



**TANGO**  
Device  
Server

# Fast Scintillation Detector User's Guide

## FastSciDetector Class

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Implemented in C++

### Introduction:

Class for controlling/reading a Fast Scintillation Detector and Pulse Processing Unit from Oxford Danfysik

### Class Identification:

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- **Class Family** : Acquisition
- **Platform** : All Platforms
- **Bus** : Not Applicable

### Class Inheritance:

- Tango::Device\_4Impl
  - FastSciDetector

## Properties:

| Device Properties  |                   |                                                  |
|--------------------|-------------------|--------------------------------------------------|
| Property name      | Property type     | Description                                      |
| <b>UnitAddress</b> | Tango::DEV_LONG   | Unit Address: integer value from 0 to 15.        |
| <b>SocketDS</b>    | Tango::DEV_STRING | Name of the device making the socket connection. |

## Device Properties Default Values:

| Property Name | Default Values   |
|---------------|------------------|
| UnitAddress   | 0                |
| SocketDS      | No default value |

**There is no Class properties.**

## States:

| States       |                   |
|--------------|-------------------|
| Names        | Descriptions      |
| <b>ON</b>    | Normal state.     |
| <b>FAULT</b> | Errors in device. |

## Attributes:

| Scalar Attributes                                                                      |            |            |        |
|----------------------------------------------------------------------------------------|------------|------------|--------|
| Attribute name                                                                         | Data Type  | R/W Type   | Expert |
| <b>Gain:</b> Gain value in percentage.                                                 | DEV_DOUBLE | READ_WRITE | No     |
| <b>SCAUpperLevel:</b> SCA Upper Level                                                  | DEV_DOUBLE | READ_WRITE | No     |
| <b>SCALowerLevel:</b> SCA Lower Level                                                  | DEV_DOUBLE | READ_WRITE | No     |
| <b>PeakingTime:</b> Peaking time: 50 ns, 100 ns, 300 ns or 1000 ns.                    | DEV_LONG   | READ_WRITE | No     |
| <b>HighVoltage:</b> High Voltage (only valid if the power supply option is installed). | DEV_DOUBLE | READ_WRITE | No     |
| <b>Saturation:</b> 1 if saturation is detected, 0 otherwise.                           | DEV_LONG   | READ       | No     |
| <b>HVFail:</b> 1 if high voltage failure is detected, 0 otherwise.                     | DEV_LONG   | 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 |

### 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::ON
- 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::ON
  - 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::ON
  - Tango::FAULT

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