



**HEXAGON**

Release guide  
2021.1

---

# Release guide

LuciadCPillar 2021.1

20 December 2021



# Contents

<b>About this release</b> .....	3
<b>Benefits of the new features</b> .....	4
Configure the operator view with the new Camera API .....	4
Sample code to get you started .....	5
Other improvements .....	5

## 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#.

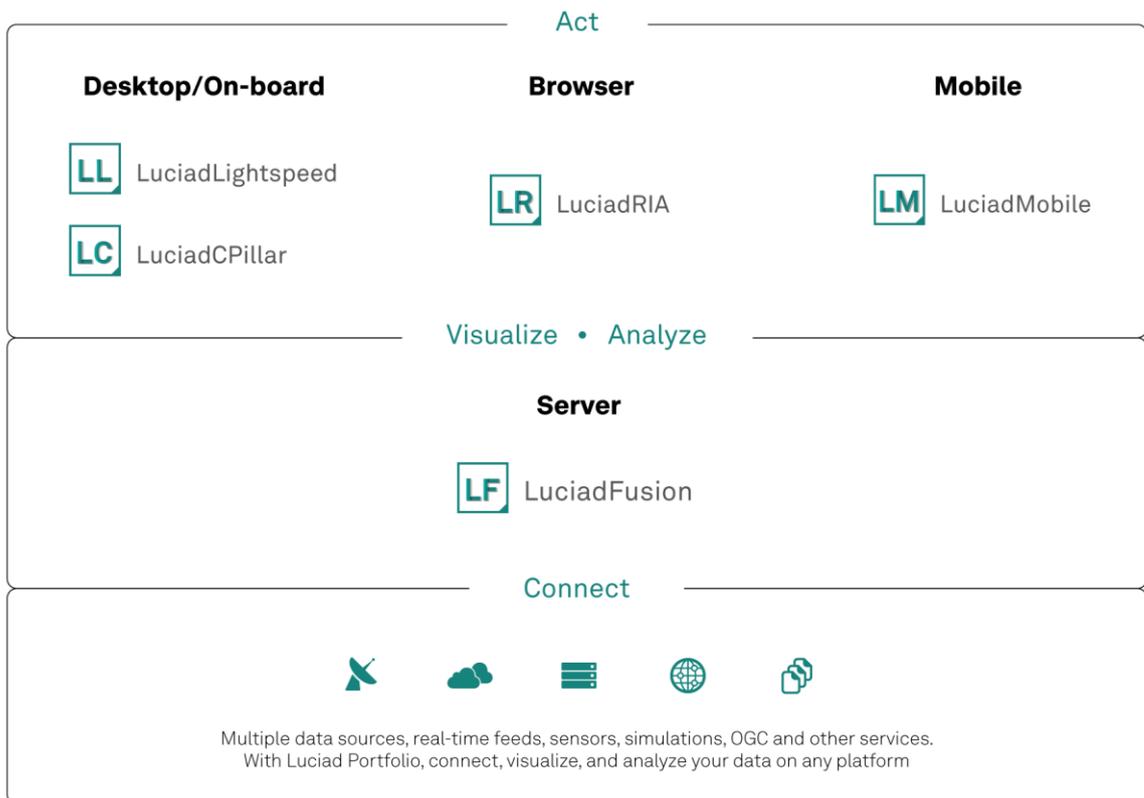


Figure 1: The Luciad Product Portfolio.

## 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.

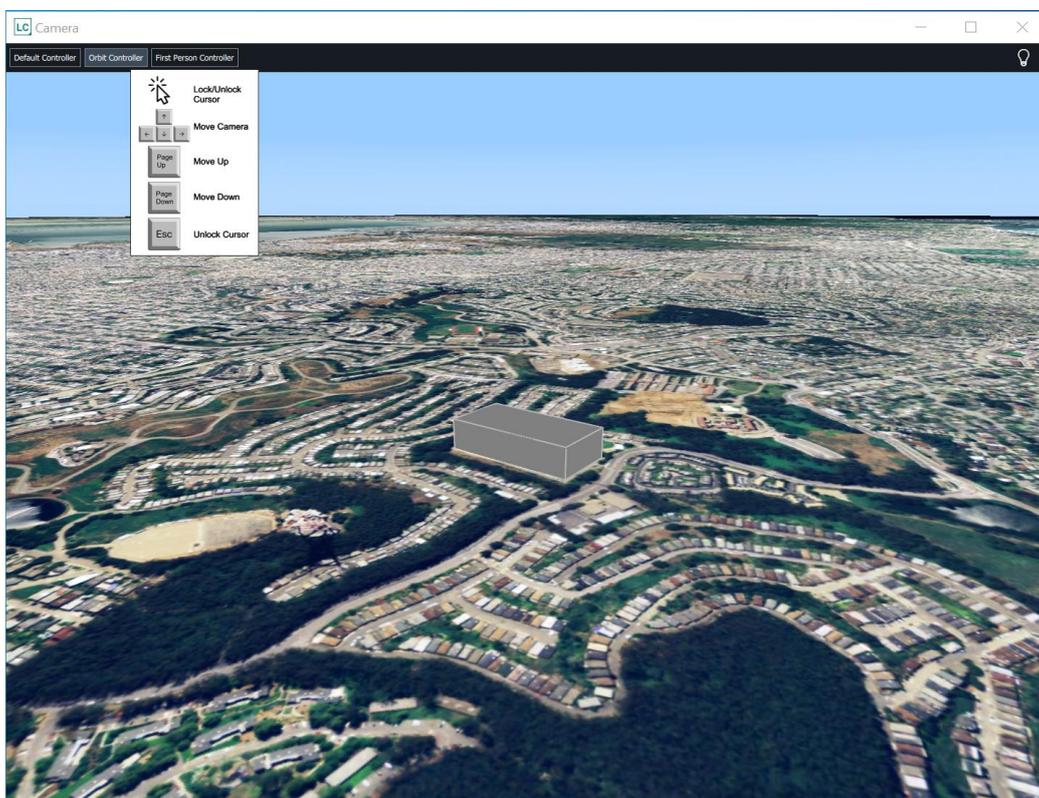


Figure 2: The Camera sample illustrates the use of the camera API via a set of example controllers.

## 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

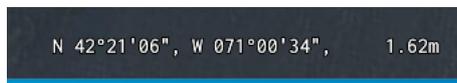


Figure 4: LuciadCPillar sample code now includes a mouse location readout controller.



# About Hexagon

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Safety, Infrastructure & Geospatial division improves the performance, efficiency and resilience of vital services. Its Safety & Infrastructure solutions enable smart and safe cities. Its Geospatial software leverages the power of location intelligence.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 21,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at [hexagon.com](https://www.hexagon.com) and follow us [@HexagonAB](https://twitter.com/HexagonAB).

## Copyright

© 2021 Hexagon AB and/or its subsidiaries and affiliates. All rights reserved

Warning: The product made the subject of this documentation, including the computer program, icons, graphical symbols, file formats, audio-visual displays and documentation (including this documentation) (collectively, the "Subject Product") may be used only as permitted under the applicable software license agreement, and subject to all limitations and terms applicable to use of the Subject Product therein. The Subject Product contains confidential and proprietary information of Intergraph Corporation, a member of the Hexagon Group of companies ("Hexagon"), its affiliates, and/or third parties. As such, the Subject Product is protected by patent, trademark, copyright and/or trade secret law and may not be transferred, assigned, provided, or otherwise made available to any third party in violation of applicable terms and conditions cited further below.

## Terms of Use

By installing, copying, downloading, accessing, viewing, or otherwise using the Subject Product, you agree to be bound by the terms of the EULA found here:

[https://www.hexagonsafetyinfrastructure.com/-/media/Legal/Hexagon/SI/Licenses/EULA\\_SA\\_SIG-Eng\\_062021.pdf](https://www.hexagonsafetyinfrastructure.com/-/media/Legal/Hexagon/SI/Licenses/EULA_SA_SIG-Eng_062021.pdf).

## Disclaimers

Hexagon and its suppliers believe the information in this publication is accurate as of its publication date. Hexagon is not responsible for any error that may appear in this document. The information and the software discussed in this document are subject to change without notice.

Language Translation Disclaimer: The official version of the Documentation is in English. Any translation of this document into a language other than English is not an official version and has been provided for convenience only. Some portions of a translation may have been created using machine translation. Any translation is provided "as is." Any discrepancies or differences occurring in a translation versus the official English version are not binding and have no legal effect for compliance or enforcement purposes. Hexagon disclaims any and all warranties, whether express or implied, as to the accuracy of any translation.

Reasonable efforts have been made to provide an accurate translation; however, no translation, whether automated or provided by human translators is perfect. If any questions arise related to the accuracy of the information contained in a translated version of Documentation, please refer to its official English version. Additionally, some text, graphics, PDF documents, and/or other accompanying material may not have been translated.



## Links To Third Party Websites

This Document may provide links to third party websites for your convenience and information. Third party websites will be governed by their own terms and conditions. Hexagon does not endorse companies or products to which it links.

Third party websites are owned and operated by independent parties over which Hexagon has no control. Hexagon shall not have any liability resulting from your use of the third party website. Any link you make to or from the third party website will be at your own risk and any information you share with the third party website will be subject to the terms of the third party website, including those relating to confidentiality, data privacy, and security.

Hexagon provides access to Hexagon international data and, therefore, may contain references or cross references to Hexagon products, programs and services that are not announced in your country. These references do not imply that Hexagon intends to announce such products, programs or services in your country.

## Revisions

Hexagon reserves the right to revise these Terms at any time. You are responsible for regularly reviewing these Terms. Your continued use of this Document after the effective date of such changes constitutes your acceptance of and agreement to such changes.

## Questions

[Contact us](#) with any questions regarding these Terms.