PulseGeneration Tango Cpp Class

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PulseGeneration Class Identification :

Contact	: at null - null
Class Family	:
Platform	:
Bus	:
Manufacturer	:
Manufacturer ref.	:

PulseGeneration Class Inheritance :

- Tango::DeviceImpl
  - PulseGeneration

PulseGeneration Class Description :

2 modes (depending on properties):

-Mode Retrig: Generate a single pulse on 8 counters each time a trigger is received.

-Mode Continuous: Generate pulses continuously on 8 counters.

The delay and the width of each pulse is configurable.

PulseGeneration Properties :

There is no class properties

Device Properties			
Name	**Description**	**Type**	**Default Value**
TriggerSource	The name of the terminal for the input trigger as specified by NI (PFIxx). The trigger can be configured as following: - for finite and continuous modes, this trigger can be used as a start trigger (cf UseExtStartTrigger). If no start trigger is used, a counter of the board will be used to start all the other counters. - for retrig mode, each trigger will launch the generation of a pulses train. So the possible values are PFIxx	String	none
BoardName	The name of the board.	String	none
AutoStart	If true, the generation will start at device startup and when command ``Init`` is executed.	boolean	none
Clock	The clock used. Possible values are ``INTERNAL`` or ``PFIxx``, with xx the pin number.	String	none

ExternalFrequency	In case of using an external clock, the frequency of this clock in Hz.	double	none
IdleStateCounter0	cCan be LOW or HIGH.	String	none
IdleStateCounter1		String	none
IdleStateCounter2		String	none
IdleStateCounter3		String	none
IdleStateCounter4		String	none
IdleStateCounter5		String	none
IdleStateCounter6		String	none
IdleStateCounter7		String	none
UseExtStartTrigger	If true, use the TriggerSource to start the generation in Finite or Continuous Mode.	boolean	none
TriggerEdge	values : POSITIVE or NEGATIVE. Set if the external trigger is posivite edge or negative edge.	String	none

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PulseGeneration 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.
Start	DEV_VOID	DEV_VOID	OPERATOR	Start generations of pulses.
Stop	DEV_VOID	DEV_VOID	OPERATOR	Stop generations of pulses.
Abort	DEV_VOID	DEV_VOID	OPERATOR	Abort generations.
ResetBoard	DEV_VOID	DEV_VOID	EXPERT	Reset the physical board. After this command, the board is in an unknown state (no more configured). The device must be initialized.
GetDriverVersion	DEV_VOID	DEV_STRING	EXPERT	Get the current version of the driver installed for NI counter boards.
GetBoardsInChassis	DEV_VOID	DEV_STRING	EXPERT	Get a string containing all the boards names (from NI) present in the chassis where this device is running. This names are defined in MAX.
GetBoardType	DEV_STRING	DEV_STRING	EXPERT	Returns the type (ex: PXI-6602) of a specified board.

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	State Code
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	Status description
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command Start :

Start generations of pulses.

Start Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..

Polling Period	Not polled	..
Command NOT allowed for	• UNKNOWN • RUNNING	..

Command Stop :

Stop generations of pulses.

Stop Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	• UNKNOWN	..

Command Abort :

Abort generations.

Abort Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	• UNKNOWN • STANDBY	..

Command ResetBoard :

Reset the physical board. After this command, the board is in an unknown state (no more configured). The device must be initialized.

ResetBoard Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	EXPERT	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command GetDriverVersion :

Get the current version of the driver installed for NI counter boards.

GetDriverVersion Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_STRING	The driver version
DisplayLevel	EXPERT	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command GetBoardsInChassis :

Get a string containing all the boards names (from NI) present in the chassis where this device is running. This names are defined in MAX.

GetBoardsInChassis Definition	

Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_STRING	All the names of NI boards.
DisplayLevel	EXPERT	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command GetBoardType :

Returns the type (ex: PXI-6602) of a specified board.

GetBoardType Definition		
Input Argument	Tango::DEV_STRING	The board name.
Output Argument	Tango::DEV_STRING	The board type.
DisplayLevel	EXPERT	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

PulseGeneration Class Attributes							
Name	**Inherited**	**Abstract**	**Attr. type**	**R/W type**	**Data type**	**Level**	**Description**
generationType	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	Possible values: \n- CONTINUOUS: after a start, pulses are continuously generated until stop. \n- FINITE: after a start, a finite number of pulse are generated.

							\n- RETRIG. after a start, generate pulses after each received trigger.
pulseNumber	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	
counter0Enable	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	counter 0 is disable if 0, enable otherwise.
initialDelay0	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	
delayCounter0	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Delay in milliseconds for counter 0.
pulseWidthCounter0	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	The pulse width in milliseconds of pulses generated by counter 0.
counter1Enable	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	counter 1 is disable if 0, enable otherwise.
initialDelay1	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	
delayCounter1	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Delay in milliseconds for counter 1.
pulseWidthCounter1	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	The pulse width in milliseconds of pulses generated by counter 1.
counter2Enable	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	counter 2 is disable if 0, enable otherwise.
initialDelay2	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	
delayCounter2	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Delay in milliseconds for counter 2.
pulseWidthCounter2	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	The pulse width in milliseconds of pulses generated by counter 2.
counter3Enable	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	counter 3 is disable if 0, enable otherwise.
initialDelay3	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	
delayCounter3	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Delay in milliseconds for counter 3.
							The pulse width

pulseWidthCounter3	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	in milliseconds of pulses generated by counter 3.
counter4Enable	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	counter 4 is disable if 0, enable otherwise.
initialDelay4	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	
delayCounter4	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Delay in milliseconds for counter 4.
pulseWidthCounter4	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	The pulse width in milliseconds of pulses generated by counter 4.
counter5Enable	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	counter 5 is disable if 0, enable otherwise.
initialDelay5	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	
delayCounter5	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Delay in milliseconds for counter 5.
pulseWidthCounter5	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	The pulse width in milliseconds of pulses generated by counter 5.
counter6Enable	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	counter 6 is disable if 0, enable otherwise.
initialDelay6	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	
delayCounter6	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Delay in milliseconds for counter 6.
pulseWidthCounter6	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	The pulse width in milliseconds of pulses generated by counter 6.
counter7Enable	false	false	Scalar	READ_WRITE	Tango::DEV_BOOLEAN	OPERATOR	counter 7 is enable if true, disable otherwise.
initialDelay7	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	
delayCounter7	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Delay in milliseconds for counter 7.
pulseWidthCounter7	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	The pulse width in milliseconds of pulses generated by

							counter 7.

There is no dynamic attribute defined.

Attribute generationType :

Possible values:
\n- CONTINUOUS: after a start, pulses are continuously generated until stop.
\n- FINITE: after a start, a finite number of pulse are generated.
\n- RETRIG. after a start, generate pulses after each received trigger.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	generationType
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	Not set

Attribute pulseNumber :

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	pulseNumber
unit	
standard unit	
display unit	
format	%3d
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	Not set

Attribute counter0Enable :

counter 0 is disable if 0, enable otherwise.

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	true
Write hardware at init.	true

Attribute Properties	
label	counter 0 enable
unit	
standard unit	
display unit	
format	%1d
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	

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	false

Read allowed for	All states
Write allowed for	All states

delta_val	

code	
Push Archive event by user code	false
Push DataReady event by user code	Not set

Attribute initialDelay0 :

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

Attribute Properties	
label	initialDelay0
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute delayCounter0 :

Delay in milliseconds for counter 0.

Attribute	

Attribute	

Attribute Event Criteria	

Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Properties	
label	delay counter 0
unit	msecs
standard unit	
display unit	
format	%10.9s
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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	Not set

Attribute pulseWidthCounter0 :

The pulse width in milliseconds of pulses generated by counter 0.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read	

Attribute Properties	
label	pulse width counter 0
unit	msecs
standard unit	
display unit	
format	%10.9s
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	

allowed for	All states
Write allowed for	All states

code	false
Push DataReady event by user code	Not set

Attribute counter1Enable :

counter 1 is disable if 0, enable otherwise.

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	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	counter 1 enable
unit	
standard unit	
display unit	
format	%1d
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	Not set

Attribute initialDelay1 :

Attribute Definition	

Attribute Properties	

Attribute Event Criteria	
Periodic	Not set

Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

label	initialDelay1
unit	msecs
standard unit	
display unit	
format	%10.9s
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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	Not set

Attribute delayCounter1 :

Delay in milliseconds for counter 1.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed	

Attribute Properties	
label	delay counter 1
unit	msecs
standard unit	
display unit	
format	%10.9s
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

for	All states

Push DataReady event by user code	Not set

Attribute pulseWidthCounter1 :

The pulse width in milliseconds of pulses generated by counter 1.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	pulse width counter 1
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute counter2Enable :

counter 2 is disable if 0, enable otherwise.

Attribute Definition	
Attribute	Scalar

Attribute Properties	
	counter 2

Attribute Event Criteria	
Periodic	Not set

Type	
R/W Type	READ_WRITE
Data Type	Tango::DEV_BOOLEAN
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

label	enable
unit	
standard unit	
display unit	
format	%1d
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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	Not set

Attribute initialDelay2 :

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	initialDelay2
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute delayCounter2 :

Delay in milliseconds for counter 2.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	delay counter 2
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute pulseWidthCounter2 :

The pulse width in milliseconds of pulses generated by counter 2.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE

Attribute Properties	
label	pulse width counter 2
unit	msecs

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set

Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

standard unit	
display unit	
format	%10.9s
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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	Not set

Attribute counter3Enable :

counter 3 is disable if 0, enable otherwise.

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	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	counter 3 enable
unit	
standard unit	
display unit	
format	%1d
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	Not set

Attribute initialDelay3 :

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	initialDelay3
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute delayCounter3 :

Delay in milliseconds for counter 3.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE

Attribute Properties	
label	delay counter 3
unit	msecs
standard unit	

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

Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

display unit	
format	%10.9s
max_value	
min_value	
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	Not set

Attribute pulseWidthCounter3 :

The pulse width in milliseconds of pulses generated by counter 3.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	pulse width counter 3
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute counter4Enable :

counter 4 is disable if 0, enable otherwise.

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	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	counter 4 enable
unit	
standard unit	
display unit	
format	%1d
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	Not set

Attribute initialDelay4 :

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

Attribute Properties	
label	initialDelay4
unit	msecs
standard unit	
display unit	
format	%10.9s

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

Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

max_value	
min_value	
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	Not set

Attribute delayCounter4 :

Delay in milliseconds for counter 4.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	delay counter 4
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute pulseWidthCounter4 :

The pulse width in milliseconds of pulses generated by counter 4.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	pulse width counter 4
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute counter5Enable :

counter 5 is disable if 0, enable otherwise.

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

Attribute Properties	
label	counter 5 enable
unit	
standard unit	
display unit	

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

Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

format	%1d
max_value	
min_value	
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	Not set

Attribute initialDelay5 :

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	initialDelay5
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute delayCounter5 :

Delay in milliseconds for counter 5.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	delay counter 5
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute pulseWidthCounter5 :

The pulse width in milliseconds of pulses generated by counter 5.

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

Attribute Properties	
label	pulse width counter 5
unit	msecs
standard unit	
display unit	
format	%10.9s

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

Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

max_value	
min_value	
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	Not set

Attribute counter6Enable :

counter 6 is disable if 0, enable otherwise.

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	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	counter 6 enable
unit	
standard unit	
display unit	
format	%1d
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	Not set

Attribute initialDelay6 :

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	initialDelay6
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute delayCounter6 :

Delay in milliseconds for counter 6.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling	Not polled

Attribute Properties	
label	delay counter 6
unit	msecs
standard unit	
display unit	
format	%10.9s
max_value	
min_value	

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

Period	
Memorized	true
Write hardware at init.	true
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	Not set

Attribute pulseWidthCounter6 :

The pulse width in milliseconds of pulses generated by counter 6.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	pulse width counter 6
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute counter7Enable :

counter 7 is enable if true, disable otherwise.

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	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	counter 7 enable
unit	
standard unit	
display unit	
format	%1d
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	Not set

Attribute initialDelay7 :

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

Attribute Properties	
label	initialDelay7
unit	msecs
standard unit	
display unit	
format	%10.9s
max_value	
min_value	
max_alarm	

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

Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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	Not set

Attribute delayCounter7 :

Delay in milliseconds for counter 7.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	delay counter 7
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

Attribute pulseWidthCounter7 :

The pulse width in milliseconds of pulses generated by counter 7.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	pulse width counter 7
unit	msecs
standard unit	
display unit	
format	%10.9s
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	Not set

PulseGeneration Class States	
Name	**Description**
UNKNOWN	
STANDBY	
RUNNING	