

# LiveQuartz

## Simple Photo Editing on macOS

<http://www.livequartz.com>

You can watch screencasts of LiveQuartz from the help menu or through this link:  
[http://www.livequartz.com/?menu=livequartz\\_video](http://www.livequartz.com/?menu=livequartz_video)

The software is localized in 11 languages :  
English, Japanese, Traditional Chinese, Simplified Chinese, Danish, French, German, Italian, Persian, Russian and Spanish

## Tools

- The **arrow tool (V or cmd key)** is the layer moving tool. When there is a selection, it is a very easy way to cut and paste part of layers or to duplicate them (“**alt**” key). We can force its action on the same line or on the same vertical position by pressing the “⇧” key.
- The **brush (B)** allows you to paint with the chosen color and tool size.
- The **duplication tool (S)** is here to retouch photos. To use it, you have to click on a reference point with 'alt' key pressed and then you can click where you want to duplicate the pixels. It uses the same tool size as the brush tool.
- The **drawing tools (U)** : A line tool, a stroke rectangle tool, a fill rectangle tool, a stroke oval tool and a fill oval tool. They use the same tool size as the brush tool. With “⇧” key pressed, rectangle and oval tools keep 1:1 proportions. And with “⇧” key pressed, the line tool steps 45°. You can draw rectangles with round corners too.
- The **eraser tool (E)** erases an image by replacing it with a transparent color. It uses the same tool size as the brush tool.
- The **background eraser tool (O)** helps you to remove backgrounds and to replace them with transparent color. Just click on the color you want to remove and drag the mouse to adjust the color range of the erasing. The further you drag your mouse, the wider range of colors will be removed. As color removal applies to all the layer, it is recommended to use it with selections. When “**alt**” key is pressed, you can use a “**paint bucket**” to fill a zone with the chosen color. As the background eraser, the further you drag your mouse, the more colors will be replaced. Difference between background eraser and paint bucket is that background eraser does not find edges, it is applied to the whole layer or the whole selected part of the layer.

Note : brush, duplication tool, background eraser, paint bucket and eraser tools do not work on text layers.

- The **gradient tools (G)** are composed of the linear and the radial gradient tools. With “⇧” key pressed, the linear tool steps 45°.
- The **rich text tool (T)** is for adding a rich text layer. It is possible to modify the text by opening the text editor popover in layers' list at the left of the window.
- The **spiral tool (N)** is for modifying “point” parameters of filters. To be able to use it, select the point parameter you want to modify in the filter's parameters list (bottom right of the window).

Note : Usually, those parameters are named “Center” or “Point...”.

- The **color picker (H)** is a very fast way to choose a color by clicking on a pixel of your image. With “⇧” key pressed, you can choose the second color. With “alt” key pressed when using tools that are using colors, you can quickly get the color picker and choose a new color or a new second color.
- The **rectangular selection tool (M)** is used to crop the image (using the “crop” button), to copy a portion of the image and to restrict painting area and erasing area. Its shape is rectangular or a square if we press the “ ⇧ ” key.
- The **ellipse selection tool** is used to copy a portion of the image and to restrict painting area and erasing area. Its shape is an ellipse or a circle if we press the “ ⇧ ” key.
- The **lasso selection tool (L)** is used to copy a portion of the image and to restrict painting area and erasing area to a very precise area. It has two modes :
  - Classical behaviour by doing a click, drag and release of the mouse to close the selection**OR**
  - Polygonal mode where you do some successive clicks to define segments of the polygon. You close the selection path with the “ Close ” button or with the “ ↶ ” key (“ esc ” key is here to cancel the selection)

Note : There is a selection setting to apply progressive / blurred borders (no blur effect by default). “Layer crop” (available in the layer contextual menu by doing a right click on selected layers in the layer’s list) will use the current selection to mask the selected layers.

- The **magnifying glass (Z)** is here to zoom and unZoom (“alt” key). You can zoom in and out with “cmd +” and “cmd -”.

You can switch tool by hitting “**tab**” or “⇧ **tab**”.

You can hide or show layers' interface with “**cmd L**”

You can hide or show filters' interface with “**cmd F**”

You can adjust window size with the image with “**cmd \***”

You can cut/copy/paste pixels in selected layers with “**cmd X**”, “**cmd C**” and “**cmd V**”

You can erase pixels in selected layers with the “**backspace key**”

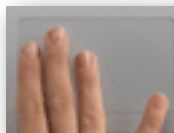
You can fill a selection with the current color with “**cmd K**”

The “Merge” button is used to compose selected layers in one.

You can undo your actions since the document opening using “**cmd Z**” et “**cmd ⇧ Z**”.

## Multi-Touch support

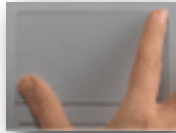
### SWIPE



**Horizontal Swipe** : change selected tool

**Vertical Swipe** : change selected layer

### PINCH AND EXPAND



**Default** : Magnification

**If the Layer Dragging tool is selected** : we make a transformation scale on selected layer(s) (“alt key” pressed for a Magnification)

## ROTATE



**If the Layer Dragging tool is selected** : we make a transformation rotation on selected layer(s)

## SCROLL



**If there are scroll bars** : we scroll

## Image formats

Native format (non destructive) :

– **rhif**: the native LiveQuartz format that saves all the layers and filters (QuickLook and Spotlight ready).

Mixed formats (available in “Export” menu) :

– **pdf**: the Portable Document Format from Adobe (it is also the native format of Quartz, the OS X drawing foundations).

Bitmap formats :

– >Read/Write formats (available in “Export” menu) :

**png**, **heic** (heif), **jpeg** (no alpha), **jpeg2000**, **tiff**, **tga**, **gif** (1bit alpha), **bmp** (no alpha), **OpenEXR**

–> Read only formats :

**raw** (Adobe, Canon, Fuji, Kodak, Minolta, Nikon, Olympus, Sony DNG), **photoshop** (merged layers), **icns**, **sgi**, **Windows ico**, **Windows cursor**, **FlashPix**, **MacPaint**, **QuickTime Import Format**, **Radiance**, **XWindow bitmap**

# Minimal configuration for latest release

🍏 macOS 10.11  
🍏 1Go RAM

## Versions History

November 2020 : version 2.9 ([macOS 10.11+](#)):

### New Features:

- macOS 11 « Big Sur »: Minor UI changes for Big Sur compatibility
- macOS 11 « Big Sur »: Status bar remains visible in Full Screen mode
- macOS 11 « Big Sur »: New full window text editor (due to compatibility problems on Big Sur, I had to redo the Text Edit settings without a popover)
- Bigger previews in Filter picker

### Bug fixes:

- File size preview problem in export dialog
- macOS 11 « Big Sur »: Full screen having a disappearing toolbar
- macOS 11 « Big Sur »: App hang when trying to export
- macOS 11 « Big Sur »: Window's top right controls impossible to click

December 2018 : version 2.8 ([OS X 10.11+](#)):

### New Features:

- In Edit menu, the latest selection can be restored
- As it is similar, the brand new **"Paint Bucket"** is available by choosing the background eraser tool with 'alt' key pressed
- Drag and Drop of text layers is now possible (Previously, it would have converted the layer to a pixel image layer)
- Default corner input points for certain transform filters now default to the current position of the corners (example: "Perspective Correction" filter)

### Bug fixes:

- Drag and drop of layers and filters between two LiveQuartz documents is back on Mojave
- Fixing an issue on certain configuration with painting tools on Mojave (pencil and duplication tool)
- Scrolling with input devices like the magic mouse is disabled while using tools to avoid wired behaviour
- Fixing an english localisation issue in filter picker
- Fixing a layer size issue with background eraser when using a selection

September 2018 : version 2.7 ([OS X 10.11+](#)):

### New Features (macOS Mojave):

- Support of Dark Mode
- Linear gradient tool uses a better quality filter to generate the gradient image
- New native dialog asking for an App Store review that will be displayed sometimes after exporting an image
- Continuous camera support ('ctrl'-clik or right clic on the layers' list)

#### Bug fixes:

- Fixing a sandbox issue preventing to import scanner or camera images on certain configurations
- Prevent from a possible hang when opening documents (while building layer previews)
- Fixing a crash preventing QuickLook to work properly
- On Mojave, fixing a refresh issue when removing filters
- On Mojave, fixing a bug preventing to change order of layers or filters with drag and drop
  - Note: The (temporary) workaround was to disable the possibility to drag and drop layers and filters between two LiveQuartz documents on Mojave. I hope to re-enable this functionality as soon as possible.

#### June 2018 : version 2.6 (OS X 10.11+):

##### Features:

- Better performance when scrolling and window resizing thanks to use of core animation layer backed views (we are still working on some performance enhancements for future updates)
- Now, at least on Sierra, you can drag and drop one or several photos from Apple Photos app to LiveQuartz

##### Bug fixes:

- Fixing a bug with alpha introduced with filters optimisation in 2.5.21
- More efficient file size estimation
- LITE: "Restore" button is back to be able to restore a previous purchase when it is not found automatically (new mac, etc)
- LITE: Dragging one or several layer(s) does not account anymore for the limit of one export per day

#### April 2015 -> Spring 2018 : version 2.5, a special 10 years Birthday version of LiveQuartz 🎂 (OS X 10.10+):

- **New Ellipse Selection tool**
- Enhanced Lasso Selection tool with two modes : classical behaviour by using it as usual (click and drag and release the mouse to close the selection) OR the **new polygonal mode** where you do some successive clicks to define segments of the polygon. You close the selection path with the "Close" button or with the "↩" key ("esc" key is here to cancel the selection)
- New selections settings to apply a **blur effect on the selection borders** (no blur effect by default)
- Layer crop (available in the layer contextual menu by doing a right click on selected layers in the layer's list) is now possible to any types of selection. This gives new **basic masking** capabilities to LiveQuartz (rectangle, elliptic, lasso and polygonal masking with progressive borders in option).
- Redesigned rectangle selections resizing knobs
- Better feedback about the tool size values and more precise tool size settings for small sizes (the slider uses a logarithmic slider)
- Painting tools now have **dynamic sized cursors** to show the tool shape
- Arrow tool (layer dragging) could be constrained to a line or vertical move with the "⬆" key
- Rectangle selections could be constrained to squares with the "⬆" key
- Ellipse selections could be constrained to circles with the "⬆" key
- Fixes a bug with undo grouping on some drawing tools
- Fixes a bug with cursors when we have selections
- Fixes a bug with the background eraser when using it by clicking on a non opaque color

#### October 2014 : version 2.4 (OS X 10.10+):

- Fully supports OS X 10.10 Yosemite with lot's of bug fixes
- New rewritten iSight camera capture Panel (cmd-⬆-⌘)
- Now LiveQuartz always opens images as rhif files.
- Popovers can now be detached.
- Note : 2.4 and higher will not support anymore versions of OS X prior to Yosemite. If your system is not up to date, you can download 2.3.3 for Lion, Mountain Lion or Mavericks.

#### April 2014 : version 2.3 (MAC APPSTORE, OS X 10.7.5+):

- New Color Picker Tool (accessible with 'alt' key)

- Scrolling Tool removed

#### 09/2013 : version 2.2 (MAC APPSTORE, OS X 10.7.5+):

- Some UI Bugs are fixed (window size problem in "versions" is fixed, etc)
- Major bug when using Magic Eraser with selections is fixed
- Larger rounded corners are now possible when drawing rectangles
- Bigger maximum size of tools
- New background Grid Guide size settings in preferences
- New image scroll view background with a shadow (easier to see grey and black images)
- More intuitive behaviour of all the application when working on layers having filters. For example when using the eraser. The visible filters are automatically merged into the layer. If you want to keep some filters, disable them before making your changes to the layer.
- Symmetry filter names fixed
- New notification the first time we open a non rhif file to explain that saving it is destructive
- Text Layer crop (layer's contextual menu)
- Mavericks bugs fixes
- New Lite version with In App Purchase
- Ajout d'un système de crash reporting

#### 03/2013 : version 2.1 (MAC APPSTORE, OS X 10.7.5+):

- New actions available in layers' contextual menu : 'cut', 'copy' and 'crop'.
- 'Crop' a layer is new in LiveQuartz. Before, only cropping a selection on all the document was possible. Now, you can crop image layers individually or by group. To be able to crop, you must select a rectangle with the selection tool and right clic or ctrl-click on the layer or the selected layers. Note that, as this action removes pixels that are outside the crop rectangle, this could be a technique to reduce memory usage and 'rhif' file size.
- Drag and drop of filters to copy them to another layer of the same document or to another layer (or filters) of another document. So now, you can easily reuse your best filters by keeping all there custom parameters.
- New lighter User Interface when entering "Versions" history on Mountain Lion
- Limits on Layer name, image size, layer size and layer positions removed to avoid confusing errors with AutoSaving
- Major Bug fixed when opening LiveQuartz 1 files
- Cleaner way to handle migrations to version 2 when opening LiveQuartz 1 files. In LiveQuartz 2.0.x, files were moved into the sandbox. Now in LiveQuartz 2.1, a backup of the original file is put into LiveQuartz's sandbox but the migrated file (the one we use) does not move.
- More robust handling of errors when opening files
- Refresh bugs fixed when canceling or redoing actions on filters

#### 08/2012 : version 2.0 (MAC APPSTORE, OS X 10.7.4+):

- Built for Mountain Lion and Lion
- "Sandbox" support
- Full Screen support
- Simplified and more modern UI with more contextual informations
- New text layer UI (full text editor per text layer with rich text editing and alignment settings, etc)
- More standard Filters added (110+ filters available)
- Sharing popover menu support to export to popular social web sites like Twitter, Flickr, Email, AirDrop, Message and very soon : Facebook (only on Mountain Lion)
- Auto Save support (only on Mountain Lion)
- Versions support (only on Mountain Lion)
- Updated file format RHIF
- New "Export" menu to export a LiveQuartz image to popular image file formats
- Retina Display support status : Critical bugs are fixed but some tools' bugs remain (drawing tools and selections). Graphical User Interface is 90% ready for Retina Display. Support of 'Retina image editing' will be enhanced in next releases.
- After adding a multiple pages PDF as a layer, we can choose the page in layer settings popover.
- Precise positioning of layers
- Possible to fill a layer with current color
- QuickLook plug-in bug fixes

- More stable Import from Device and Scanner UI (only on Mountain Lion)
- Bug Fixes affecting LiveQuartz on Lion and Mountain Lion

02/2012 : version 1.9.7 (ONLY FOR MACAPPSTORE, MacOS 10.6.6+):

- "Take a picture" picker is back to its standard size
- Some bug fixes

07/2011 : version 1.9.6 (ONLY FOR MACAPPSTORE, MacOS 10.6.6+):

- Bug fixes on Lion

04/2011 : version 1.9.5 (ONLY FOR MACAPPSTORE, MacOS 10.6.6+):

- Facebook export
- Help menu now has a direct link to the AppStore LiveQuartz page

03/01/2011 : version 1.9.4 (ONLY FOR MACAPPSTORE, MacOS 10.6.6+):

- Fix a linear gradient color order issue
- Works on Lion

02/05/2011 : version 1.9.3 (ONLY FOR MACAPPSTORE, MacOS 10.6.6+):

- **New app icon designed by NendoMatt (<http://www.nendomatt.com>)**
- Enhanced background eraser with progressive borders
- Linear gradient : By pressing the ⌘ key during its usage, you can have increment angles of 45 degrees (same as the drawing tools)
- By default, new documents have a 800 by 600 pixels size
- Small UI adjustments
- Bug fixes

01/13/2011 : version 1.9.2 (ONLY FOR MACAPPSTORE, MacOS 10.6.6+):

- Add a setting in preferences for exporting with or without alpha background (for image formats supporting alpha)

01/06/2011 : version 1.9.1 (ONLY FOR MACAPPSTORE, MacOS 10.6.6+):

- LiveQuartz 1.9.1 is the first release available on the Mac AppStore
- Bug fixes
- Free line tool has been removed as it did not differentiate enough with the brush.

2011 : version 1.9.0.1 (ONLY FOR SNOW LEOPARD):

- LiveQuartz 1.9.0.1 is a Snow Leopard only release. Older versions remain available on the web site.
- Bug fixes

01/26/2010 : version 1.9 (ONLY FOR SNOW LEOPARD):

- LiveQuartz 1.9 is a Snow Leopard only release. Older versions remain available on the web site.
- Various Bug fixes and GrandCentralDispatch optimizations on Snow Leopard
- Faster quit and better use of multiple CPUs
- New "Flip" transformations added in geometry filter category (Horizontal and Vertical)
- New "Shadow" filter added in stylize filter category
- Better localization of filter parameters (with full explanation in the filter parameter panel)
- Filters are represented in their order : top to bottom
- Layer display offset bug resolved on transformed layers that have some filters
- Pixel accurate image display and pixel accurate drawing when working precisely on pixels (except when using scale and rotation transformations or text)
- Rewritten and fixed drawing tools
- Rounded corner rectangle drawing tools
- "Import from device..." added to import from scanners, digital cameras, iphones, etc...
- "New from Clipboard..." menu added
- New option on saving as flat image formats to keep alpha for the background or not



- Window last position is saved
- Pasting an image selection now pastes it at the same place as the original

10/02/2009 : version 1.8.4 (LAST VERSION FOR LEOPARD 10.5):

- Bug fixes on Snow Leopard : PDF files opening

09/01/2009 : version 1.8.3 (LEOPARD + SNOW LEOPARD):

- Bug fixes on Snow Leopard

03/31/2009 : version 1.8.2 (ONLY FOR LEOPARD):

- Intel 64 bit binary added ! Now LiveQuartz will run in 64 bit if you have at least MacOS 10.5.6 on a Core2Duo or better.
- Japanese Localization (thanks to Shintaro Ikegaki & Ryuta Kojima)
- Preferences for default color and default font
- New more simple livequartz-update system (<http://sparkle.andymatuschak.org>)

06/09/2008 : version 1.8.1 (ONLY FOR LEOPARD):

- New behaviour of drawing and gradient tools : By default, LiveQuartz is not creating a new layer each time you use the tool anymore (if you like the old behaviour, you can get it by typing this in the "terminal" application : "defaults write com.rhapsoft.livequartz IMDrawingWithoutMerging YES").
- LiveQuartz keeps the current selected tool after drawing.
- With "⌘" key pressed, rectangle and oval tools keep proportions 1:1. And with "⌘" key pressed, the line tool steps 45°.
- When choosing "Save as..." to a standard image file format, you can see a preview of final file size.
- A file opening bug has been fixed (when there are empty layers)
- A very old bug with display of "lasso" selection doing some pauses is fixed
- "RHIF" Spotlight plug-in bug fix
- 1.8.1 only for MacOS 10.5.3 because LQ has some hanging issues on PowerPC with 10.5.2

04/16/2008 : version 1.8 (ONLY FOR LEOPARD):

- From release 1.8, LiveQuartz is Leopard MacOS 10.5 only !
- LiveQuartz handles multi-touches (with compatible trackpads) : swipe (tools choice and selected layer choice), rotation (layer rotation) and magnifying (magnification and layer zoom transformation)
- New free line drawing tool (click on the line tool sub-menu to choose it)
- New standard Leopard filter picker with bookmarks ("Collections")
- Background eraser's action can be restricted by a selection
- More logical merging of layers : Now, only selected layers are merged
- Global image resize is finally possible !
- New tool settings user interface (only tools available for the current tool are displayed)
- New line width setting for drawing tool
- PDFs, text and drawing layers are correctly rendered (as long as we do not alter their content or use filters on them)
- New "Take a picture" menu to use the standard picture taker of Leopard (snapshots from iSight camera)
- Lot's of bug fixes
- Memory usage optimizations
- Faster launch times
- Faster QuickLook plug-in (RHIF format)
- QuartzGL (Faster display system) is available in preferences but is not enabled by default because there are too many display issues yet

04/01/2008 : version 1.7.3 (LAST VERSION FOR TIGER):

- Bug fix : when pasting graphics, there was a blur effect
- Bug fix : there was a bug on undo after opening a rhif document
- Enhancement : tools' undo is grouped now

02/16/2008 : version 1.7.2:



- Bug fix in "RHapsoft Image Format" save behaviour

11/17/2007 : version 1.7.1:

- New setting in preferences for background grid color
- Bug fix in the RHapsoft Image Format QuickLook importer

10/30/2007 : version 1.7:

- Bug fix : In earlier versions, when exporting text which has alpha and no filter, text became opaque
- New super easy to use background eraser tool ([ONLY ON LEOPARD](#))
- QuickLook ready ([ONLY ON LEOPARD](#))

09/28/2007 : version 1.6.5:

- Bug fixes for Leopard

05/29/2007 : version 1.6.4:

- Leopard 10.5 ready
  - A potential bug that may cause a crash at start up has been fixed.
- The app may launch slower than previous builds but it is much safer.

10/06/2006 : version 1.6.3:

- No preview icon anymore for files created with LiveQuartz to decrease small images' file size
- While using tools on a layer, does not hide other layers anymore
- Italian localization added thanks to Simone D.

06/10/2006 : version 1.6.2:

- Third party CoreImage Image Units recognized (just put them in .../Library/Graphics/Image Units)

06/07/2006 : version 1.6.1:

- Bug fixes

04/27/2006 : version 1.6:

- Much more image formats supported (photoshop, raw, etc)
- Option to choose the compression of JPEG files
- Many bugs fixes
- Speed and memory optimizations
- Better feedback of the spiral (filter) tool
- Better behaviour of the text layer
- New web site for LiveQuartz made by Loïc Villette
- Spanish localization added thanks to Manuel Rives

04/07/2006 : version 1.5.2:

- avoids a very serious deadlock when using painting tools with MacOS 10.4.6 (CoreImage bug)

01/15/2006 : version 1.5.1:

- Fixes on Russian localization
- Optimizations on copies
- Bug fix on internal image handling
- Traditional Chinese localization added

01/09/2006 : version 1.5:

- Totally rewritten selection sub-system
- New lasso selection tool
- New linear and radial gradient tools
- New feature : "Fill a selection with current color" (Edit menu)
- New Interface look inspired from Apple iTunes 6 and Apple Mail 2

- New alternate interface with all the settings in a drawer at the right of the window (available via preferences)
- New preference option to hide settings on window opening
- Bug fixes
- New localization : Persian (Ali Samadi)
- Universal binary compiled on XCode 2.2

#### 11/01/2005 : version 1.2:

- Selection tool has a new more classical and logical appearance
- Scrollers are hidden now when not necessary
- Drag and drop bug fixed (Had been introduced since 1.1)
- Localizations completed (German and Chinese)
- New localization : Russian (Michael Krekin)

#### 09/13/2005 : version 1.1:

- New 5 drawing tools : line, stroked rectangle, filled rectangle, stroked oval and filled oval
- Painting tools' behaviour is correct now (fluid painting, no points anymore)
- Tools are correctly enabled and disabled in toolbar
- New shortcuts
- Bug fixed with CoreImage pointing tool
- Major regression crash bug fixed (undo of a new layer follow by any operation) introduced since 1.0.1

#### 08/23/2005 : version 1.0.2:

- Bug fixed on filter insertion
- Regression bug fixed in layer handling

#### 08/20/2005 : version 1.0.1:

- Two memory leaks fixed

#### 08/16/2005 : version 1.0 final:

- Enhanced interface with more space for the image
- Update on cursor management
- In filters' popup menu, filters are sorted by categories with previews
- New option to merge layers
- CoreImage tools rewritten to be able to be used on transformed layers
- Opens correctly images off all dpi and always saves in 72dpi
- Image dragged to a new window has its size correctly taken into account
- When opening images, zoom is adjusted for the image to fit the window
- Video demo added in "Help"
- Software update added
- "Save As" bug with rhif files fixed
- Visual zoom bug fixed
- Chinese localization

#### 06/13/2005 : version 1.0 B5:

- New background grid
- New option at the bottom right of the window to hide filters' interface
- New duplication tool
- Bug fixes
- Better Spotlight support : now RHIF files are recognized as images files
- Copy and Paste of image added
- Universal binaries (PowerPC AND Intel X86 compatibility)
- German localization

#### 05/16/2005 : version 1.0 B4:

- Major Issue resolved : it was not possible to save a file as "rhif" type if it was an other file type.

- Major Visual bug : filtered layers were cropped
- Visual bug : after opening a non "rhif" file, there were refresh issues

#### 05/12/2005 : version 1.0 ß3:

- Major Issue resolved : hanging on saving files (was introduced by ß2)
- New text tool
- New application name and icon

#### 05/09/2005 : version 1.0 ß2:

- Unlimited undo is fully working
- Images direct opening is working
- Filters pop-up menu correctly selected
- RHIF format is spotlight ready (you can search for a word that is in a layer name)
- User Interface is clarified
- French localization added

#### 05/02/2005 : version 1.0 ß1:

First public release

#### Autumn 2004 : first internal builds of “ iMage ” (the first name of LiveQuartz):

First internal builds (Panther 10.3 only)

## Know issues in last release

- LiveQuartz is only producing 72dpi images.
- You can not restrict a filter or some text to as selection.
- LiveQuartz does not handle color profiles.
- When using drawing tools, a temporary layer appears.
- Some language supports are not complete.
- A bug in macOS prevents from exporting images of 1 pixel line or 1 pixel row in HEIF
- **macOS 11 « Big Sur »**: Pixels are not displayed correctly when rendering at more than 100%, at least with some graphic cards, due to an image Interpolation bug in macOS Big Sur (#FB8570894).
- **macOS 11 « Big Sur »**: LiveQuartz is not yet optimised for Apple Silicon so it will use Rosetta to run on Apple Silicon Macs. I am working on the native version.

## Macs that were used to build LiveQuartz since the beginning

- PomerMac G3 Blue Yosemite (2004)
- iMac G5 original (2004–2006)
- Mac Mini G4 (early 2005)
- iBook G4 12 inch (spring 2005)
- MacBook Pro Intel CoreDuo 1.8GHz 15 inch (spring 2006)
- iMac Core2Duo White 2.16GHz 20 inch (summer 2007)
- iMac Core2Duo Alu 2.93GHz 24 inch (march 2009)
- iMac Unibody Corei7 2.8GHz 27 inch (november 2009)
- iMac Ultra Thin Corei5 3.2GHz 27 inch (october 2013)

## About the author

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Follow @LiveQuartz news on Twitter.

Don't hesitate to write detailed explanations in the dialog that appears on next launch of LiveQuartz after a crash. This could help me a lot to fix complex bugs that I don't reproduce easily.

You could send the feedback about LiveQuartz at [feedback@rhapsoft.com](mailto:feedback@rhapsoft.com) or post to LiveQuartz' forum at <https://www.tapatalk.com/groups/livequartzfr>

This software is entirely made on my spare time. Big thanks to my family for their support.

## With special thanks to

Loïc Villette for the RhapSoft web site,  
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Niels Danielsen for Danish localization,  
Manuel Rives for Spanish localization,  
Michael Krekin for Russian localization,  
Ali Samadi for Persian localization,  
Lu Ang for Traditional Chinese localization,  
Lidan for Chinese localization,  
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À Louis.