



**TANGO**  
Device  
Server

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# **ImgGrabber User's Guide**

## **ImgGrabber Class**

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Implemented in C++ - CVS repository: tango-ds

### **Introduction:**

### **Class Inheritance:**

- Tango::Device\_4Impl
  - ImgGrabber

### **Properties:**

| Device Properties     |                    |                                                                   |
|-----------------------|--------------------|-------------------------------------------------------------------|
| Property name         | Property type      | Description                                                       |
| <b>PluginLocation</b> | Tango::DEV_STRING  | the full path to the ImgGrabber plugin                            |
| <b>MoviePath</b>      | Tango::DEV_STRING  | the path where the movie/images are recorded                      |
| <b>MovieFormat</b>    | Tango::DEV_STRING  | the format of the saved files : JPG, PNG, TIF, PGM, BMP, DIB, RAS |
| <b>AutoStart</b>      | Tango::DEV_BOOLEAN | automatically start grabbing at init                              |

### Device Properties Default Values:

| Property Name  | Default Values   |
|----------------|------------------|
| PluginLocation | undefined        |
| MoviePath      | No default value |
| MovieFormat    | AVI              |
| AutoStart      | No default value |

**There is no Class properties.**

### States:

| States         |              |
|----------------|--------------|
| Names          | Descriptions |
| <b>OPEN</b>    |              |
| <b>CLOSE</b>   |              |
| <b>RUNNING</b> |              |
| <b>STANDBY</b> |              |
| <b>FAULT</b>   |              |

### Attributes:

| Scalar Attributes                                                                               |             |          |        |
|-------------------------------------------------------------------------------------------------|-------------|----------|--------|
| Attribute name                                                                                  | Data Type   | R/W Type | Expert |
| <b>CurrentlySavingMovie:</b> true if a movie is been saved                                      | DEV_BOOLEAN | READ     | No     |
| <b>MovieRemainingTime:</b> The time remaining until the end of the movie currently beeing saved | DEV_STRING  | READ     | No     |

| Image Attributes                 |            |               |               |        |
|----------------------------------|------------|---------------|---------------|--------|
| Attribute name                   | Data Type  | X Data Length | Y Data Length | Expert |
| <b>Image:</b> the acquired image | DEV_USHORT | 2048          | 2048          | 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>Open</b>                        | DEV_VOID                 | DEV_VOID         |
| <b>Close</b>                       | DEV_VOID                 | DEV_VOID         |
| <b>Start</b>                       | DEV_VOID                 | DEV_VOID         |
| <b>Stop</b>                        | DEV_VOID                 | DEV_VOID         |
| <b>StartSaveMovie</b>              | DEVVAR_DOUBLESTRINGARRAY | DEV_VOID         |
| <b>StopSaveMovie</b>               | DEV_VOID                 | DEV_VOID         |
| <b>Snap</b>                        | DEV_VOID                 | DEV_VOID         |
| <b>SetROI</b>                      | DEVVAR_LONGARRAY         | DEV_VOID         |
| <b>GetROI</b>                      | DEV_VOID                 | DEVVAR_LONGARRAY |
| <b>ResetROI</b>                    | DEV_VOID                 | DEV_VOID         |
| <b>SaveSettings</b>                | DEV_VOID                 | DEV_VOID         |
| <b>GetPluginInfo</b>               | DEV_VOID                 | 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::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY
  - 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::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY
  - 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::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY
  - Tango::FAULT

## 4 - Open

- **Description:**
- **Argin:**  
**DEV\_VOID** :
- **Argout:**  
**DEV\_VOID** :
- **Command allowed for:**
  - Tango::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY

## 5 - Close

- **Description:**
- **Argin:**  
**DEV\_VOID** :
- **Argout:**  
**DEV\_VOID** :
- **Command allowed for:**
  - Tango::OPEN

- Tango::CLOSE
- Tango::RUNNING
- Tango::STANDBY

## 6 - Start

- **Description:**
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY

## 7 - Stop

- **Description:**
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY

## 8 - StartSaveMovie

- **Description:** saves a movie in the directory specified in the MoviePath property, and with the format specified as MovieFormat.
- **Argin:**  
DEVVAR\_DOUBLESTRINGARRAY : duration of the movie & file base-name
- **Argout:**

**DEV\_VOID :**

- **Command allowed for:**

- Tango::OPEN
- Tango::CLOSE
- Tango::RUNNING
- Tango::STANDBY
- Tango::FAULT

## **9 - StopSaveMovie**

- **Description:** immediately stops the movie saving

- **Argin:**

**DEV\_VOID :**

- **Argout:**

**DEV\_VOID :**

- **Command allowed for:**

- Tango::OPEN
- Tango::CLOSE
- Tango::RUNNING
- Tango::STANDBY
- Tango::FAULT

## **10 - Snap**

- **Description:**

- **Argin:**

**DEV\_VOID :**

- **Argout:**

**DEV\_VOID :**

- **Command allowed for:**

- Tango::OPEN
- Tango::CLOSE
- Tango::RUNNING
- Tango::STANDBY
- Tango::FAULT

## 11 - SetROI

- **Description:**
- **Argin:**  
DEVVAR\_LONGARRAY : [origin\_x, origin\_y, width, height]
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY
  - Tango::FAULT

## 12 - GetROI

- **Description:**
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEVVAR\_LONGARRAY : [origin\_x, origin\_y, width, height]
- **Command allowed for:**
  - Tango::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY
  - Tango::FAULT

## 13 - ResetROI

- **Description:**
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::OPEN

- Tango::CLOSE
- Tango::RUNNING
- Tango::STANDBY
- Tango::FAULT

## 14 - SaveSettings

- **Description:** save the current acquisition parameters to the device Properties
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY
  - Tango::FAULT

## 15 - GetPluginInfo

- **Description:** Retrieves information about the grabber plugin used
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_STRING :
- **Command allowed for:**
  - Tango::OPEN
  - Tango::CLOSE
  - Tango::RUNNING
  - Tango::STANDBY
  - Tango::FAULT

TANGO is an open source project hosted by :  


Core and Tools : CVS repository on tango-cs project  
 Device Servers : CVS repository on tango-ds project