



14. Counter tool



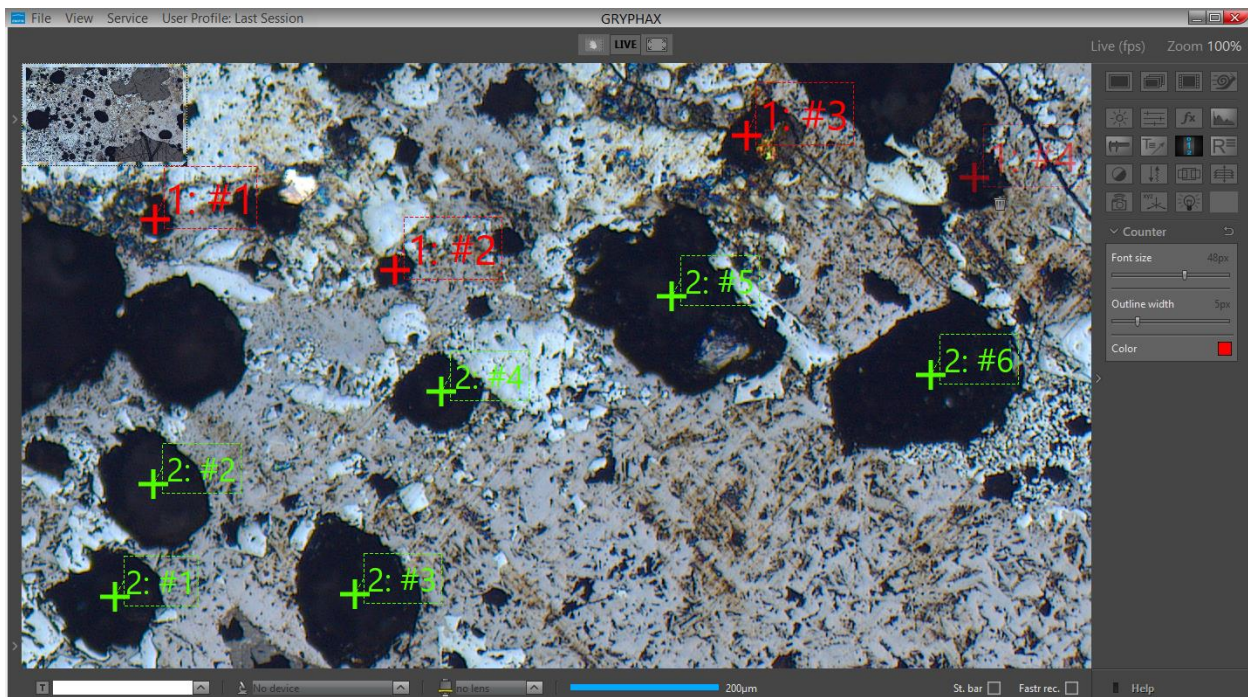
User Guide for Counter tool of JENOPTIK GRYPHAX® software

General description:

The GRYPHAX Counter Tool enables users to count important items directly at live preview or at images loaded from gallery. In Addition, the counting statistics can be analyzed and exported by Report tool.


Overview:

Multiple Counting objects on loaded Panorama image from Gallery:




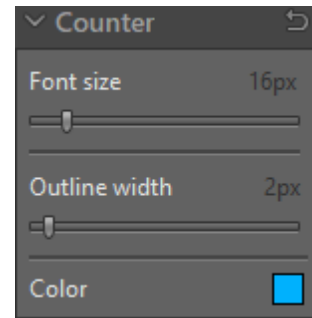


Start Counter tool:


To **activate** the *Counter tool* open the GRYPHAX tool bar by pressing the arrow  on right-hand software site or use keyboard short cut (**ctrl / cmd + T**)

Click to the Counter icon  at the tool bar, the Counter widget will be displayed and contains the following tools and options:

- **Font Size** – by value 8 – 72px
- **Outline Width** – by value 1 – 20px
- **Colour** can be selected by colour selector, click on colour rectangle  to open colour selector



Note: Counter tool is available only if record mode “Single shot” is selected and live image is activated before. Alternatively, a recorded image is opened from Gallery.
No support for Time-lapse preview or video files.

Reset button  on a tool sets all properties to their initial values. Initial values are fixed.


Pre-define settings:


When no object is current or selected, the tool widgets show default properties.


To **predefine** the general settings of Counter tool e.g. font size, outline width or color by change of the according parameter without set Counter to the image window.

The settings for each drawing object can be individual adjusted after start of drawing or by selecting a drawn object from image window.

Start & save drawing:


To **start** drawing select record mode “Single shot” or **start live** by pressing the “Live”-button  or open a **recorded image** from Gallery.

By **pressing** “Rec”  button all previously drawn Counter from **live preview** will be merge into the image and cannot be removed afterwards. In addition, new counts can be added to the existing countings.

To **save** drawn counter at loaded **recorded images** from Gallery, start live preview  or load another image from Gallery. An **image copy** will be always saved automatically by software with a file name extension: “_copy_1” and increment the image copy number accordingly.



Creation (drawing) of Counter:

In general, after clicking of the Counter icon from tool bar  , the cursor changes to a crosshair and user can draw an counter object into the image window.

The Counter tool is a 1-point drawing object.

To **draw** an object with left mouse-click on point of interest and release.

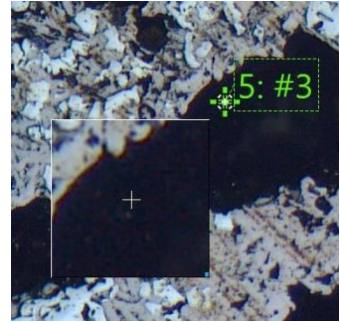
A cross will be drawn and the counter label display the number of counting series and the count number e.g. "Counter1: #1"

For any further click into the image window, another count with increment number (Counter1: #2, Counter1: #3 ...) will be placed.

To **draw multiple count series** – deactivate the focus / marking of current count by using the "ctrl / cmd" key or deactivate the Counter tool.

Click into the image window once and re open Counter tool.

Afterwards, the next counting series can be drawn.



In addition, a small **floating pane** is opened as image window overlay and shows a detailed view of a selected sector like as the magnifier tool.

Zoom level of magnifier can be adjusted on the used section of "zoom level" under *Preferences / General / Magnifier* (valid as of version 1.1.8)

Pressing "Del" or "Esc" key before finishing an object, aborts the creation and removes unfinished objects. With each additional "Del" click, the last counter number of series is marked and can be deleted as well.

To **extent** existing counting series, select an already drawn counter object. The counting series will be extended by new object with consecutive numbering.

Object selection:

Every object can be **selected** as the current one at live and captured images before image is recorded / saved with overlay. The current object is displayed as semi-transparent and decorated with the trash icon.

An object can be selected as the current one, by **clicking** it with the pointer tool - 'arrow' button on the main window's *Record bar*. But when an active tool is other than the pointer tool (e.g. text tool), this requires switching the active tool off and switching the pointer tool on.

To make it more convenient, the Counter tool can be temporarily **activated** by pressing the "ctrl / cmd" key. As long as the key is pressed, the pointer tool is active. When "ctrl / cmd" is released, the previously active tool activates again.

The current object can be **moved** using the pointer tool. When the counter tool widget is visible on the tool bar, the properties of the current object (color, outline width, font size) are set in the widget.

The label of active counts can be moved to different position by mouse operation as well. In case, select a counter in advance the label position can be adjusted by holding **ctrl / cmd** key pressed and move the label.



Object multi-selection:

By marking a [rectangular area](#) with the pointer tool at the image window, one can also select more than one object. Multi-selected objects are also displayed as semi-transparent, but without their trash buttons. A multi-selection trash will be displayed in center of the selected objects to delete all. Pressing “del” key remove all selected objects.

Multi-selection can be also created, extended or modified by clicking on objects with the pointer tool while “shift” key is pressed. Objects selected can be moved together as well.

Deleting objects:



The current object can be [deleted](#) by clicking its trash icon, or pressing “del” key. Objects selected can be deleted together by pressing “del” key.

Changing object properties:

Object's properties can be [modified](#) using controls on the tool widget appropriate for the object (color, outline width, font size). The properties of the current object are visible in the widget and can be modified. When more than one object is selected (multi-selection), some common properties (like color or line width) for all selected objects can be modified.

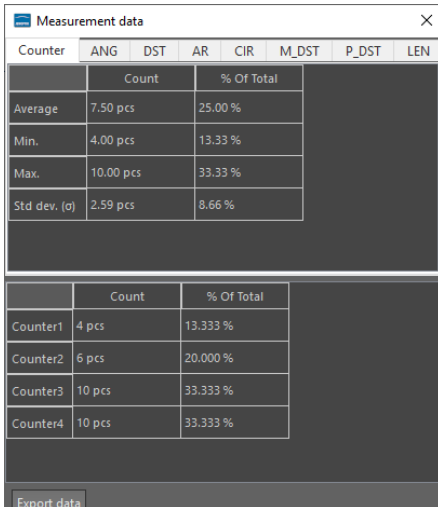
Note: If a tool widget is closed, **double-click** on an object makes the object current and [opens](#) the appropriate tool widget at the toolbar.

Reporting counters:

To analyze the counters statistics from live preview or recorded images from gallery - start “Report” tool  and activate option “Measurement data table” .

In addition, the reported data and statistics can be exported. To [export](#) measurements data, press button: “Export data” to save all measurements data information into *.xml file.

Note: To [open](#) exported *.xml file a 3rd party software like MS Excel or comparable is needed.



Counter	ANG	DST	AR	CIR	M_DST	P_DST	LEN
	Count		% Of Total				
Average	7.50 pcs		25.00 %				
Min.	4.00 pcs		13.33 %				
Max.	10.00 pcs		33.33 %				
Std dev. (σ)	2.59 pcs		8.66 %				
	Count		% Of Total				
Counter1	4 pcs		13.333 %				
Counter2	6 pcs		20.000 %				
Counter3	10 pcs		33.333 %				
Counter4	10 pcs		33.333 %				

Export data

For detailed information, please see the separate section for [Report tool](#).

Extent existing counting series to gallery images

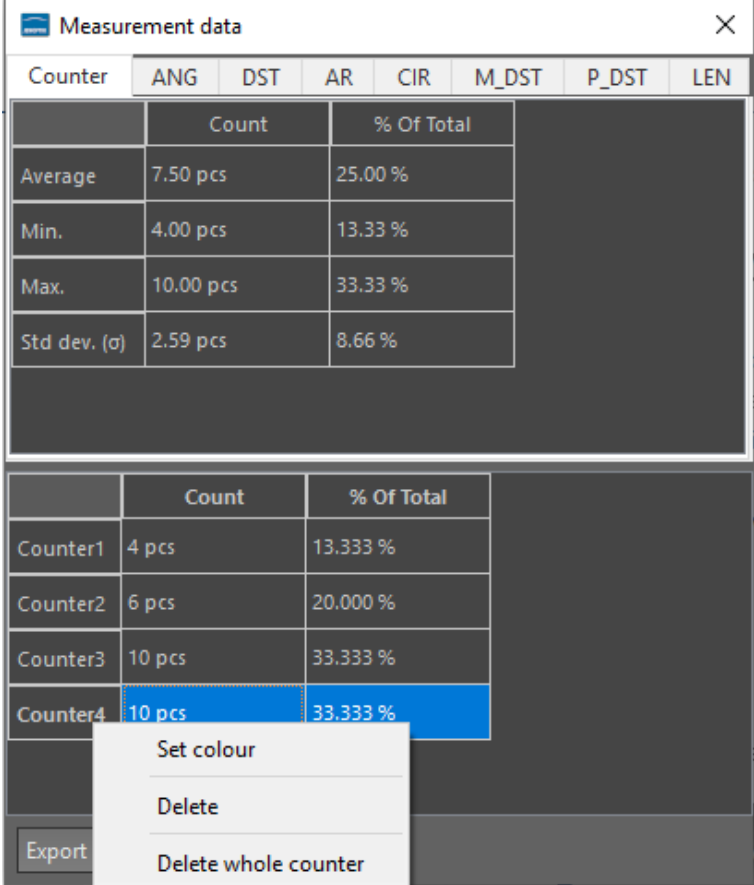
To **extent** existing counting series, open the image from gallery to display on main image window.

Afterwards, start "Report tool"  from tool bar and activate Measurement data table .

Select a counting series from Counter list by mouse click to **add** further counters to existing counts from recorded gallery images. The counting series will be extended by new object with consecutive numbering.

Furthermore, a separate menu will appear by right-hand mouse click on counter series to change the colour or to delete the whole counter series from unsaved images.

Note: Merged counter object cannot removed or changed afterwards.



The screenshot shows the "Measurement data" window with a table of counter statistics. Below the table, a context menu is visible with options: "Set colour", "Delete", and "Delete whole counter".

Counter	ANG	DST	AR	CIR	M_DST	P_DST	LEN
	Count		% Of Total				
Average	7.50 pcs		25.00 %				
Min.	4.00 pcs		13.33 %				
Max.	10.00 pcs		33.33 %				
Std dev. (σ)	2.59 pcs		8.66 %				

	Count	% Of Total
Counter1	4 pcs	13.333 %
Counter2	6 pcs	20.000 %
Counter3	10 pcs	33.333 %
Counter4	10 pcs	33.333 %

Context menu options:

- Set colour
- Delete
- Delete whole counter

Limitations:

- Counter are not available during record of time-lapse, video, Z-stacking, Panorama or Fluorescence mode.
- Counter tool is enabled only if record mode "Single shot" is selected and live image is activated before. Or a recorded image is opened from Gallery. No support for Time-lapse preview or video files.