



HEXAGON

Release guide
2021.1

Release guide

LuciadCPillar 2021.1

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About this release

The 2021.1 release of LuciadCPillar focuses on user interaction and developer experience and adds a comprehensive camera positioning and constraint API. It supports the traditional look-from and look-at modes but is also ready to be configured for any other type of navigation. As always, the new capabilities are available in both C++ and C#.

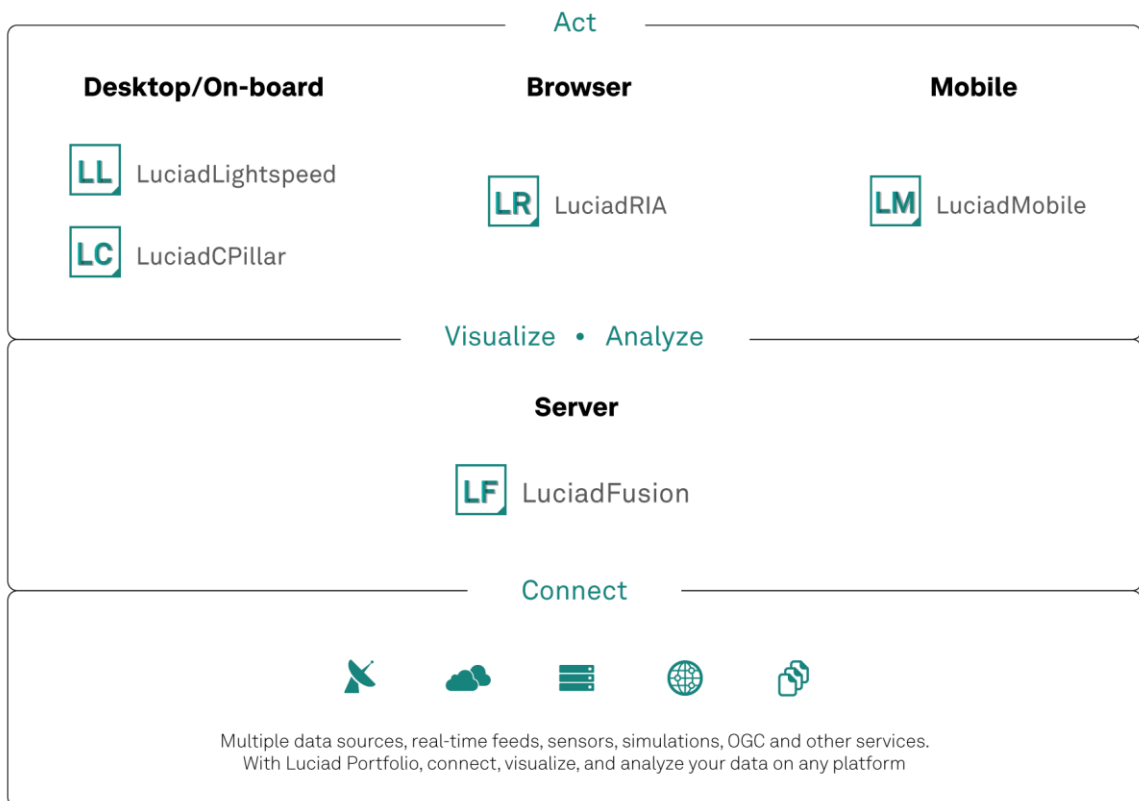


Figure 1: The Luciad Product Portfolio.

Benefits of the new features

Configure the operator view with the new Camera API

When navigating through your data in 2D or 3D, the right information is fetched to represent the area visited by the user. The mechanism that defines the data to visualize is called a camera, both in 2D and 3D.

From the start, LuciadCPillar handled a camera under the hood in the controllers. With this release, LuciadCPillar is enriched with a complete and flexible camera positioning and constraint API. It supports the traditional look-from and look-at modes but is also ready to be configured for any other type of navigation. You can also easily add effects like inertia.

More specifically, the API offers a camera model to position the camera through code in both 2D and 3D. You can also use a camera constraint model, which aids users by limiting the navigation possibilities. Examples of such constraints are above-terrain navigation and modes where the camera looks at a fixed object, and the user is allowed to navigate around the object to inspect it from all angles. Finally, you can access API to define an animation for the camera. Examples of such animations are a camera that circles around a scene, or a camera that follows a moving platform like a helicopter.

Next to more traditional use cases for navigation, the camera API also helps with advanced use cases, such as the integration and synchronization of external content like Qt Overlays.

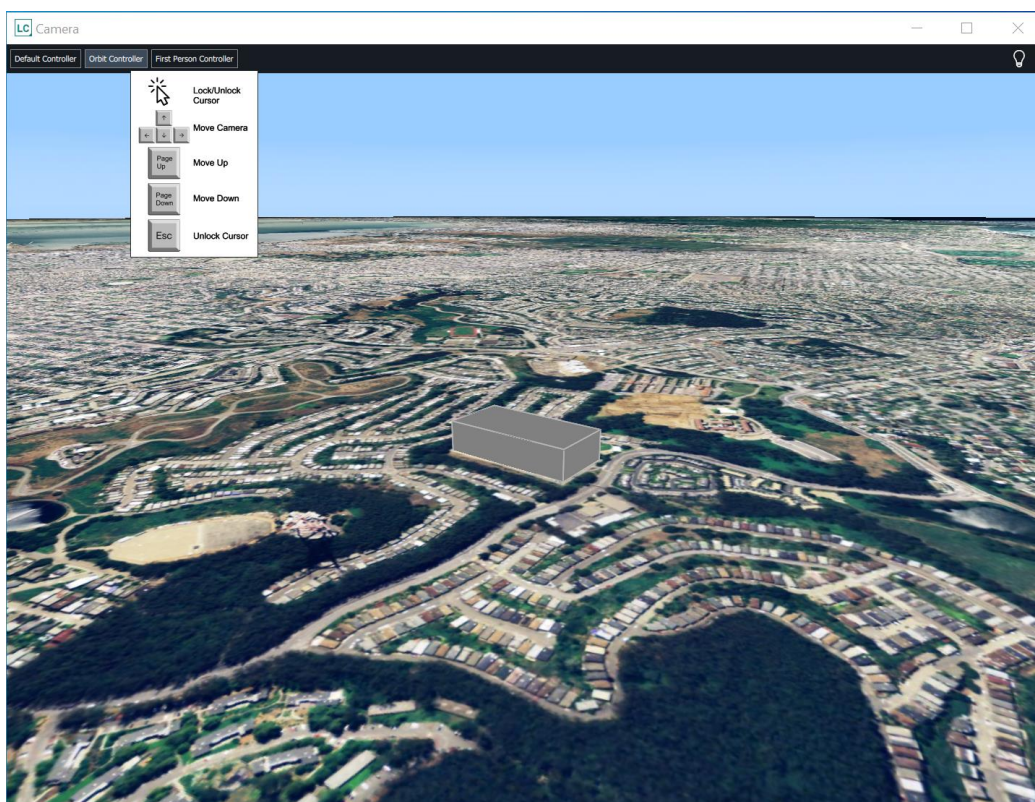


Figure 2: The Camera sample illustrates the use of the camera API via a set of example controllers.

Sample code to get you started

LuciadCPillar offers a dedicated camera sample for both C++ and C#. The *sample_camera* sample implements two example controllers that build on the new camera API capabilities: an orbit controller that orbits around a building and constrains the camera to always look at it, and a first-person controller that allows you to navigate around using the keyboard and mouse, like in a computer game.

Other improvements

- Multi-line labels with text using multiple styles can be used



Figure 3: LuciadCPillar now supports multi-line labels.

- C++ samples use latest Qt 5 LTS release, Qt 5.15
- Samples now offer a mouse location readout

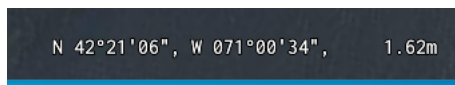


Figure 4: LuciadCPillar sample code now includes a mouse location readout controller.



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