

# LaVue - General Settings

The first tab of the configuration dialog contains **General Settings**. It is divided into a few groups:

The screenshot shows the 'Configuration' dialog box with the 'General' tab selected. The settings are organized into several sections:

- Image source:** Refresh time in s: 0,50; Number of image sources: 1; Map images to color channels: ; Interrupt on a source error: ; Display specific for a source: ; Source timeout in ms: 3000.
- Image display:** Maximal memory buffer size: 1000; Mask pixels with NAN: ; Pixel image masks with zero values: ; Keep original coordinates: ; Lazy image slider: ; Aspect Ratio locked: ; Auto Down-Sample: ; Float type for intensity: float; Accelerate memory buffer sum: ; Ranges and ROIs Colors: (Color selection buttons: pink, green, yellow, purple).
- Tools:** Store detector geometry for Angle/Q: ; Geometry from a source: ; Display extension refresh time in s: 0,02; Parameter polling interval in s: 1,0; Crosshair locker switched on: ; Diffraction size: 1000; Correct Solid Angle: ; Send results to LavueController: .
- Statistics and 1d plots:** Intensity scaling: ; Calculate variance: .
- ZMQ security stream:** Enabled: ; Automatic port: ; Port: 34603.
- ROIs:** Show all ROIs values: ; Send ROIs values: ; Single ROIs aliases: .
- Sardana:** Enabled: ; Door: Door/dellek/1; Add ROIs to MG: ; Fetch ROIs order: .

Buttons: Cancel, OK.

## Image source

- **Refresh rate in s:** select a minimal time between consecutive frames
- **Number of image sources:** a number of different image sources from which images should be stitched
- **Map images to color channels:** places images from different image sources to separate color channels
- **Interrupt on source errors:** stops live image viewing on image source errors
- **Display specific for a source:** store/retrieve display parameters for an each image source separately
- **Source timeout in ms:** maximal time in milliseconds to wait for a response, e.g. from Hidra or HTTP image sources

## Statistics and 1d plots

- **Intensity scaling:** applies the intensity display scaling to image statistics and 1d-plots
- **Calculate variance:** perform calculations of variance from image pixel intensities

## ZMQ security stream

- **Enabled:** turns on sending the ZMQ security stream with basic information about the image, e.g. maximal intensity
- **Automatic port:** selects a port number for the ZMQ security stream automatically
- **Port:** defines a port number for the ZMQ security stream

## Image display

- **Maximal memory buffer size:** maximal frame number in the memory buffer
- **Mask pixels with NAN:** store masked pixels as a float Not-A-Number (NAN)
- **Pixel masks with zero values:** causes that zero pixel values of mask image are interpreted as masking
- **Keep original coordinates:** causes the 2D-plot axes transforms with image transformation
- **Lazy image slider:** plot a new image after the image slider is focused out
- **Aspect Ratio locked:** sets the aspect ratio to 1:1 in the 2D-plot
- **Auto Down-Sample:** turns on auto-down-sampling mode of pyqtgraph
- **Float type for intensity:** type to which intensity is converted if it is changed to float type
- **Accelerate memory buffer sum:** speeds up calculation of an image sum for the memory buffer tool
- **Ranges and ROIs Colors:** allows to defined colors of Ranges or ROIs selection frames. Colors are used cyclically

## ROIs

- **Show all ROIs values:** calculates ROIs sum values for all ROI frames
- **Send ROIs values:** sends ROIs sum values to `LaVueController` tango server
- **Single ROIs aliases:** adds `roi1, roi2, roi3, ...` aliases if a number of rois is higher than their aliases

## Tools

- **Store detector geometry for Angle/Q:** store the detector geometry for the Angle/Q tool in the configuration settings
- **Geometry from a source:** fetch metadata parameters describing detector geometry from the image source
- **Display extension refresh time in s:** Minimum refresh time for display extensions
- **Parameter polling interval in s:** time in seconds between read-outs of detector tango attributes in the Parameters tool
- **Crosshair locker switched on:** initial status of intensity crosshair locker
- **Diffraction size:** number of points in the diffraction
- **Correct Solid Angle:** correct solid angle flag for diffraction
- **Send results to LavueController:** sends the current tool results to `LaVueController` tango server

## Sardana

- **Enabled:** turns on communication with Sardana
- **Door:** Door tango device to communicate with Sardana
- **Add ROIs to MG:** causes the ROIs Apply button adds the corresponding ROIs aliases into the current Sardana Measurement Group
- **Fetch ROIs order:** read a ROIs order from Sardana environment variables