



**TANGO**  
Device  
Server

# Wave Master Control User's Guide

## WaveMaster Class

Revision: Release\_2\_1 - Author: verdier  
Implemented in C++ - CVS repository: ESRF

### Introduction:

This class is able to controle a Lecroy WaveMaster Oscilloscope.

### Class Inheritance:

- Tango::Device\_4Impl
  - WaveMaster

### Class Description:

Click on picture for information about Wavemaster oscilloscope controlled by this device server:



## Properties:

<b>Device Properties</b>		
<b>Property name</b>	<b>Property type</b>	<b>Description</b>
<b>DeviceAddress</b>	Tango::DEV_STRING	The WaveMaster IP address.
<b>RemoteDevice</b>	Tango::DEV_SHORT	Zero if local (device server running on WaveMaster host).
<b>AcquisitionPeriod</b>	Tango::DEV_LONG	Time to wait between clear_sweep and read values in seconds.
<b>PanelSetup</b>	Tango::DEV_SHORT	Panel Setup number used at startup.
<b>HdbDevice</b>	Tango::DEV_STRING	Hdb push data device name.

## Device Properties Default Values:

<b>Property Name</b>	<b>Default Values</b>
DeviceAddress	No default value
RemoteDevice	No default value
AcquisitionPeriod	60
PanelSetup	No default value
HdbDevice	No default value

**There is no Class properties.**

## States:

<b>States</b>	
<b>Names</b>	<b>Descriptions</b>
<b>UNKNOWN</b>	Initilization failed.
<b>ON</b>	The device is OK.
<b>RUNNING</b>	The device is in automatic mode.
<b>FAULT</b>	The connection to the WaveMaster failed.

## Attributes:

<b>Scalar Attributes</b>			
<b>Attribute name</b>	<b>Data Type</b>	<b>R/W Type</b>	<b>Expert</b>
<b>Delay</b>	DEV_DOUBLE	READ	No
<b>Length</b>	DEV_DOUBLE	READ	No

## Commands:

More Details on commands....

Device Commands for Operator Level		
Command name	Argument In	Argument Out
<b>Init</b>	DEV_VOID	DEV_VOID
<b>State</b>	DEV_VOID	DEV_STATE
<b>Status</b>	DEV_VOID	CONST_DEV_STRING
<b>ClearSweep</b>	DEV_VOID	DEV_VOID
<b>ReadValues</b>	DEV_VOID	DEVVAR_DOUBLEARRAY
<b>WriteReadCmd</b>	DEV_STRING	DEV_STRING
<b>WriteCmd</b>	DEV_STRING	DEV_VOID
<b>StartAutomaticMode</b>	DEV_VOID	DEV_VOID
<b>StoptAutomaticMode</b>	DEV_VOID	DEV_VOID
<b>RecallSetup</b>	DEV_SHORT	DEV_VOID
<b>SaveSetup</b>	DEV_SHORT	DEV_VOID
<b>OpenConnection</b>	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::ON
  - Tango::RUNNING
  - 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::UNKNOWN
  - Tango::ON
  - Tango::RUNNING
  - 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::UNKNOWN
  - Tango::ON
  - Tango::RUNNING
  - Tango::FAULT

## 4 - ClearSweep

- **Description:** Start bunch length measurements sequence.
- **Argin:**  
**DEV\_VOID** :
- **Argout:**  
**DEV\_VOID** :
- **Command allowed for:**
  - Tango::ON

- Tango::RUNNING

## 5 - ReadValues

- **Description:**
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEVVAR\_DOUBLEARRAY : delay and length
- **Command allowed for:**
  - Tango::ON
  - Tango::RUNNING

## 6 - WriteReadCmd

- **Description:** Write a specific command to the WaveMaster and Read Answer. Mainly used to test.
- **Argin:**  
DEV\_STRING : WaveMaster command
- **Argout:**  
DEV\_STRING : WaveMaster response
- **Command allowed for:**
  - Tango::ON
  - Tango::RUNNING

## 7 - WriteCmd

- **Description:** Write a specific command to the WaveMaster. Mainly used to test.
- **Argin:**  
DEV\_STRING : WaveMaster command
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::ON
  - Tango::RUNNING

## 8 - StartAutomaticMode

- **Description:**
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::ON
  - Tango::RUNNING
  - Tango::FAULT

## 9 - StoptAutomaticMode

- **Description:**
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::ON
  - Tango::RUNNING
  - Tango::FAULT

## 10 - RecallSetup

- **Description:** Recall a non volatil panel setup.
- **Argin:**  
DEV\_SHORT : Panel setup number.
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::ON
  - Tango::RUNNING

## 11 - SaveSetup

- **Description:** Save panel setup in a non volatil memory.
- **Argin:**  
**DEV\_SHORT** : Panel setup number.
- **Argout:**  
**DEV\_VOID** :
- **Command allowed for:**
  - Tango::ON
  - Tango::RUNNING

## 12 - OpenConnection

- **Description:** Open a WaveMaster connection.
- **Argin:**  
**DEV\_VOID** :
- **Argout:**  
**DEV\_VOID** :
- **Command allowed for:**
  - Tango::UNKNOWN
  - Tango::FAULT

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