr Properties :

There is no class properties

Device Properties			
Name	Description	Type	Default Value
Connection	If the connection is made local (local) or remote (remote) via a terminal server.	String	local
Host	Hostname or IP of the terminal server for remote connection.	String	localhost
Port	Port used on the terminal server for remote connection.	String	10000
Device	Device node used for local connection.	String	/dev/ttyS0
BaudRate	Connection speed in bits/s. Used for local connections only.	int	9600
DataBits	Number of data bits. Used for local connections only.	short	8
Parity	Whether and what kind of parity bit is used. May be none (N), odd (O), even (E), mark (M), or space (S). Used for local connections only.	String	N
StopBits	How many stop bits are used - for local connections only.	short	1
FlowControl	Whether XON/XOFF (software), CTS/RTS (hardware) or no (none) flow control is used.	String	none
TimeOut	Connection timeout in deciseconds. It has to be between 1 and 255ds.	short	20
AutoReconnect	Whether the server will automatically try to reconnect on errors.	String	true

BunchUhr Class Commands				
Name	Input type	Output type	Level	Description
State	DEV_VOID	DEV_STATE	OPERATOR	This command gets the device state (stored in its device_state data member) and returns it to the caller.
Status	DEV_VOID	CONST_DEV_STRING	OPERATOR	This command gets the device status (stored in its device_status data member) and returns it to the caller.

Command State :

This command gets the device state (stored in its device_state data member) and returns it to the caller.

State Definition		
Input Argument	Tango::DEV_VOID	none
Output Argument	Tango::DEV_STATE	Device state
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..

Command allowed for	All states	..

Command Status :

This command gets the device status (stored in its device_status data member) and returns it to the caller.

Status Definition		
Input Argument	Tango::DEV_VOID	none
Output Argument	Tango::CONST_DEV_STRING	Device status
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

BunchUhr Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
							Raster BC BT ----- ----- ----- 00 5,2Mhz 130Khz /40 bunch 01 7,8Mhz 130Khz /60 bunch 02 10,4Mhz 130Khz /80 bunch 03 16,9Mhz 130Khz /120 bunch 04 31,3Mhz 130Khz /240 bunch 05 46,8Mhz

RemoteControl1	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	configuration is done locally or via Tango. If set to false, all settings for this channel are ignored.
							<p>Raster BC BT</p> <p>-----</p> <p>-----</p> <p>00 5,2Mhz 130Khz /40 bunch</p> <p>01 7,8Mhz 130Khz /60 bunch</p> <p>02 10,4Mhz 130Khz /80 bunch</p> <p>03 16,9Mhz 130Khz /120 bunch</p> <p>04 31,3Mhz 130Khz /240 bunch</p> <p>05 46,8Mhz 130Khz /360 bunch</p> <p>06 62,5Mhz 130Khz /480 bunch</p> <p>07 auto 130Khz auto</p> <p>10 10,4Mhz 1Khz cycle /130</p> <p>11 10,4Mhz 5Khz cycle /26</p> <p>12 10,4Mhz 10Khz cylce /13</p> <p>13 10,4Mhz 65Khz cycle /2</p> <p>14 5,2Mhz 130Khz /40 bunch</p> <p>15 7,8Mhz 130Khz /60 bunch</p> <p>16 10,4Mhz 130Khz /80 bunch</p> <p>17 31,3Mhz 130Khz /240 bunch</p>
Raster2	false	false	Scalar	READ_WRITE	Tango::DEV_UCHAR	OPERATOR	

							20 65Khz 130Khz pulse duration 200ns 21 130Khz 130Khz pulse duration 200ns 22 260Khz 130Khz pulse duration 200ns 23 520Khz 130Khz pulse duration 200ns 24 reserved 25 reserved 26 reserved 27 reserved
Delay2	false	false	Scalar	READ_WRITE	Tango::DEV_SHORT	OPERATOR	Delay time for this channel.
RemoteControl2	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	Whether the configuration is done locally or via Tango. If set to false, all settings for this channel are ignored.
							Raster BC BT ----- ----- ----- 00 5,2Mhz 130Khz /40 bunch 01 7,8Mhz 130Khz /60 bunch 02 10,4Mhz 130Khz /80 bunch 03 16,9Mhz 130Khz /120 bunch 04 31,3Mhz 130Khz /240 bunch 05 46,8Mhz 130Khz /360 bunch

Raster3	false	false	Scalar	READ_WRITE	Tango::DEV_UCHAR	OPERATOR	06 62,5Mhz 130Khz /480 bunch 07 auto 130Khz auto 10 10,4Mhz 1Khz cycle /130 11 10,4Mhz 5Khz cycle /26 12 10,4Mhz 10Khz cylce /13 13 10,4Mhz 65Khz cycle /2 14 5,2Mhz 130Khz /40 bunch 15 7,8Mhz 130Khz /60 bunch 16 10,4Mhz 130Khz /80 bunch 17 31,3Mhz 130Khz /240 bunch 20 65Khz 130Khz pulse duration 200ns 21 130Khz 130Khz pulse duration 200ns 22 260Khz 130Khz pulse duration 200ns 23 520Khz 130Khz pulse duration 200ns 24 reserved 25 reserved 26 reserved 27 reserved
Delay3	false	false	Scalar	READ_WRITE	Tango::DEV_SHORT	OPERATOR	Delay time for this channel.
							If set to true, the BunchUhr

DisplayMachineData	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	will display the machine status. Otherwise, the actual configuration is shown.
------------------------------------	-------	-------	--------	------------	--------------------	----------	--

There is no dynamic attribute defined.

Attribute Raster1 :

Raster BC BT

-
- 00 5,2Mhz 130Khz /40 bunch
 - 01 7,8Mhz 130Khz /60 bunch
 - 02 10,4Mhz 130Khz /80 bunch
 - 03 16,9Mhz 130Khz /120 bunch
 - 04 31,3Mhz 130Khz /240 bunch
 - 05 46,8Mhz 130Khz /360 bunch
 - 06 62,5Mhz 130Khz /480 bunch
 - 07 auto 130Khz auto
 - 10 10,4Mhz 1Khz cycle /130
 - 11 10,4Mhz 5Khz cycle /26
 - 12 10,4Mhz 10Khz cycle /13
 - 13 10,4Mhz 65Khz cycle /2
 - 14 5,2Mhz 130Khz /40 bunch
 - 15 7,8Mhz 130Khz /60 bunch
 - 16 10,4Mhz 130Khz /80 bunch
 - 17 31,3Mhz 130Khz /240 bunch
 - 20 65Khz 130Khz pulse duration 200ns
 - 21 130Khz 130Khz pulse duration 200ns
 - 22 260Khz 130Khz pulse duration 200ns
 - 23 520Khz 130Khz pulse duration 200ns
 - 24 reserved
 - 25 reserved
 - 26 reserved
 - 27 reserved

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_UCHAR
Display Level	OPERATOR

Attribute Properties	
label	RasterLeft
unit	
standard unit	
display unit	
format	%2d

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set

Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

max_value	27
min_value	0
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

Attribute Delay1 :

Delay time for this channel.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_SHORT
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none"> • INIT • FAULT
Write NOT allowed for	<ul style="list-style-type: none"> • INIT • FAULT

Attribute Properties	
label	DelayLeft
unit	ns
standard unit	ns
display unit	ns
format	%4d
max_value	9999
min_value	0
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

Attribute RemoteControl1 :

Whether the configuration is done locally or via Tango. If set to false, all settings for this channel are ignored.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_BOOLEAN
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none">• INIT• FAULT
Write NOT allowed for	<ul style="list-style-type: none">• INIT• FAULT

Attribute Properties	
label	RemoteControlLeft
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

Attribute Raster2 :

Raster BC BT

-
- 00 5,2Mhz 130Khz /40 bunch
 - 01 7,8Mhz 130Khz /60 bunch
 - 02 10,4Mhz 130Khz /80 bunch
 - 03 16,9Mhz 130Khz /120 bunch
 - 04 31,3Mhz 130Khz /240 bunch
 - 05 46,8Mhz 130Khz /360 bunch
 - 06 62,5Mhz 130Khz /480 bunch
 - 07 auto 130Khz auto
 - 10 10,4Mhz 1Khz cycle /130

- 11 10,4Mhz 5Khz cycle /26
- 12 10,4Mhz 10Khz cycle /13
- 13 10,4Mhz 65Khz cycle /2
- 14 5,2Mhz 130Khz /40 bunch
- 15 7,8Mhz 130Khz /60 bunch
- 16 10,4Mhz 130Khz /80 bunch
- 17 31,3Mhz 130Khz /240 bunch
- 20 65Khz 130Khz pulse duration 200ns
- 21 130Khz 130Khz pulse duration 200ns
- 22 260Khz 130Khz pulse duration 200ns
- 23 520Khz 130Khz pulse duration 200ns
- 24 reserved
- 25 reserved
- 26 reserved
- 27 reserved

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_UCHAR
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	RasterRight
unit	
standard unit	
display unit	
format	%2d
max_value	27
min_value	0
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

Attribute Delay2 :

Delay time for this channel.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_SHORT
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	DelayRight
unit	ns
standard unit	ns
display unit	ns
format	%4d
max_value	9999
min_value	0
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

Attribute RemoteControl2 :

Whether the configuration is done locally or via Tango. If set to false, all settings for this channel are ignored.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_BOOLEAN
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read	

Attribute Properties	
label	RemoteControlRight
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set

allowed for	All states
Write allowed for	All states

delta_time	
delta_val	

Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

Attribute Raster3 :

Raster BC BT

-
- 00 5,2Mhz 130Khz /40 bunch
 - 01 7,8Mhz 130Khz /60 bunch
 - 02 10,4Mhz 130Khz /80 bunch
 - 03 16,9Mhz 130Khz /120 bunch
 - 04 31,3Mhz 130Khz /240 bunch
 - 05 46,8Mhz 130Khz /360 bunch
 - 06 62,5Mhz 130Khz /480 bunch
 - 07 auto 130Khz auto
 - 10 10,4Mhz 1Khz cycle /130
 - 11 10,4Mhz 5Khz cycle /26
 - 12 10,4Mhz 10Khz cylce /13
 - 13 10,4Mhz 65Khz cycle /2
 - 14 5,2Mhz 130Khz /40 bunch
 - 15 7,8Mhz 130Khz /60 bunch
 - 16 10,4Mhz 130Khz /80 bunch
 - 17 31,3Mhz 130Khz /240 bunch
 - 20 65Khz 130Khz pulse duration 200ns
 - 21 130Khz 130Khz pulse duration 200ns
 - 22 260Khz 130Khz pulse duration 200ns
 - 23 520Khz 130Khz pulse duration 200ns
 - 24 reserved
 - 25 reserved
 - 26 reserved
 - 27 reserved

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_UCHAR
Display Level	OPERATOR
Inherited	false
Abstract	false

Attribute Properties	
label	RasterBack
unit	
standard unit	
display unit	
format	%2d
max_value	27
min_value	0

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set

Polling Period Memorized	Not polled Not set
Read allowed for	All states
Write allowed for	All states

max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

Attribute Delay3 :

Delay time for this channel.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_SHORT
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	DelayBack
unit	ns
standard unit	ns
display unit	ns
format	%4d
max_value	9999
min_value	0
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

Attribute DisplayMachineData :

If set to true, the BunchUhr will display the machine status. Otherwise, the actual configuration is shown.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_BOOLEAN
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none"> INIT FAULT
Write NOT allowed for	<ul style="list-style-type: none"> INIT FAULT

Attribute Properties	
label	DisplayMachineData
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

BunchUhr Class States	
Name	Description
ON	Device is in working order and waiting for commands.
INIT	The device server is initializing the connection and reading out the current state.
FAULT	Device is not connected, not running or does not work as expected.