

Krita

Krita (^[6]*/ˈkriːtə/ KREE-tə*) is a free and open-source raster graphics editor designed primarily for digital art and 2D animation. The software runs on Windows, macOS, Linux, Android, and ChromeOS, and features an OpenGL-accelerated canvas, colour management support, an advanced brush engine, non-destructive layers and masks, group-based layer management, vector artwork support, and switchable customisation profiles.

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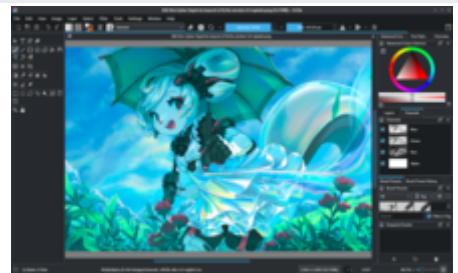
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Name

The project's name "Krita" is primarily inspired by the Swedish words *krita*, meaning "crayon" (or chalk), and *rita* which means "to draw". It follows the "K" prefix like everything else in the KDE suite.

History

Krita



<u>Developer(s)</u>	Krita Foundation, <u>KDE</u>
Initial release	21 June 2005
<u>Stable release</u>	5.1.3 ^[1]  / 7 November 2022
<u>Repository</u>	<u>invent.kde.org/graphics/krita</u> (<u>https://invent.kde.org/graphics/krita</u>)
Written in	<u>C++</u> , <u>Qt</u>
<u>Operating system</u>	<u>Windows</u> , <u>macOS</u> , <u>Linux</u> , ^[2] <u>Android</u> , <u>ChromeOS</u> ^[3] ^[4]
<u>Platform</u>	<u>IA-32</u> and <u>x64</u>
<u>Size</u>	111–201 <u>MiB</u> (varies by operating system)
<u>Type</u>	<u>Raster</u> graphics editor

Early development of the project can be tracked back to 1998 when [Matthias Ettrich](#), founder of [KDE](#), showcased a Qt GUI hack for [GIMP](#) at [Linux Kongress](#). The idea of building a Qt-based image editor was later passed to KImage, maintained by Michael Koch, as a part of [KOffice](#) suite. In 1999, Matthias Elter proposed the idea of building the software using [CORBA](#) around [ImageMagick](#). To avoid existing trademarks on the market, the project underwent numerous name changes: KImageShop, Krayon, until it was finally settled with "Krita" in 2002. The first public version of Krita was released with KOffice 1.4 in 2004.^[7] In years between 2004 and 2009, Krita was developed as a generic image manipulation software like [Photoshop](#) and [GIMP](#).

Licence	GPL-3.0-only ^[5]
Website	krita.org (https://krita.org/)



The Krita team in 2014

A change of direction happened to the project in 2009, with a new goal of becoming digital painting software like [Corel Painter](#) and [SAI](#). Also from that point, the project began to experiment with various ways of funding its development, including [Google Summer of Code](#) and funded jobs for students. As a result, the development gained speed and resulted in better performance and stability.^[8]

The **Krita Foundation** was created in 2013 to provide support for Krita's development. It collaborated with [Intel](#) to create Krita Sketch as a marketing campaign and Krita Studio with [KO GmbH](#) as a commercially supported version for movie and VFX studios. [Kickstarter](#) campaigns have been used to crowdfund Krita's development since 2014.

Time	Version	Raised	Kickstarter Campaign	Stable release
July 2014	2.9.x	€19,955	Faster Development , better PSD support, layers, masks, brush, resource manager, display, etc. ^[9]	February 2015
May 2015	3.0.x	€30,520	Better performance, animation support , layer, workflow, transform, filter, brush, etc. ^[10]	May 2016
May 2016	4.0.x	€38,579	Better text tools and vector art capability , python scripting support, etc. ^[11]	March 2018 ^[12]
	5.0.X		Brushes, Gradients and Pallets get revamped , animation system improvements, screen recorder. ^[13]	December 2021

On May 23, 2020, the beta version of Krita was released for [Android](#) and [ChromeOS](#).^{[14][15][16]}

Design and features

The current version of Krita is developed with [Qt 5](#) and [KDE Frameworks 5](#). It is designed primarily for [concept artists](#), [illustrators](#), [matte](#) and [texture artists](#), and the [VFX industry](#). It has the following key features:^[17]

User experience design

The most prominent feature of Krita is arguably its [UX](#) design with [graphics tablet](#) users in mind. It uses a combination of pen buttons, keyboard modifiers and an icon-based [HUD](#) to ensure frequently-used functions can be accessed by fewer clicks, without the need to search through text-based menus.

Most-used drawing commands can be accessed via touch by combining keyboard modifiers with pen/mouse buttons and gestures:

Command	Input
Brush size +/-	Shift + Pen drag
Pick colour	Ctrl + Pen tap
Pan	Pen button + Pen move
Zoom	Ctrl + Pen button + Pen move
Rotate	Shift + Pen button + Pen move

Pop-up Palette is Krita's right click HUD. It enables instant access to the following functions:

Brush	Colour	View
10 loaded brush presets	Colour ring selector	Zoom
Load other preset groups	FG/BG colour display	Rotate
Brush size, opacity, flow, spacing, angle	Recent colour	Mirror
		Canvas-only
		Reset view

Painting tools

Krita's core digital painting tools include:

Brush	Drawing assistants	Selection tools	Transformation tools
Graphics tablet support	Adjustable interference intensity	Rectangle	Free position
9 different brush engines	Infinite and parallel straight rulers	Ellipse	Rotate
Modelled after real tools	Splines (curves)	Freehand (lasso)	Scale
Highly adjustable	Ellipses	Polygon	Shear
Remembers settings for each physical pen	Perspective	Outline	Perspective
Pen stabilizer	Vanishing point	Fill	Warp
Multibrush painting support	Fish-eye point	Color	Cage
		Opacity	Liquify



Free web comic Pepper&Carrot
artwork by David Revoy, drawn in Krita



Krita's right-click HUD, the Pop-up palette

Animation tools

Krita's animation tools are designed for frame-by-frame raster animation. They have the following features:

Interface	Import	Export
Similar interface to <u>Adobe Animate</u>	Batch import of frames	Render with <u>FFmpeg</u>
Timeline controls		Output to individual frames
Real-time animation playback controls		Output to GIF, AVI, MP4, etc.
<u>Onion-skin</u> display		

Vector tools

Krita uses vector tools for non-destructive editing of the following objects:

- Path
- Selection
- Text (artistic, multiline, calligraphy)
- Vector art
- Fill and gradient

Layers and masks

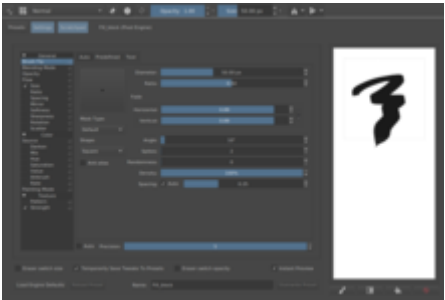
Krita's layer and mask features include:

Layer management	Mask applies to	Non-destructive layers	Non-destructive masks
Multiple-level layer groups	Raster layers	Clone layers	Transparency masks
Select multiple layers	Vector layers	Filter layers	Filter masks
Drag-and-drop layers	Layer groups	Fill layers	Colourise masks
Layer highlighting	Non-destructive layers	File layers	Transform masks
			Local selection masks

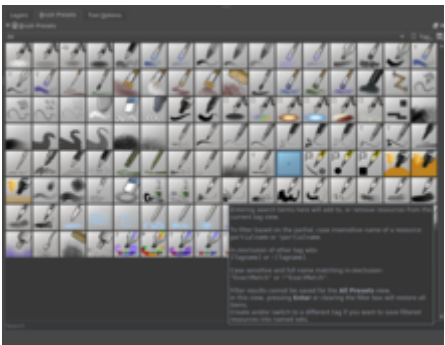
Customisation



Pencil tool work



Controls of one of Krita's many brush engines



Krita's stock brushes

Krita's resource manager allows each brush or texture preset to be tagged by a user and quickly searched, filtered and loaded as a group. A collection of user-made presets can be packaged as "**bundles**" and loaded as a whole. Krita provides many such brush set and texture bundles on its official website.

Customisable tool panels are known as **Dockers** in Krita. Actions include:

- 2 customisable toolbars
- Toggle display of each docker
- Attach any docker to any sides of main window, or detach to float free
- Buttons to collapse/expand each docker panel
- Group dockers by tabs

Workspaces allow UI customizations for different workflows to be saved and loaded on demand.

Display

OpenGL accelerated canvas is used to speed up Krita's performance. It provides the following benefits:

- Better framerate and response time: pen actions can be reflected without delay
- Better-quality, fast and continuous zooming, panning, rotation, wrap-around and mirroring
- Requires a GPU with OpenGL 3.0 support for optimal experience. In the case of Intel HD Graphics, that means Ivy Bridge and above.

Full colour management is supported in Krita with the following capabilities:

- Assign and convert between colour spaces
- Realtime colour proofing, including colour-blind mode
- Colour model supported: RGBA, Grey, CMYKA, Lab, YCbCr, XYZ
- Colour depth supported: 8-bit integer, 16-bit integer, 16-bit floating point, 32-bit floating point

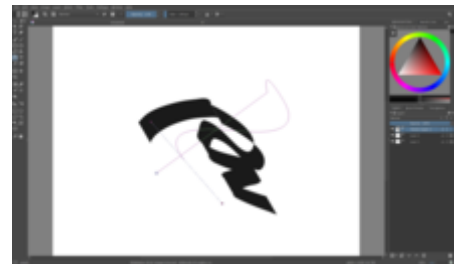
Filters

Krita has a collection of built-in filters and supports G'MIC filters. It has real-time filter preview support.

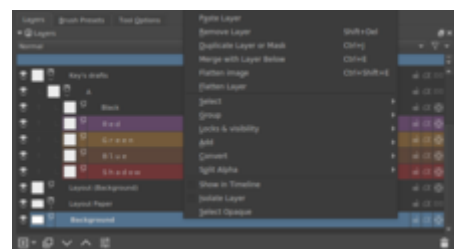
Filters included in a default installation: levels, colour adjustment curves, brightness/contrast curve, desaturate, invert, auto contrast, HSV adjustment, pixelise, raindrops, oil paint, gaussian blur, motion blur, blur, lens blur, colour to alpha, color transfer, minimise channel, maximise channel, top/left/bottom/right edge detection, sobel, sharpen, mean removal, unsharp mask, gaussian noise removal, wavelet noise



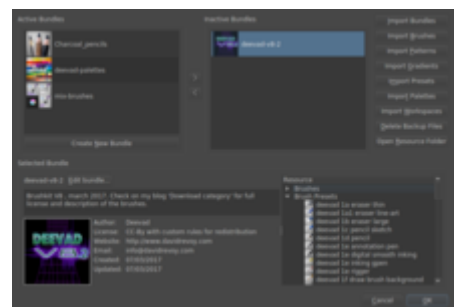
Krita's animation workspace (4.0 version)



Krita's vector tools



Krita's layer and mask controls



Krita's resource manager

reducer, emboss horizontal only/in all directions/(laplacian)/vertical only/with variable depth/horizontal and vertical, small tiles, round corners, phong bumpmap.

File formats supported

Krita's native document format is Krita Document (.kra). It can also save to many other file formats including PSD.

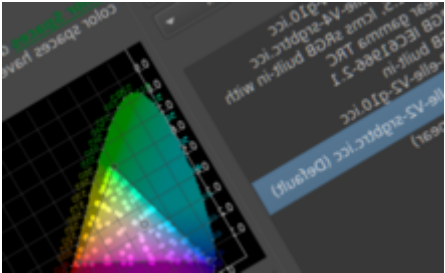
	File formats
Save to	Krita Document, OpenRaster document, PSD image, PPM, PGM, PBM, PNG, GIF, JPEG-2000, JPEG, Windows BMP, XBM, XPM, TIFF, EXR, PDF, Gimp image, WebP, SCML, ICO, TGA, CSV, QML
Import only	ODG draw, Krita Flipbook, Adobe DNG, Camera RAW, PDF, SVG, XML, XCF
Export only	[none]

Mascot

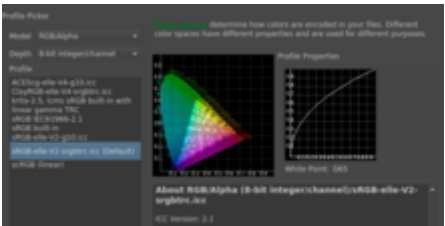
Krita's mascot is Kiki the Cyber Squirrel, a robotic, anthropomorphic squirrel character created by Tyson Tan. The community collectively decided the mascot to be a squirrel. The first version of Kiki was posted to the KDE forum in 2012 and was used in Krita version 2.6's introduction booklet.^[18] Kiki has been used as Krita's startup splash screen since Krita version 2.8.^{[19][20]} So far, each new version of Krita has come with a new version of Kiki. Kiki has been used for Krita's merchandise shop items^[21] and Krita's Steam project artworks.^{[22][23]}

Sprint events

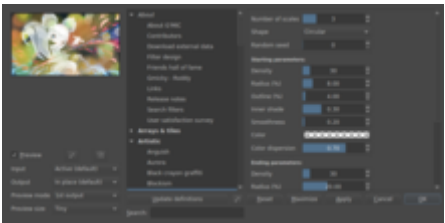
Krita sprints are events during which Krita developers and artists get together for a few days, exchange ideas and do programming face-to-face, in order to speedup development and improve relationships between members.



Text quality on Krita's OpenGL canvas with non-integer zooming, rotation and mirror



Krita's colour space loader



Krita's G'MIC filter controls



Krita's Steam box art in 2014, featuring Kiki

Year	Date	Place
2005 ^[24]	/	<u>Deventer</u> , Netherlands
2010 ^[25]	26 February to 7 March	Deventer, Netherlands
2011 ^[26]	20 to 22 May	<u>Amsterdam</u> , Netherlands
2014 ^[27]	16 to 18 May	Deventer, Netherlands
2016 ^[28]	23 to 24 January	Deventer, Netherlands
2016 ^[29]	26 to 28 August	Deventer, Netherlands
2018 ^[30]	17 to 21 May	Deventer, Netherlands
2019 ^[31]	5 to 9 August	Deventer, Netherlands

Variations

- **Krita Gemini**, optimised for tablets and touch interaction.^[32]
- **Krita Studio**, commercially supported version for movie and VFX studios.^[33]

See also

- Comparison of raster graphics editors
- List of free and open-source software packages
- List of computing mascots

Similar Programs

- GIMP
- MyPaint
- Clip Studio Paint
- Photoshop


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External links

- [Official website \(https://krita.org\)](https://krita.org) 
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