



**TANGO**  
Device  
Server

# Pin Diode readout for ID14-3 mono control User's Guide

## PinDiodeID14eh3 Class

Revision: PinDiodeID14eh3-Release\_2\_0 - Author: meyer  
Implemented in C++ - CVS repository: ESRF

### Introduction:

Pin Diode readout for ID14-3 mono control using NI EDAQ board and COMEDI

### Properties:

Device Properties		
Property name	Property type	Description
<b>Comedi_device</b>	Tango::DEV_STRING	Device Descriptor ex: /dev/comedi0
<b>Channel</b>	Tango::DEV_LONG	
<b>Points_per_unit</b>	Tango::DEV_DOUBLE	Number of acquisition points per movement unit in scan mode (e.g. 1250 points per degree)

## Device Properties Default Values:

Property Name	Default Values
Comedi_device	No default value
Channel	No default value
Points_per_unit	No default value

**There is no Class properties.**

## States:

States	
Names	Descriptions
<b>ON</b>	No scan in progress 0D attribus alive 1D attribus frozen
<b>MOVING</b>	scan in progress 0D attribus is last point of scan 1D attribus alive

## Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
<b>PinDiode:</b> Voltage on the mon pin diode	DEV_DOUBLE	READ	No

Spectrum Attributes			
Attribute name	Data Type	X Data Length	Expert
<b>Spectrum</b>	DEV_DOUBLE	65535	No

Image Attributes				
Attribute name	Data Type	X Data Length	Y Data Length	Expert
<b>scan</b>	DEV_DOUBLE	32768	2	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>StartScan</b>	DEV_LONG	DEV_VOID
<b>StopScan</b>	DEV_VOID	DEV_VOID
<b>Start</b>	DEVVAR_DOUBLEARRAY	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::ON
  - Tango::MOVING

## 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::MOVING

### 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::MOVING

### 4 - StartScan

- **Description:** Start a scan on the pin diode with external acquisition clock on PF10 input.
- **Argin:**  
**DEV\_LONG** : Scan nb of points
- **Argout:**  
**DEV\_VOID** :
- **Command allowed for:**
  - Tango::ON
  - Tango::MOVING

### 5 - StopScan

- **Description:** Stop scan on the pin diode with external acquisition clock on PF10 input
- **Argin:**  
**DEV\_VOID** :
- **Argout:**

**DEV\_VOID :**

- **Command allowed for:**
  - Tango::ON
  - Tango::MOVING

## 6 - Start

- **Description:** start a scan
- **Argin:**  
**DEVVAR\_DOUBLEARRAY :** starting point
- **Argout:**  
**DEV\_VOID :**
- **Command allowed for:**
  - Tango::ON
  - Tango::MOVING

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