



**TANGO**  
Device  
Server

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# **Icv150 User's Guide**

## **Icv150 Class**

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**Revision: Icv150-Release\_1\_1\_0 - Author: vedder**  
**Implemented in C++ - CVS repository: ESRF**

### **Introduction:**

This class will allow to control an ICV150 board.

### **Class Inheritance:**

- Tango::Device\_4Impl
  - Icv150

### **Class Description:**

## Properties:

<b>Device Properties</b>		
<b>Property name</b>	<b>Property type</b>	<b>Description</b>
<b>CardType</b>	Tango::DEV_STRING	Type of the card. (BCU,DU,SU,S or D
<b>ModuleType</b>	Tango::DEV_STRING	Type of the module. (for example 16/4
<b>Mode</b>	Tango::DEV_STRING	Initial mode.
<b>Pathname</b>	Tango::DEV_STRING	pathname of the descriptor.

## Device Properties Default Values:

<b>Property Name</b>	<b>Default Values</b>
CardType	No default value
ModuleType	No default value
Mode	No default value
Pathname	No default value

**There is no Class properties.**

## States:

<b>States</b>	
<b>Names</b>	<b>Descriptions</b>
<b>FAULT</b>	No access to the hardware.
<b>RUNNING</b>	The device is in continuous scanning mode.
<b>DISABLE</b>	Conversion has been stopped (not from the server).

## Attributes:

<b>Scalar Attributes</b>			
<b>Attribute name</b>	<b>Data Type</b>	<b>R/W Type</b>	<b>Expert</b>
<b>mode</b>	DEV_STRING	READ_WRITE	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>ReadChannel</b>	DEV_SHORT	DEV_DOUBLE
<b>SetGainChannel</b>	DEVVAR_SHORTARRAY	DEV_VOID
<b>ReadGainChannel</b>	DEV_SHORT	DEV_SHORT
<b>ReadAllGains</b>	DEV_VOID	DEVVAR_SHORTARRAY

Device Commands for Expert Level Only		
Command name	Argument In	Argument Out
<b>StartScan</b>	DEV_VOID	DEV_VOID
<b>StopScan</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::FAULT
  - Tango::RUNNING

- Tango::DISABLE

## 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::FAULT
  - Tango::RUNNING
  - Tango::DISABLE

## 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::FAULT
  - Tango::RUNNING
  - Tango::DISABLE

## 4 - ReadChannel

- **Description:** Read the value of the specified channel.
- **Argin:**  
**DEV\_SHORT** : Channel to read
- **Argout:**  
**DEV\_DOUBLE** : Value read on the channel
- **Command allowed for:**
  - Tango::FAULT

- Tango::RUNNING
- Tango::DISABLE

## 5 - SetGainChannel

- **Description:** This command will set the gain for the specified channel. The gain of the channel defined in the parameter 'channel' is set to the value defined in the parameter 'value'. The gain value is programmable as a multiple of 2, and the 'value' parameter and the gain have the following correspondence: value gain ----- ----- 0 1 1 2 2 4 3 8 4 16 5 32 6 64 7 128 8 256 9 512 10 1024
- **Argin:**  
DEVVAR\_SHORTARRAY : gain + channel
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::FAULT
  - Tango::RUNNING
  - Tango::DISABLE

## 6 - ReadGainChannel

- **Description:** This command will read the gain of the specified channel. The gain value of the channel defined by 'channel' is read. The read value and the actual gain have the following correspondence: value gain ----- ----- 0 1 1 2 2 4 3 8 4 16 5 32 6 64 7 128 8 256 9 512 10 1024
- **Argin:**  
DEV\_SHORT : Channel
- **Argout:**  
DEV\_SHORT : gain read
- **Command allowed for:**
  - Tango::FAULT
  - Tango::RUNNING
  - Tango::DISABLE

## 7 - ReadAllGains

- **Description:** This command will return the gains for all the channels which are scanned.
- **Argin:**  
DEV\_VOID :
- **Argout:**

**DEVVAR\_SHORTARRAY** : all the gains

- **Command allowed for:**

- Tango::FAULT
- Tango::RUNNING
- Tango::DISABLE

## 8 - StartScan (for expert only)

- **Description:** Start acquisitions.

- **Argin:**

**DEV\_VOID :**

- **Argout:**

**DEV\_VOID :**

- **Command allowed for:**

- Tango::FAULT
- Tango::RUNNING
- Tango::DISABLE

## 9 - StopScan (for expert only)

- **Description:** Stop acquisitions.

- **Argin:**

**DEV\_VOID :**

- **Argout:**

**DEV\_VOID :**

- **Command allowed for:**

- Tango::FAULT
- Tango::RUNNING
- Tango::DISABLE

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