

Quick Guide

OptoViewer 2.0



January 2022

Agenda

1. What's new ?
2. Using OptoViewer 2.0
3. Software Integration Options

What's new ?

Main features

- Multiple devices support
- Customizable user interface
- Advanced image saving options
- More measurements and overlays
- Fullscreen display with multiple monitors
- And more...



Using OptoViewer 2.0

Main Interface

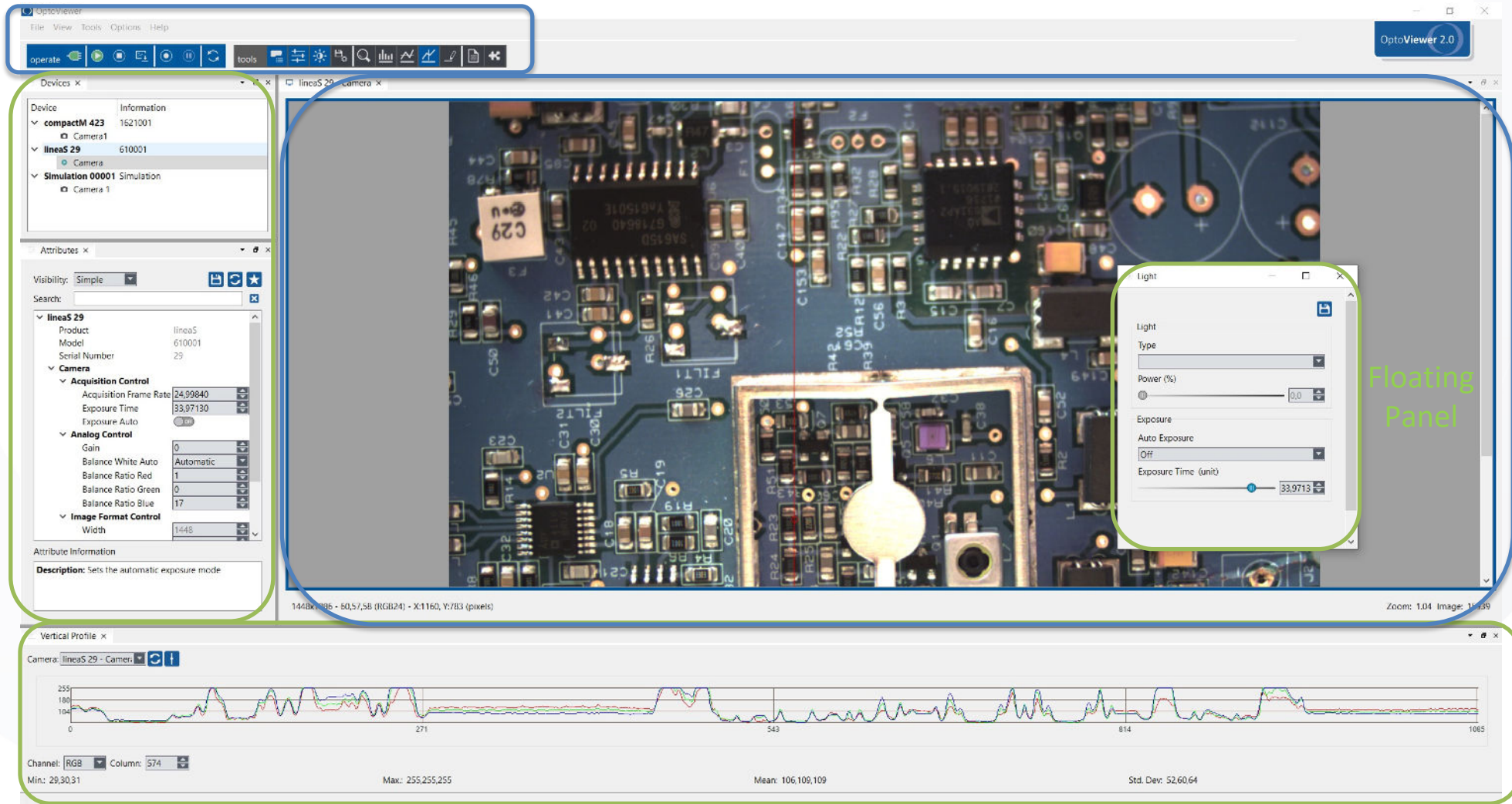
Menus and Toolbars

Vertical
Panel








Image
Display

Floating
Panel












Horizontal
Panel



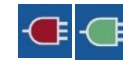
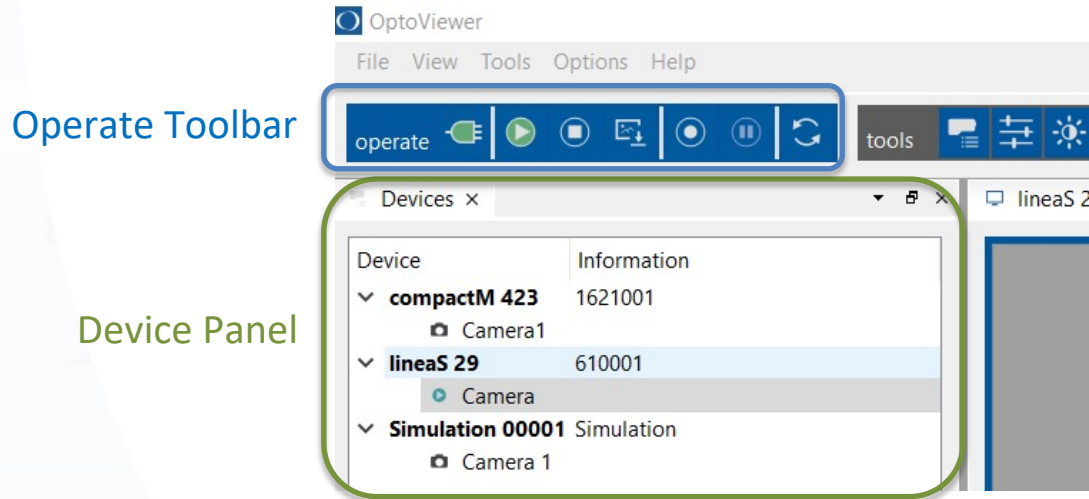
'Operate' Toolbar

'Operate' Toolbar		
	Open / Close Module	Releases access to selected module settings and features.
	Start Image Acquisition	Starts selected camera's image stream.The module has to be opened first.
	Stop Image Acquisition	Stops selected camera's image stream
	Save Image	Saves an image to file using a template naming (assigned in window 'Saving').
	Continuous Image Recording	Starts/stops image sequence recording. Parameters can be set in the 'Saving' panel.
	Pause	Pauses the recording process.
	Refresh	Refreshes the devices list in panel 'Device'.

'Tools' Toolbar

'Tools' Toolbar		
	Devices	Devices manager panel.
	Attributes	Allows module attributes management and settings for the selected and opened module.
	Light	Controls lighting type and power, exposure auto and time.
	Saving	Controls saving settings: sequence and snapshot folders and parameters.
	Magnifying Glass	Displays zoomed area of interest around the mouse pointer position.
	Histogram	Shows the image histogram.
	Horizontal Profile	Shows the colour value of pixel row.
	Vertical Profile	Shows the colour value of pixel column.
	Overlays	Allows the addition of annotations on displayed image.
	Log	Displays any warning, information or errors.
	Plugins	Gives access to processing plugins of Image Analysis or Image Processing.

Device Connection



Opens / Closes Module



Starts selected camera's image stream



Stops selected camera's image stream



Saves current image to file using a template naming

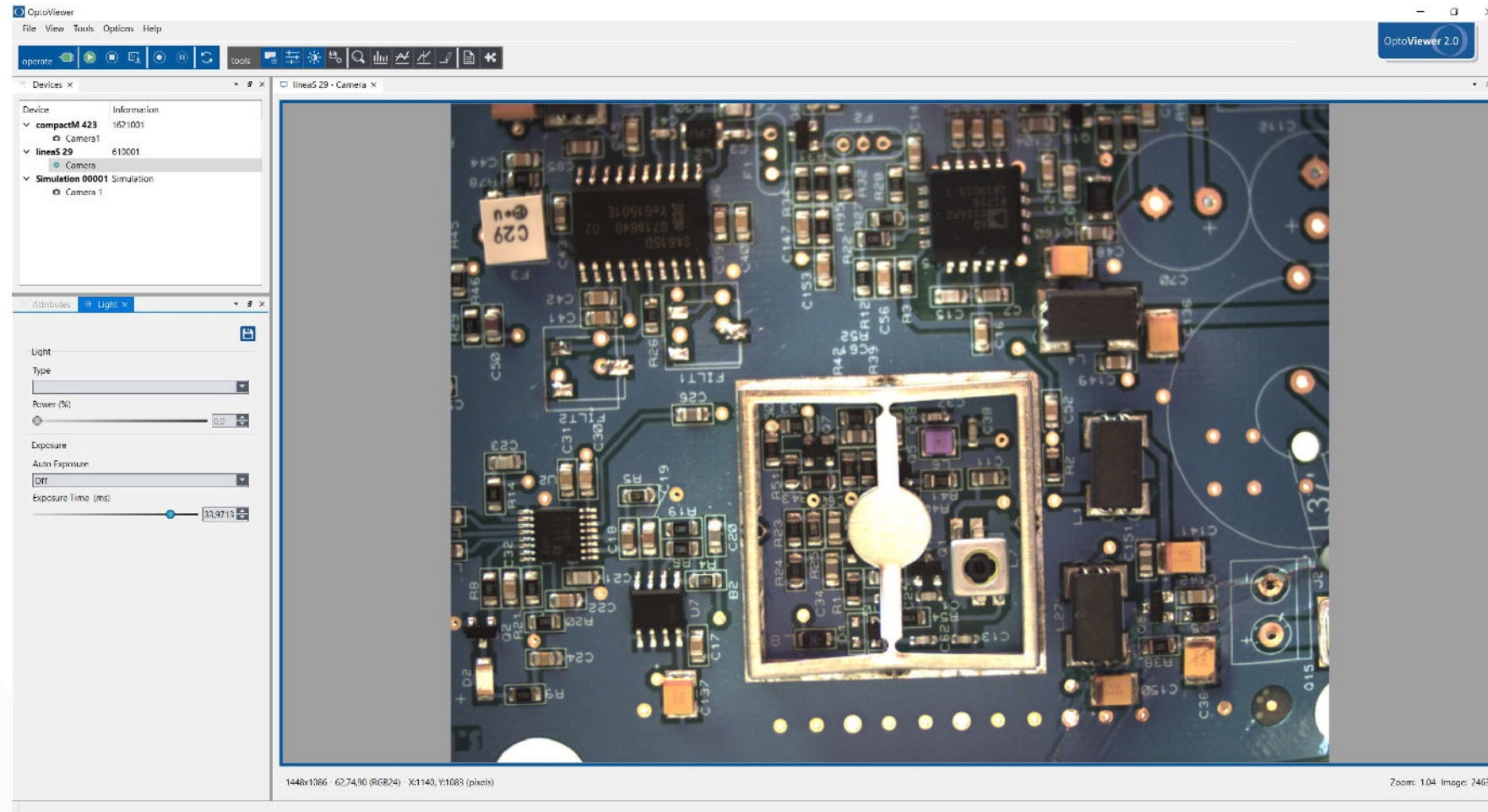


Starts/stops image sequence recording

Saving and recording parameters can be set in the 'Saving' panel
Keyboard shortcuts can be set with 'Options/OptoViewer Settings...' menu

Image acquisition will automatically start if only 1 module is connected.

First Image Acquisition



First Image Acquisition

Multiple Imaging Module can be used at a time, one image display is opened for each camera that is started.

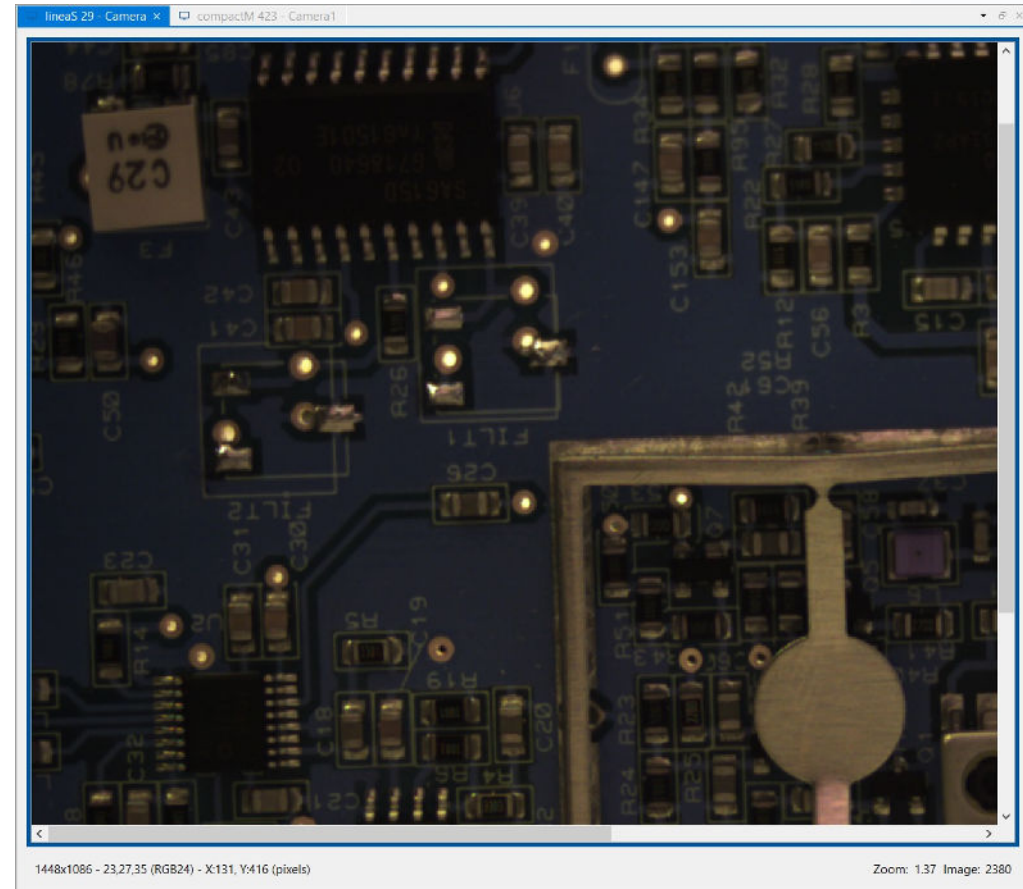
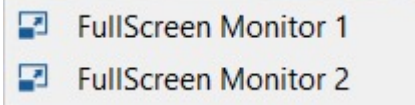
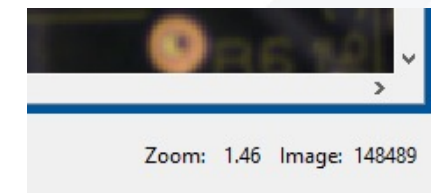
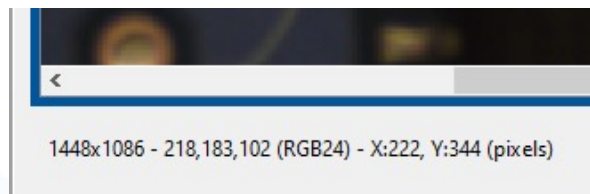
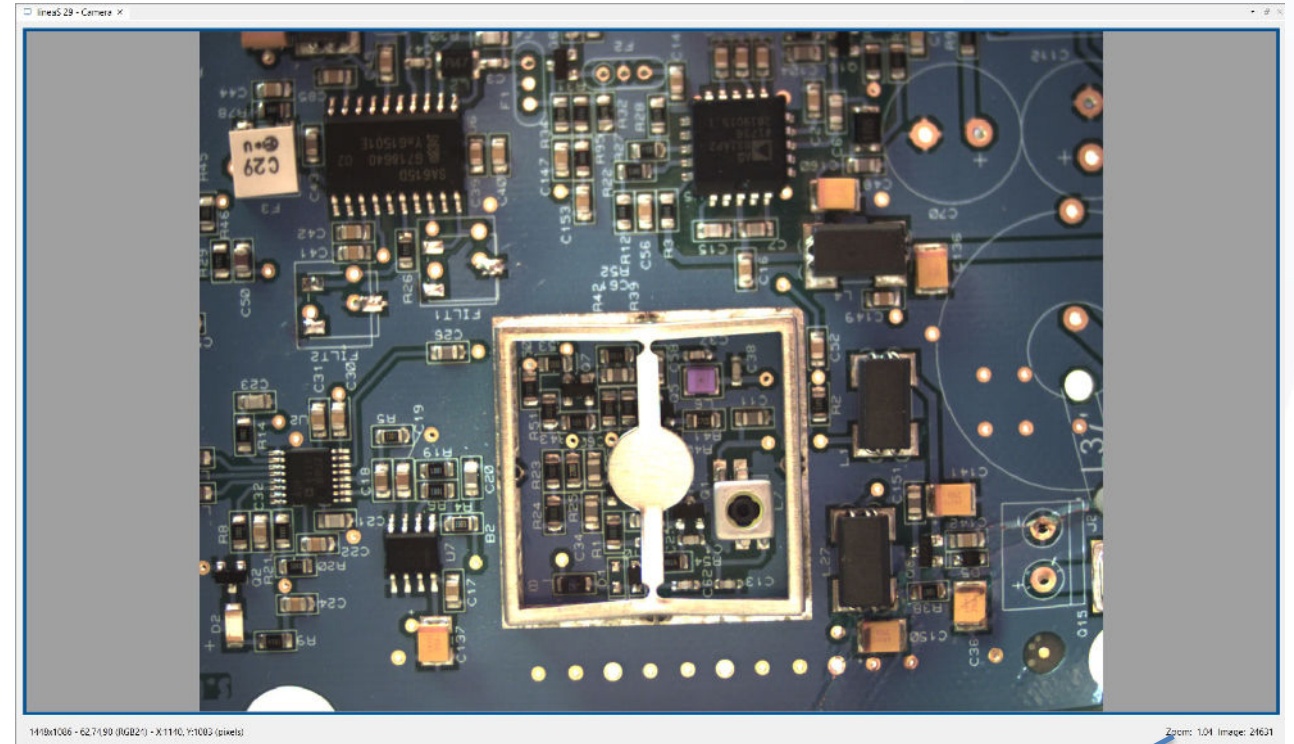


Image Display: Tips

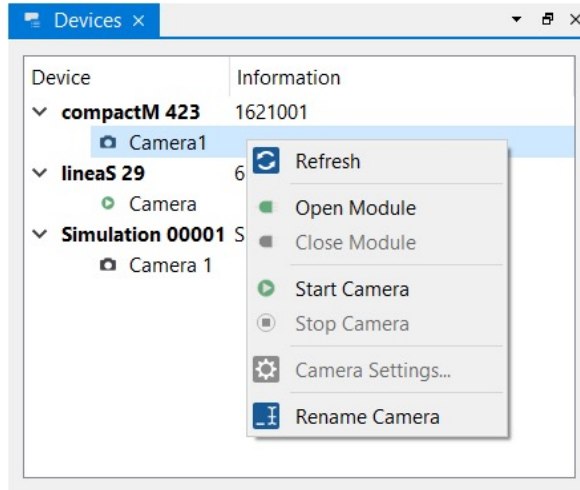
- Use the mouse wheel for zooming in and out
- Right click on the image for **Fullscreen** feature






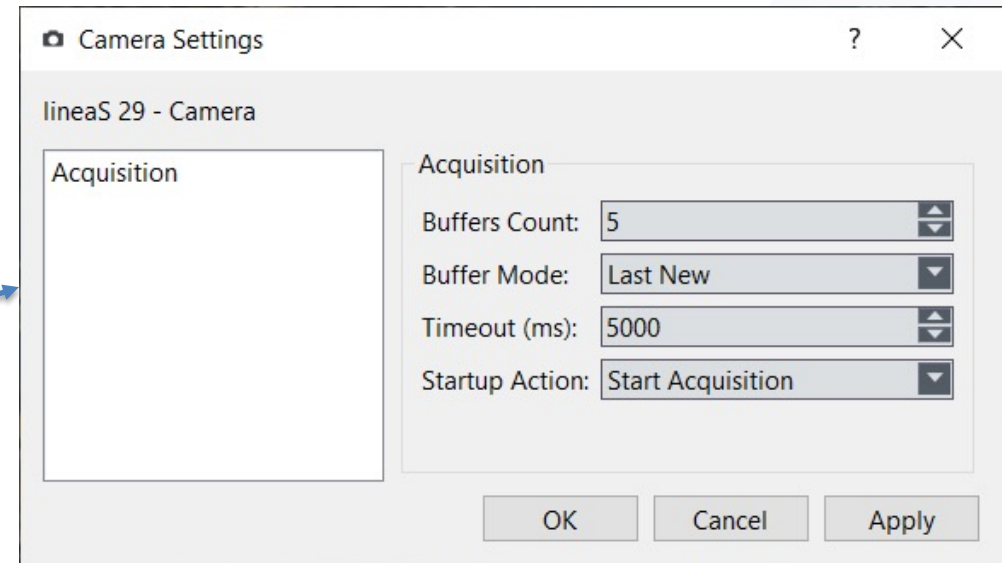
- The status bar shows:
 - Image size - Value and position of the pixel pointed by the mouse cursor
 - Zoom factor and Image acquisition index



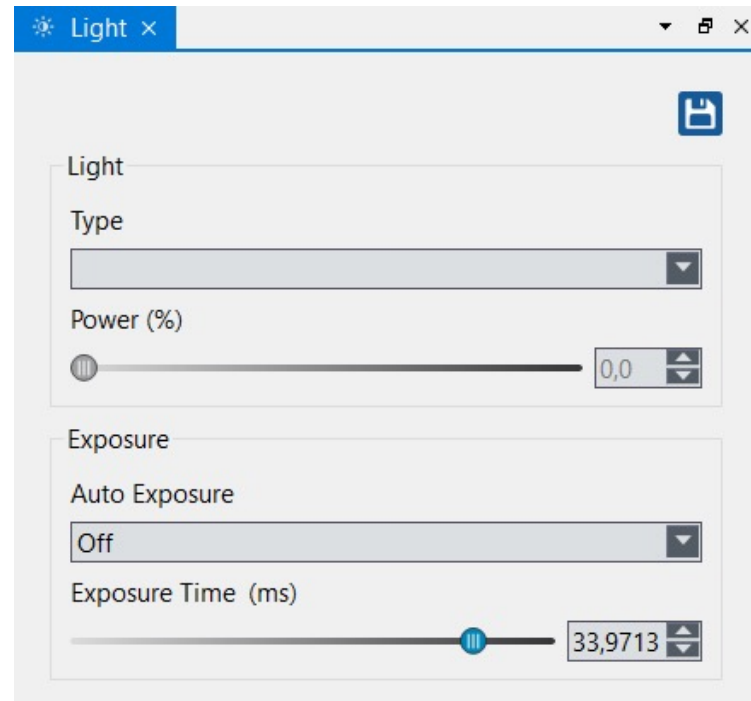
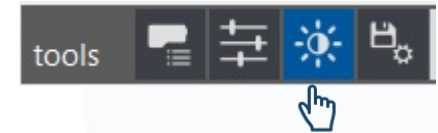
'Devices': Contextual Menu & Camera Settings



-  Refresh devices list
-  Open Camera Settings window
-  Rename module/camera



'Light' Panel



Save settings

Adjust Light type and power

Exposure can be controlled automatically (set Auto Exposure On) or manually (use Exposure Time slider)

'Attributes' Panel

The screenshot shows a software window titled 'Attributes'. At the top, there's a 'Visibility' dropdown set to 'Simple' and a search bar. Below is a tree structure for 'lineaS 29'. The tree has a 'Camera' section expanded, showing 'Acquisition Control' (with 'Acquisition Frame Rate' at 24,99840, 'Exposure Time' at 33,97130, and 'Exposure Auto' off) and 'Analog Control' (with 'Gain' at 0, 'Balance White Auto' set to 'Automatic', and 'Balance Ratio' for Red, Green, and Blue at 1, 0, and 16 respectively). Below that is 'Image Format Control' with 'Width' at 1448, 'Height' at 1086, 'Offset X' and 'Offset Y' at 0, and 'Reverse Y' and 'Reverse X' both off. At the bottom, there's an 'Attribute Information' section with a description for the selected 'Reverse Y' attribute: 'Flip vertically the image sent by the device. The Region of interest is applied after the flipping.'


Attributes management (see next slide)


Attributes tree: list of attributes for the selected module and their value, restricted by visibility and search filter





Attribute informations: detailed informations for the selected attribute in the tree

'Attributes' Management



Visibility: Simple ▾   

Search: 

- 'Visibility': adjust the displayed content
-  Save
-  Refresh
-  Favourites: sets favourites attributes to customize the displayed content when 'Visibility' is set to 'Favourites'
- 'Search': allows restricted display
-  Delete Filter

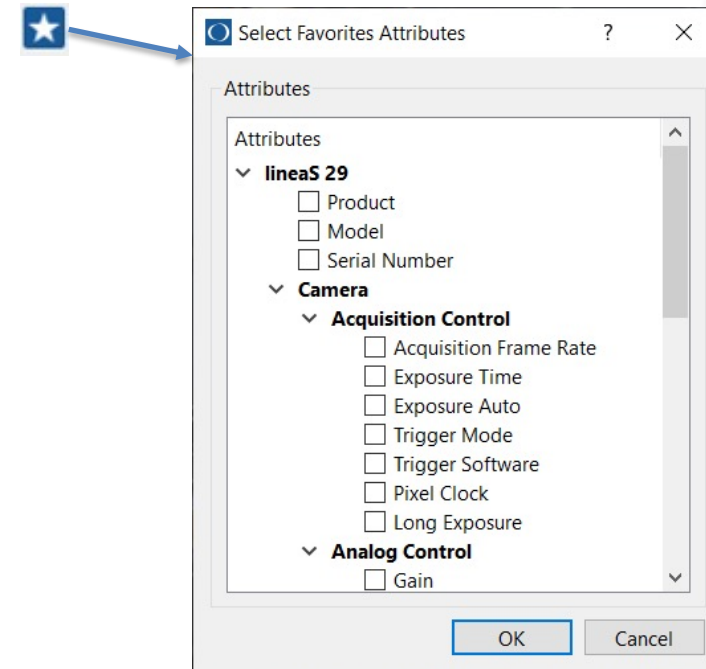


Image 'Saving' Options



Sequence Snapshot

Recording Mode
Images

Output File Path

File Path Template
[images]/[year]-[month]-[day]/[time]-[millisecond]

File Path Preview
C:/Users/User/Pictures/
2021-11-19/15-09-39-576.png

File Format
Portable Network Graphics (.png)

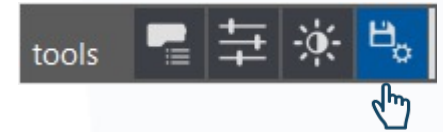
PNG Compression Strategy PNG Compression Level
Default Default


☐ Merge Overlays

☐ Record Image Every: 1000 Millisecond(s)

☐ Auto. Stop After: 0 Millisecond(s)

Image 'Saving' Options: Sequence



Configures recording
launched by using
'Recording' button 

A screenshot of a software window titled 'Saving x'. It has two tabs: 'Sequence' (selected) and 'Snapshot'. The 'Sequence' tab contains several sections: 'Recording Mode' with a dropdown menu set to 'Images'; 'Output File Path' with a 'File Path Template' field containing '[images]/[year]-[month]-[day]/[time]-[millisecond]' and a 'File Path Preview' field showing 'C:/Users/User/Pictures/2021-11-19/15-09-39-576.png'; 'File Format' with a dropdown set to 'Portable Network Graphics (.png)' and two sub-dropdowns for 'PNG Compression Strategy' and 'PNG Compression Level', both set to 'Default'; and a bottom section with three toggle switches: 'Merge Overlays' (OFF), 'Record Image Every: 1000 Millisecond(s)' (ON), and 'Auto. Stop After: 0 Millisecond(s)' (ON). Blue brackets on the right side of the dialog group these sections into four categories.

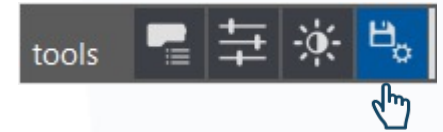
Images sequence


Sets file name and path

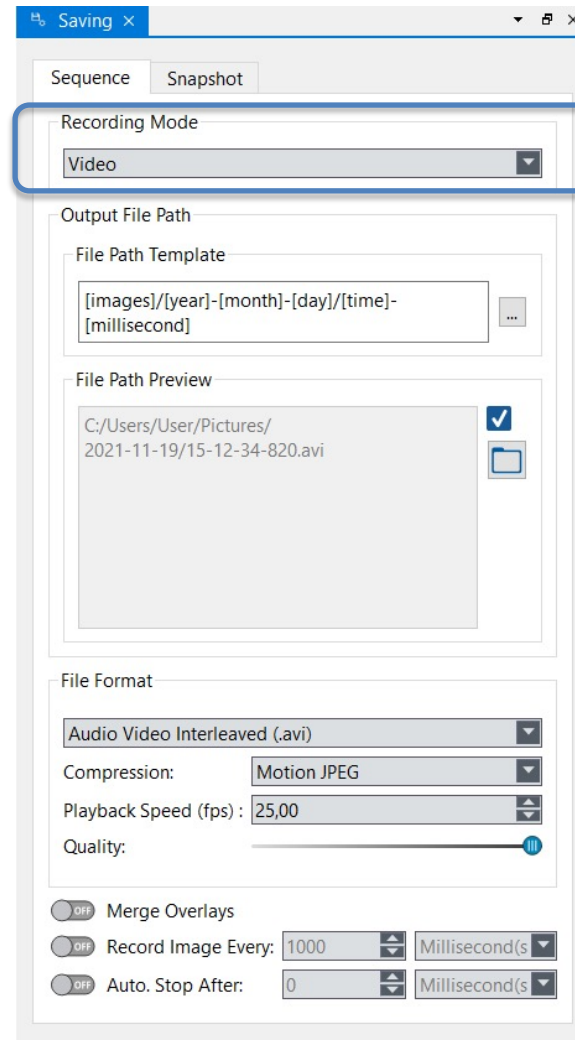
Sets file extension and compression

Configures merge, time-lapse and auto-stop

Image 'Saving' Options: Sequence



Configures recording
launched by using
'Recording' button 



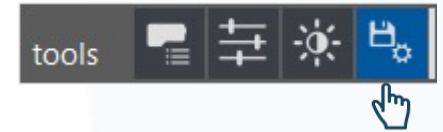
Video recording


Sets file name and path

Sets file extension, compression, fps and quality

Configures merge, time-lapse and auto-stop

Image 'Saving' Options: Snapshot



Configures recording
launched by using
'Save Image' button 

A screenshot of a 'Saving' dialog box with a 'Snapshot' tab selected. The dialog has two main sections: 'Output File Path' and 'File Format'. The 'Output File Path' section contains a 'File Path Template' field with the text '[images]/[year]-[month]-[day]/[time]-[millisecond]' and a 'File Path Preview' field showing 'C:/Users/User/Pictures/2021-11-19/15-12-34-820.png'. The 'File Format' section contains a 'File Format' dropdown menu set to 'Portable Network Graphics (.png)', two dropdown menus for 'PNG Compression Strategy' and 'PNG Compression Level' both set to 'Default', and a 'Merge Overlays' toggle switch set to 'OFF'.

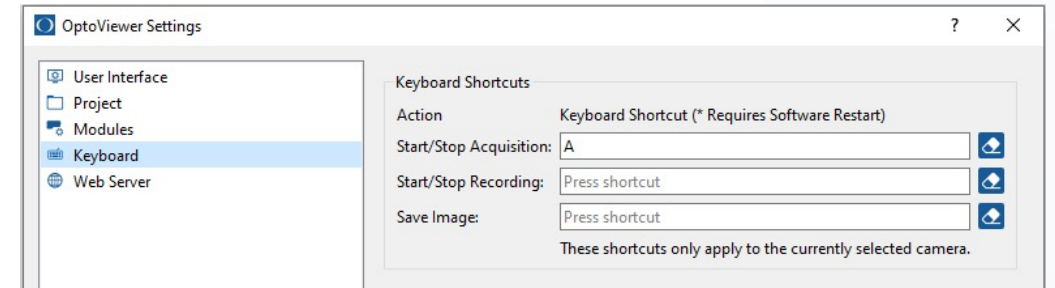
Sets file name and path

Sets file extension and compression

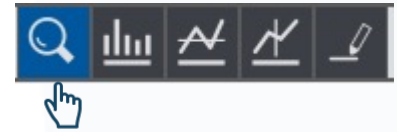
Configures merge

Keyboard shortcuts

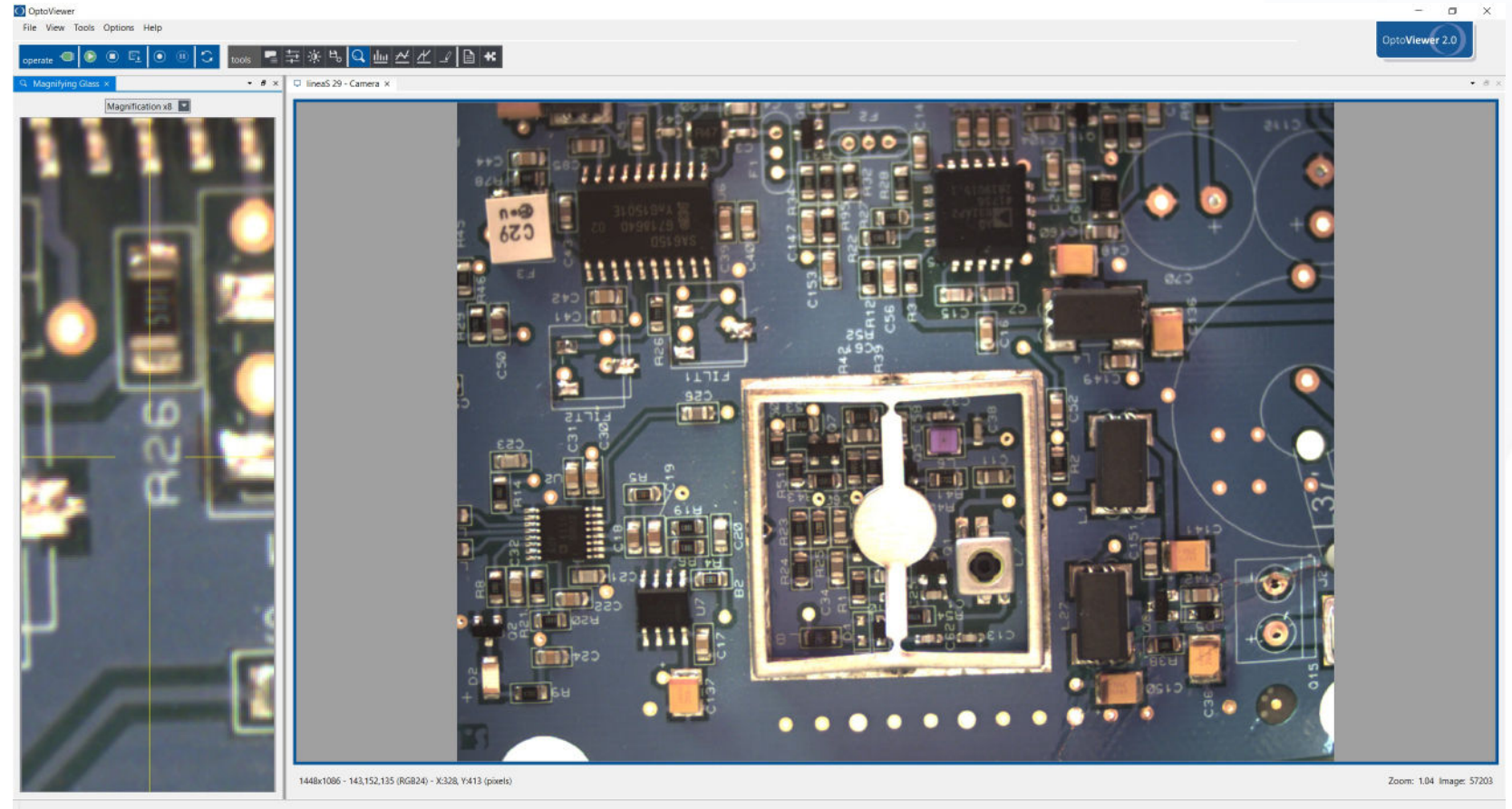
Control image acquisition and recording with keyboard, wireless clicker or pedals for hands free operation



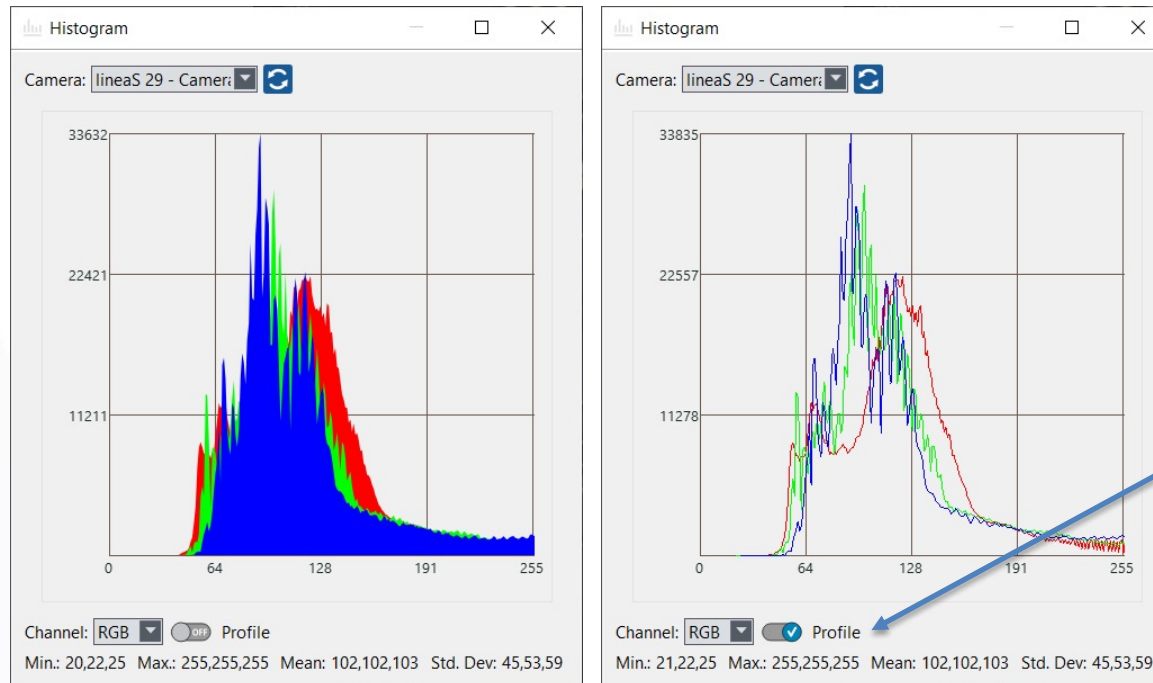
‘Magnifying Glass’



Enables keeping the global field of view while providing in the same time a zoomed view around the mouse cursor



'Histogram' Graph



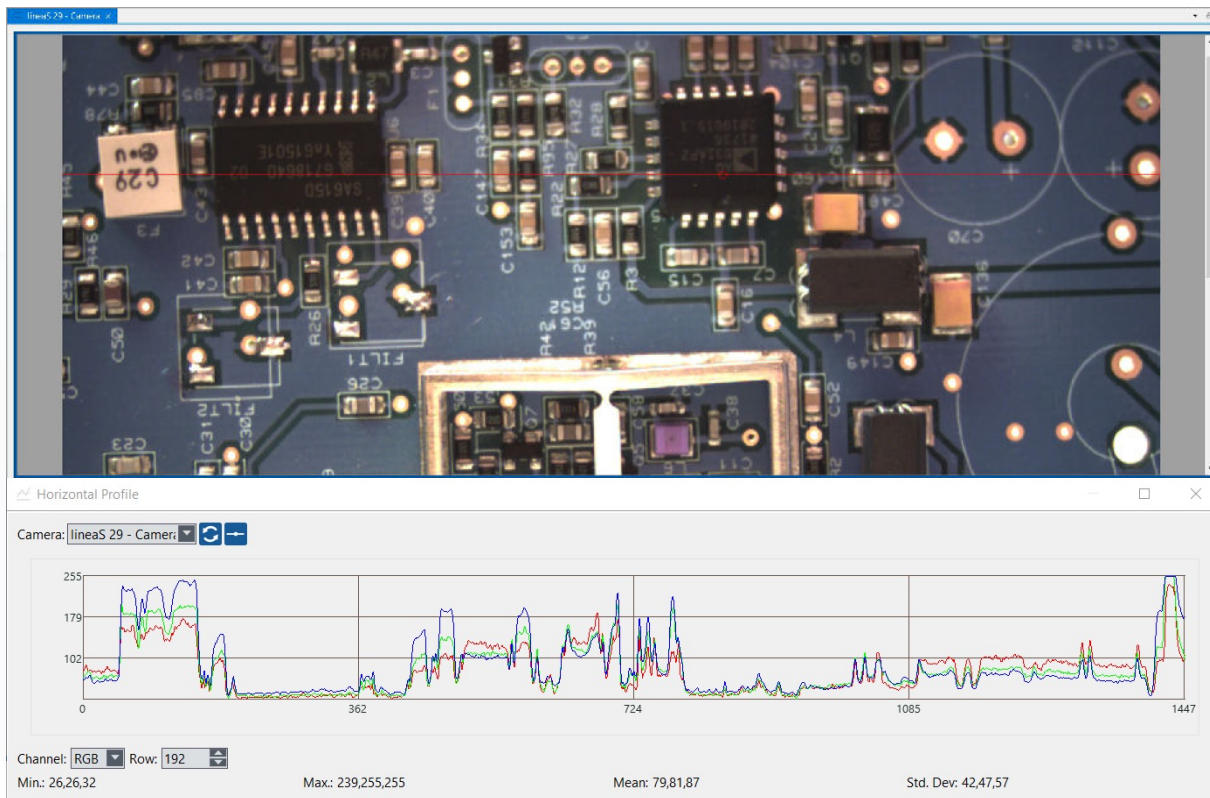
'Histogram' panel shows pixels intensities distribution graph as well as statistics:

- Minimum value
- Maximum value
- Mean value
- Standard deviation

When 'Profile' is on, only profile line is displayed.


On colour images, it is possible to display red, green or blue values or all 3.

‘Horizontal/Vertical Profile’



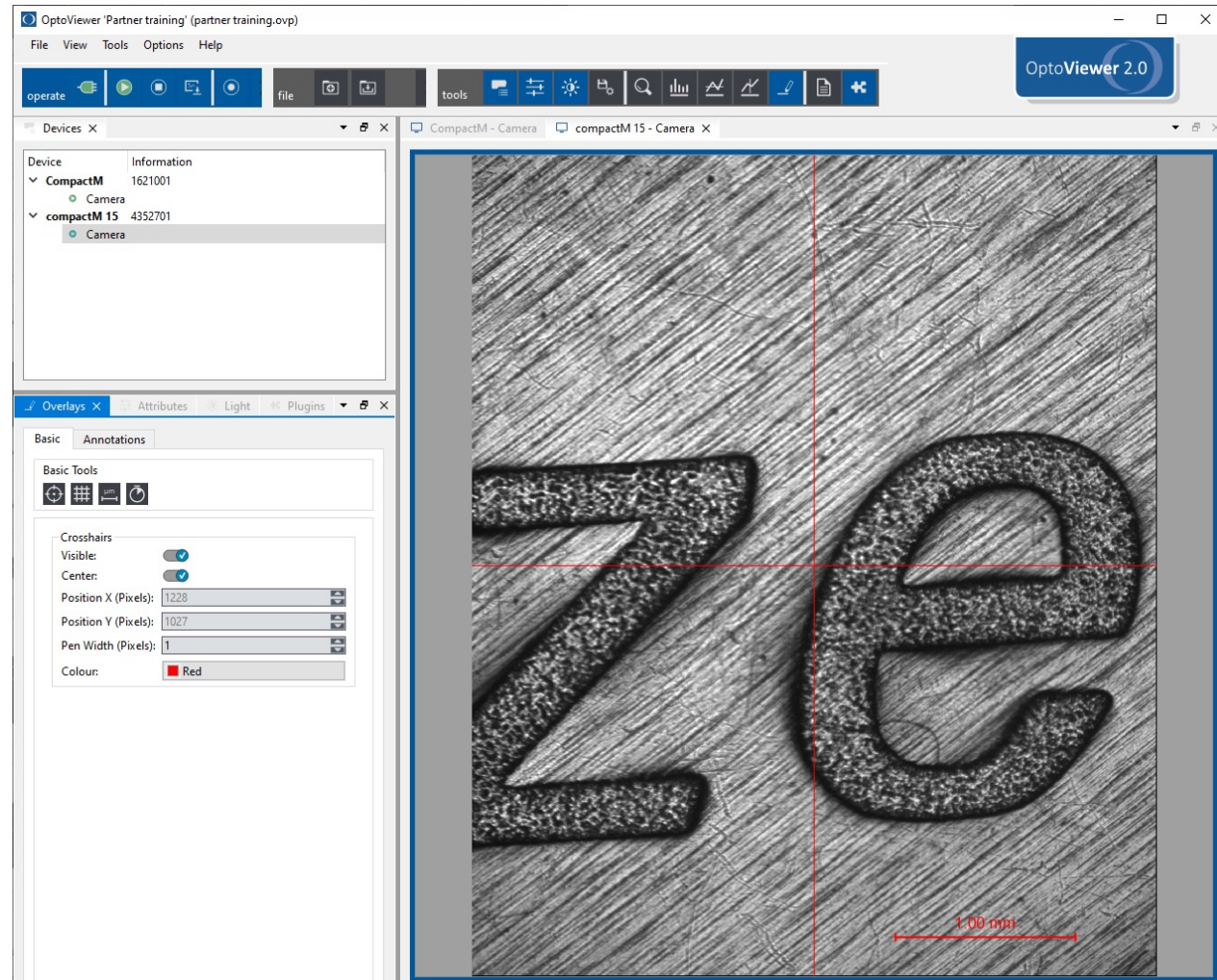
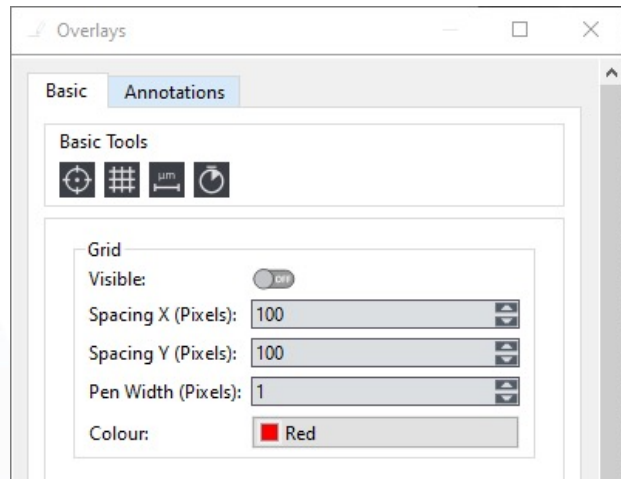
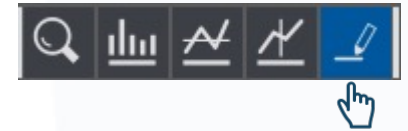
‘Horizontal Profile’ panel shows pixels intensities distribution graph of the selected pixel row as well as statistics:

- Minimum value
- Maximum value
- Mean value
- Standard deviation

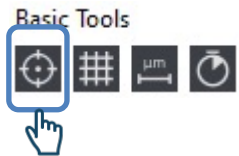
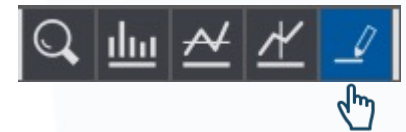
Row can be set using horizontal line tool  or number field **Row: 771** .

On colour images, it is possible to display red, green or blue values or all 3 **Channel: RGB** .

'Overlay' Tools



'Overlays': Basic Tools



Crosshairs

Visible: ☒

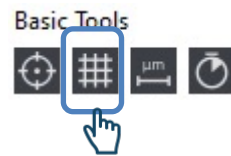
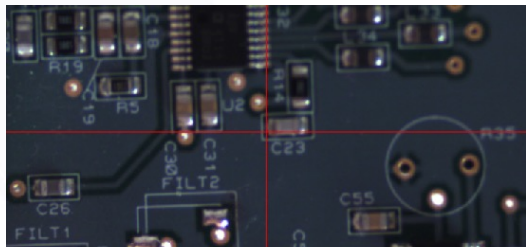
Center: ☒

Position X (Pixels): 724

Position Y (Pixels): 543

Pen Width (Pixels): 1

Colour: ■ Rouge



Grid

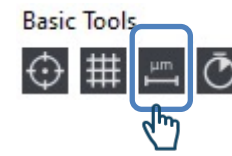
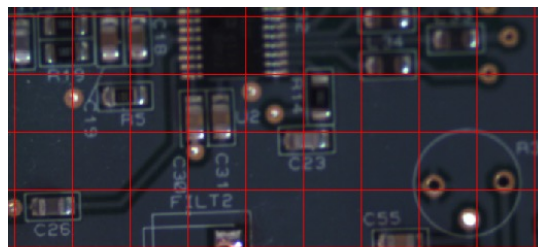
Visible: ☒

Spacing X (Pixels): 100

Spacing Y (Pixels): 100

Pen Width (Pixels): 1

Colour: ■ Rouge



Scale

Visible: ☒

Position: Bottom-Right

Position X (Pixels): 0

Position Y (Pixels): 0

Size (Pixels): 300,00000

Size Unit: pixels

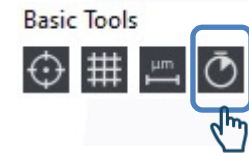
Precision: 5

Pen Width (Pixels): 1

Colour: ■ Rouge

Background Colour: ☐ Transparent

Text Font: ...



Timestamp

Visible: ☒

Clock: Acquisition

Position: Top-Left

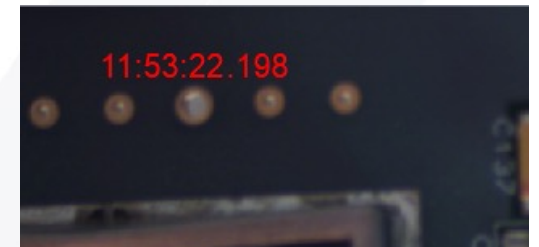
Position X (Pixels): 0

Position Y (Pixels): 0

Colour: ■ Rouge

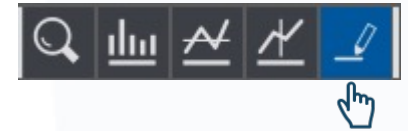
Background Colour: ☐ Transparent

Text Font: ...



Scale can be automatically displayed in real units thanks to internal calibration

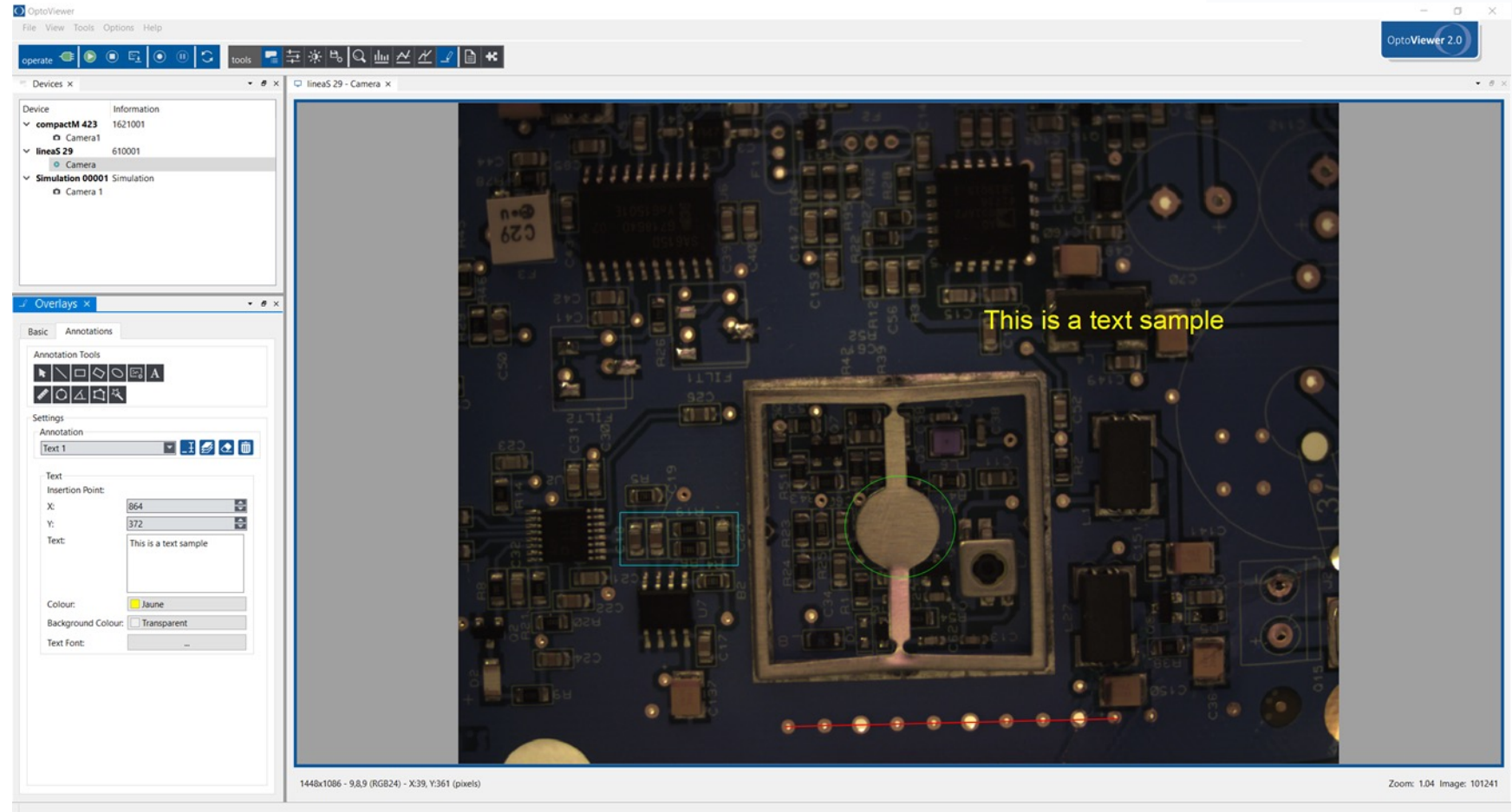
'Overlays': Annotations Tools



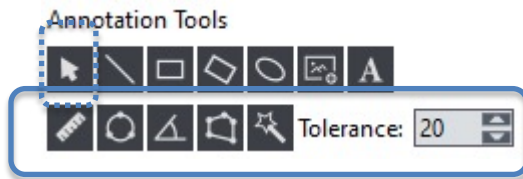
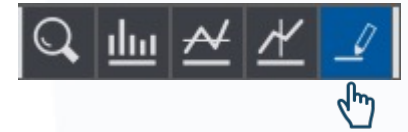
Annotation Tools




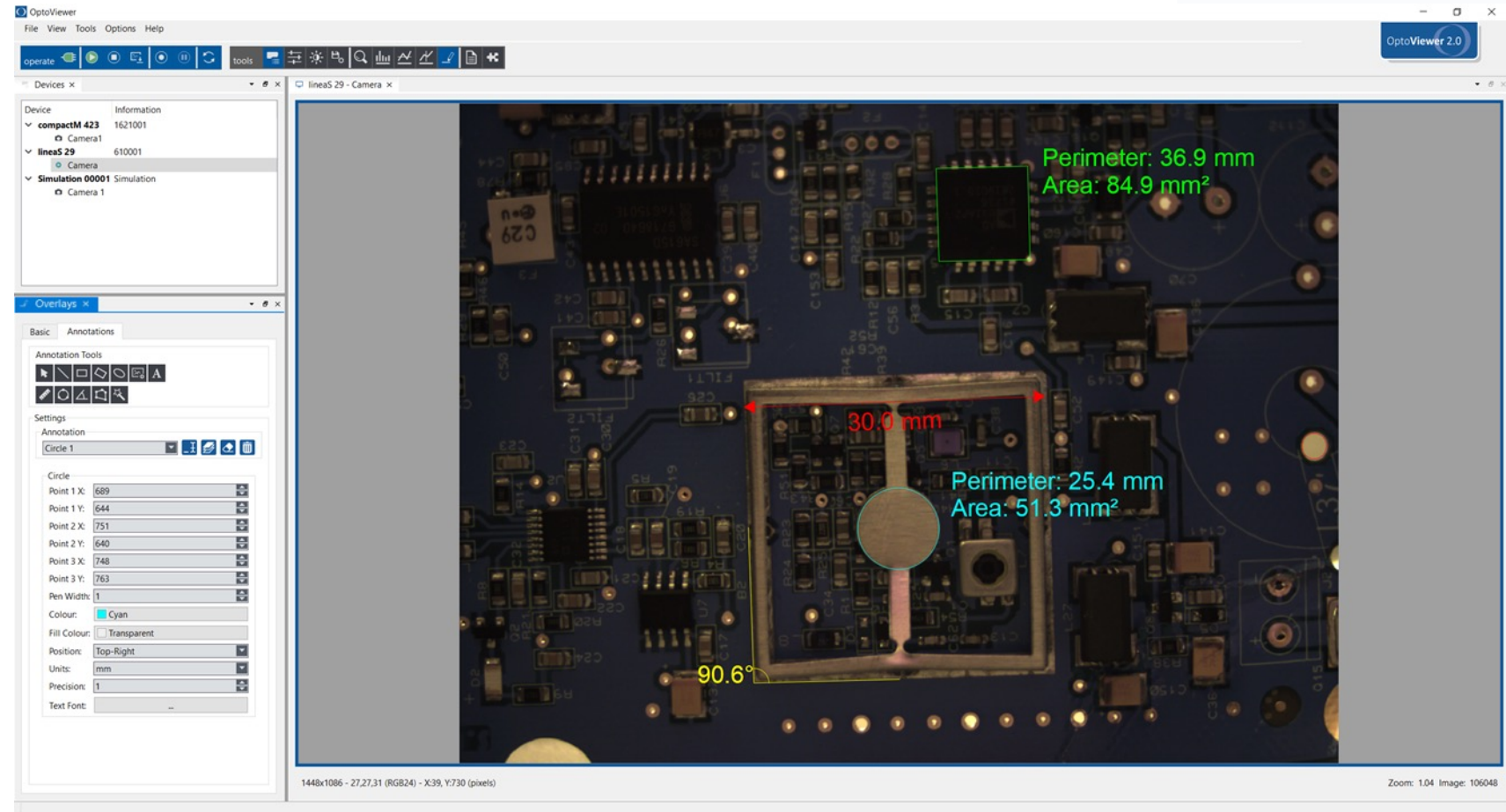
- Draw various shapes
- Insert text and pictures
- Use the arrow tool to edit overlays position or size



'Overlays': Measurement Tools

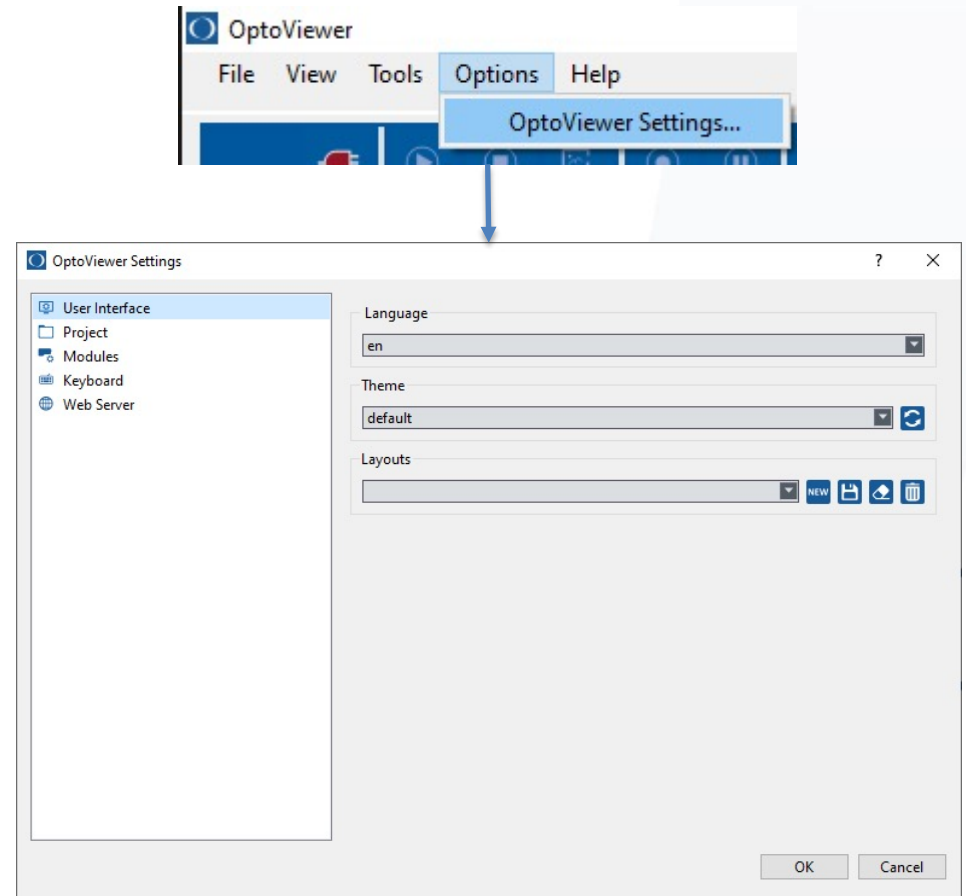


- Measure length, angle or areas and perimeters
- Use the arrow tool to edit overlays position or size
- Tolerance is available only for contour area/perimeter 

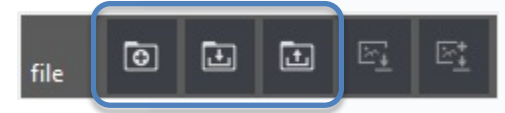


User interface customization

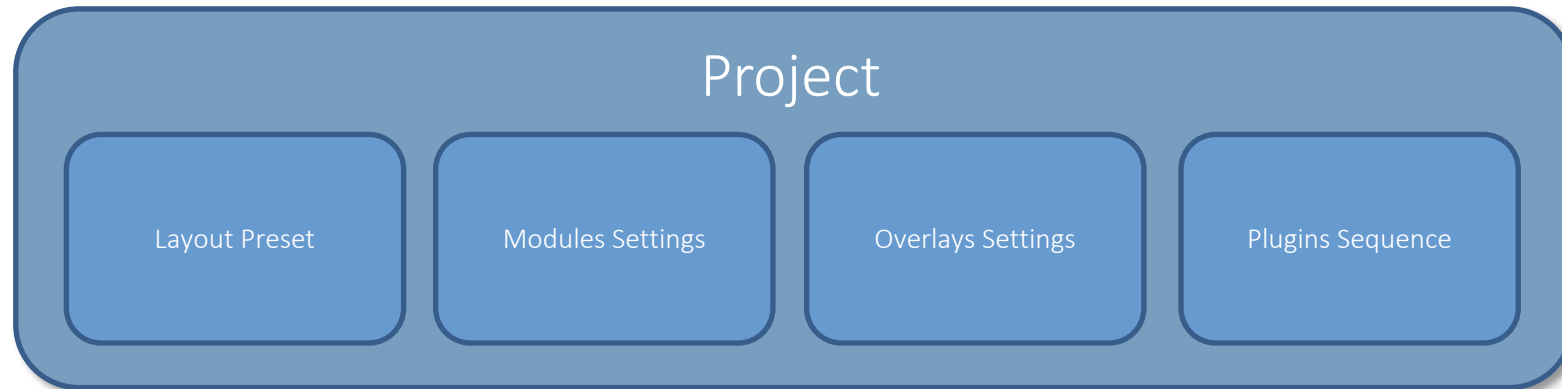
- Theme: user interface colour set
 - Default
 - Dark
- Layouts
 - customized user interface states
 - Toolbars
 - Panels



Projects



- Save and load full OptoViewer configurations
- Startup project can be defined

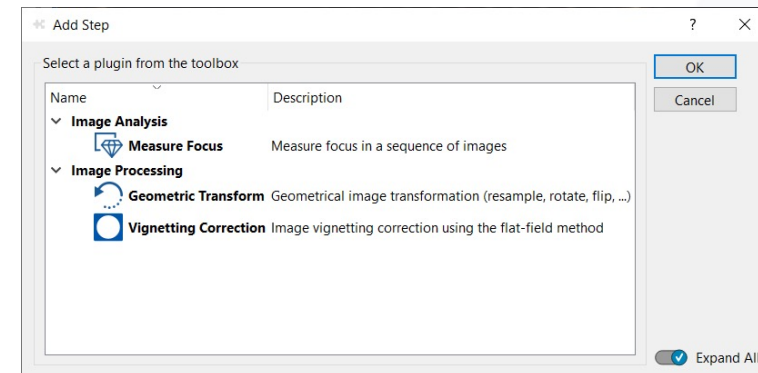
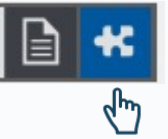


'Plugins'

Plugins are extra tools which can be added to OptoViewer

Some plugins are included by default:

- Vignetting correction
- Geometric Transformations
- Measure Focus

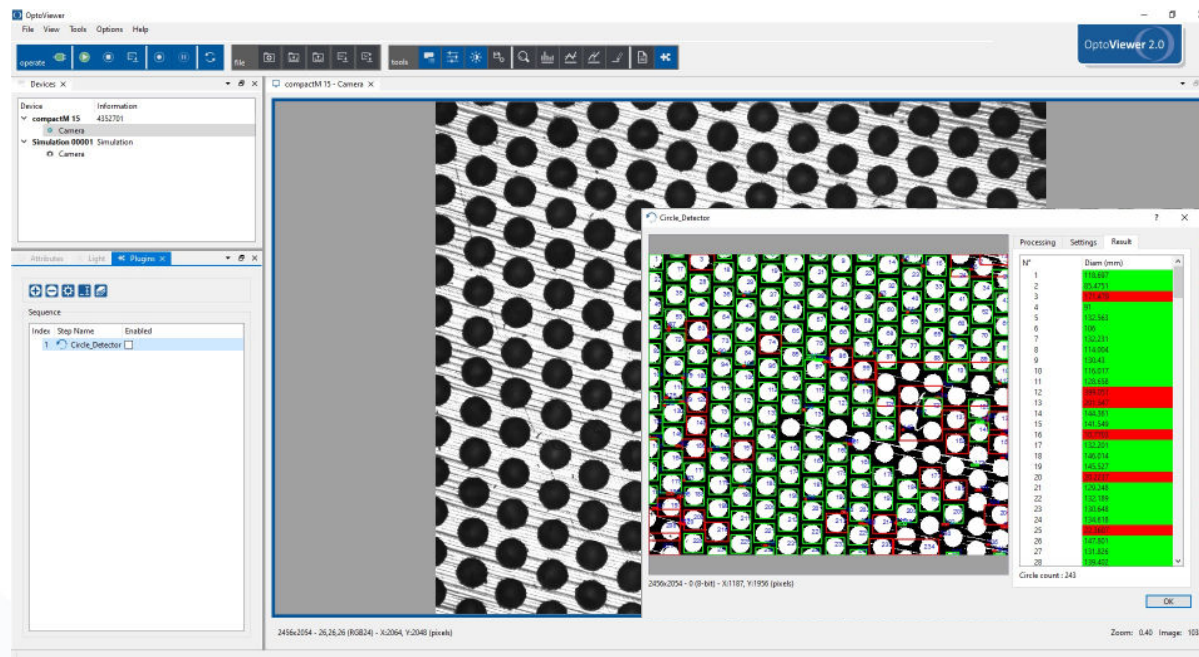
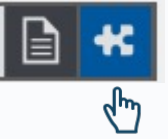


'Plugins'

General purpose plugins will be added

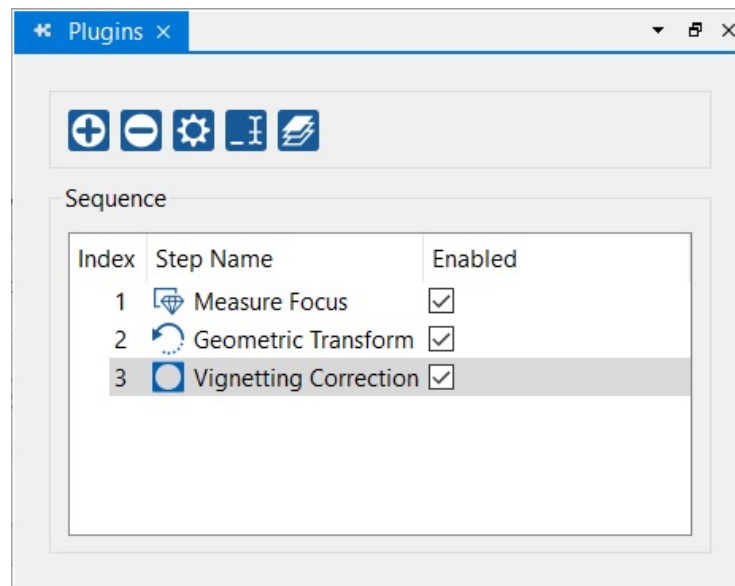
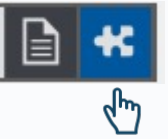
Market or customer specific ones can be added






→ Bring more value through OptoViewer



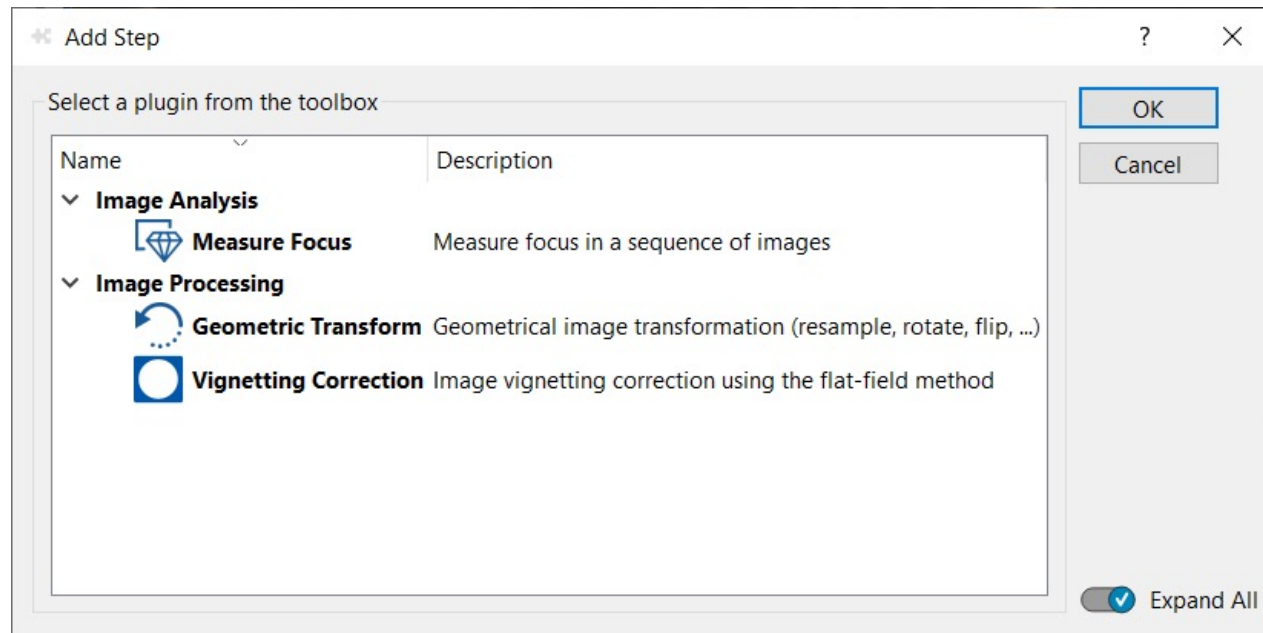
Hole Measurement plugin

'Plugins'

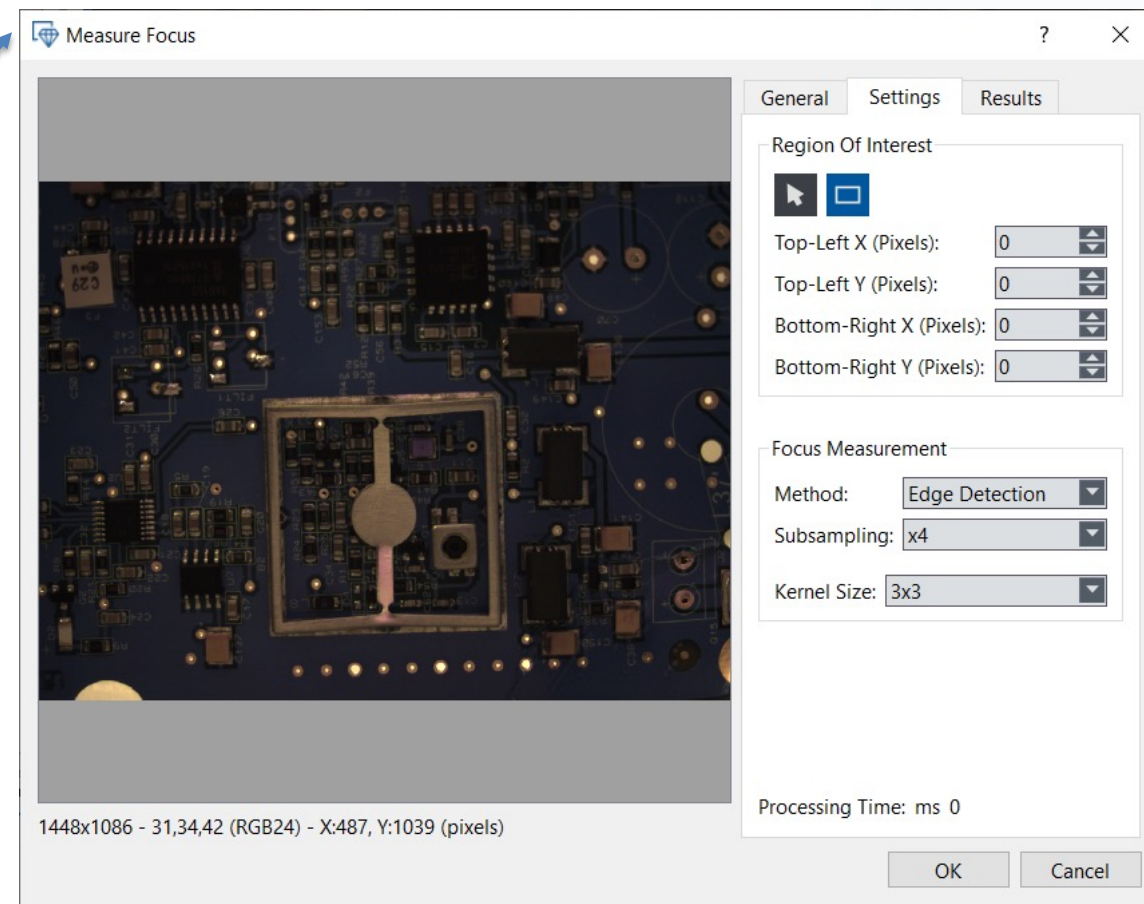
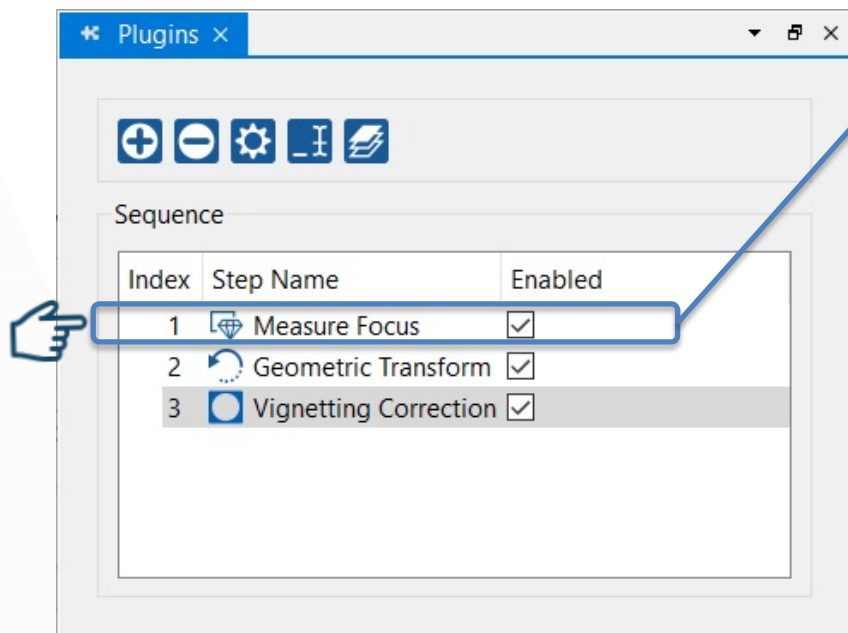


-  Adds new step
-  Deletes selected step
-  Sets up step
-  Renames selected step
-  Reorders sequence of steps

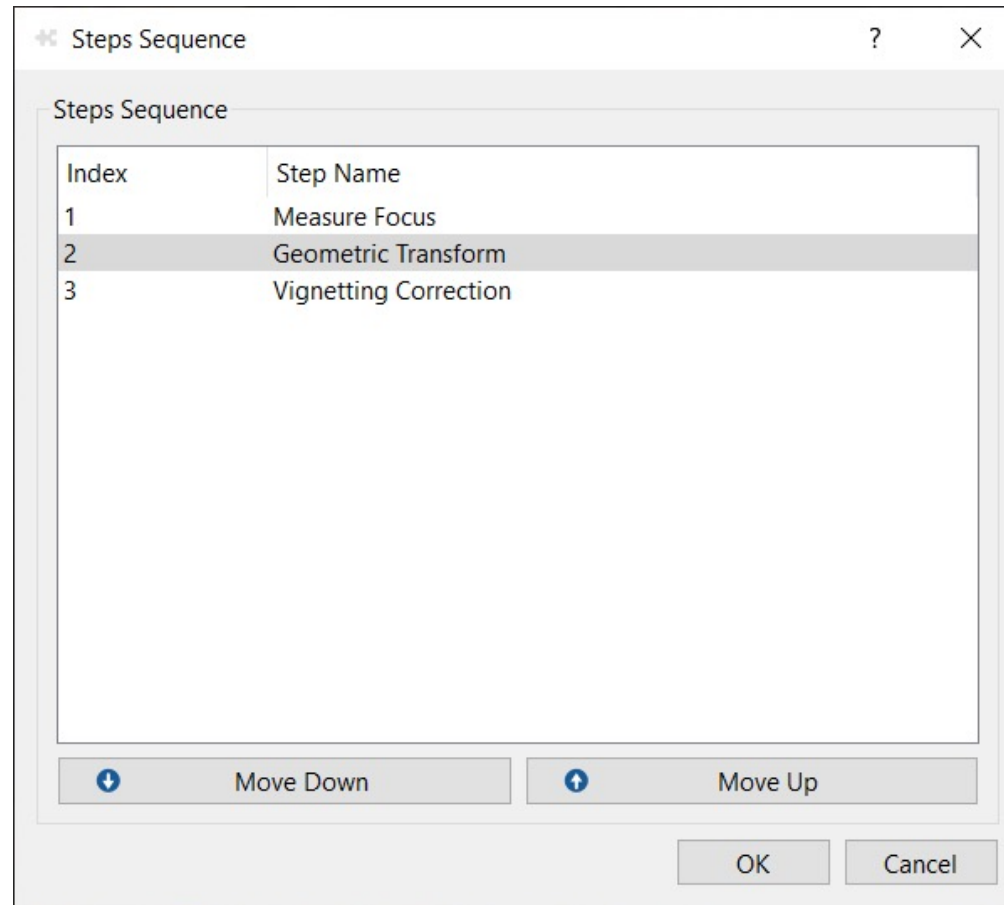
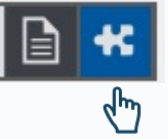
'Plugins': Add a new Step



'Plugins': Set up a Step



'Plugins': Reorder Steps



Software Integration Options

How to contact technical support team

- By email : support@opto.de
- By phone : +33 4 75 53 14 00

谢谢
ありがとう
감사합니다
Vielen Dank
Merci
Thank you
Gracias
תודה רבה

