# HEXAGON

# Release guide

LuciadCPillar 2023.0

6 June 2023

# Contents

# About this release

The 2023.0 release of LuciadCPillar structurally extends the support for elevation data with DTED/DMED and GeoTIFF and adds a new API to retrieve the height at a specific location. In addition, the release includes several updates and improvements.
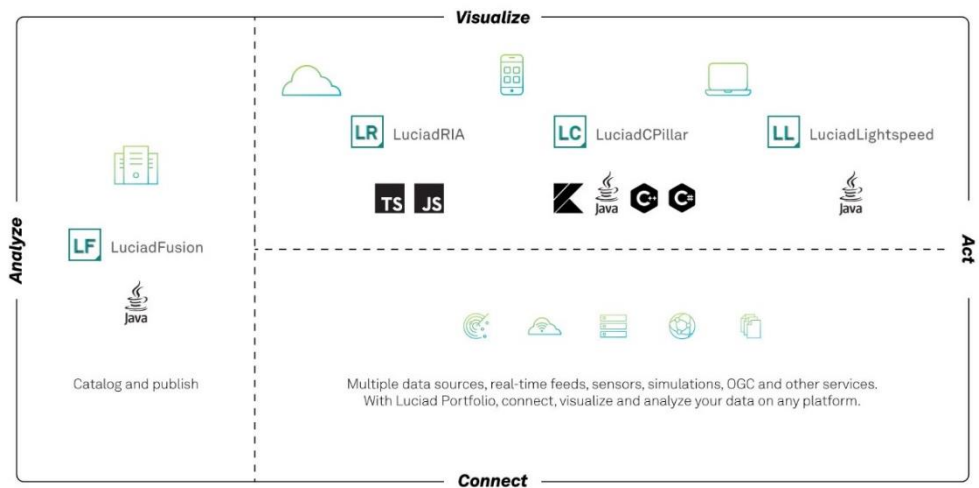


*Figure 1: The Luciad portfolio*

# Benefits of new features

## Elevation data beyond the pretty picture

LuciadCPillar has always offered a terrain visualization feature, as illustrated in Figure 2. From the outset, you can load GeoPackage data with elevation information, and LuciadCPillar displays the terrain as a 3D mesh and drapes imagery over the terrain for a realistic rendition of the landscape.

In this release, we structurally extend the support for elevation data. First, LuciadCPillar now supports the DTED/DMED and GeoTIFF data formats. GeoTIFF data containing imagery was already supported. With this release, single-band GeoTIFF data using either 32-bit float or 16-bit integer data is considered elevation data.

Now you can also load multiple elevation datasets, each with distinct geographical coverage. In addition, you can now use the API to request elevation values for locations, such as the elevation data below the mouse cursor. This is illustrated in Figure 3.
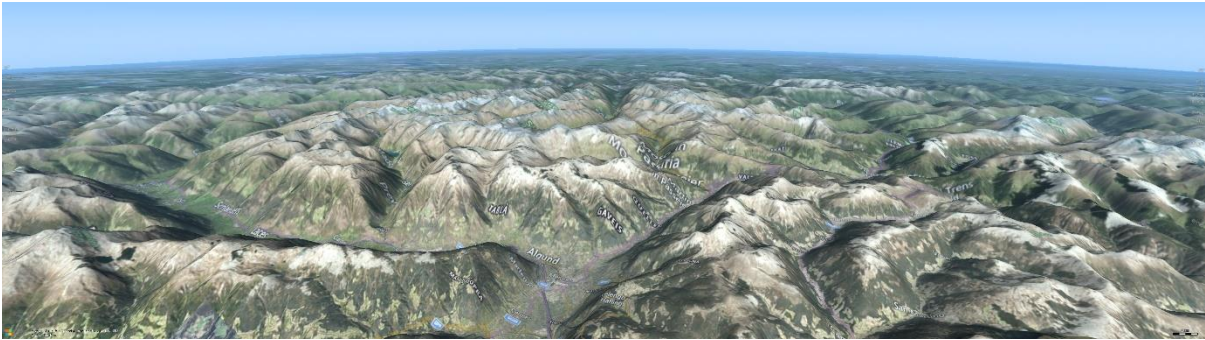


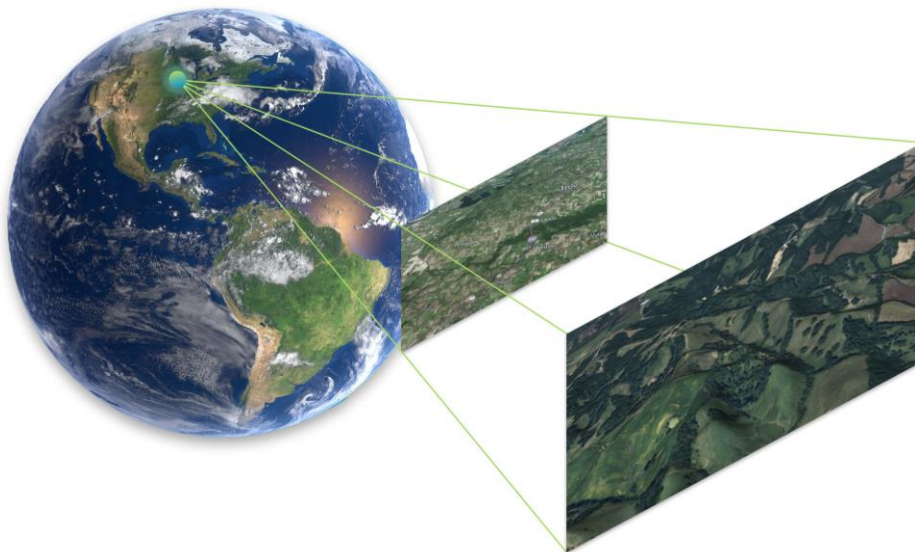*Figure 2: 3D terrain visualized in LuciadCPillar*



*Figure 3: LuciadCPillar supports multiple elevation datasets, with different geographic coverage.*

**Documentation**

The article "How to load elevation data" has been updated. It combines all information related to the topic. For more details, refer to the new articles "Decode and visualize DTED and DMED elevation data" and "How to get height data from a raster model."
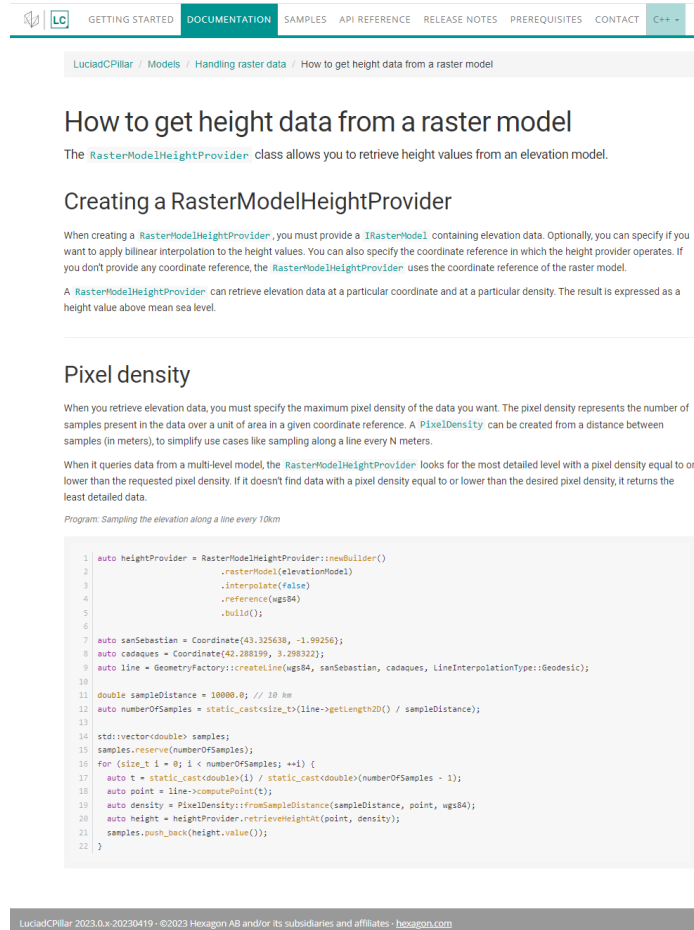


*Figure 4: A new article has been added to guide you while retrieving height data in your application.*

# Updated software requirements

## Requirements for C++ development on Linux
LuciadCPillar no longer supports Linux distributions using the old ABI. This means that you cannot develop and deploy LuciadCPillar 2023.0 on RHEL 7 or CentOS 7.

## Requirements for Android development
For LuciadCPillar 2023.0, we raised the supported API version from API Level 28 (Android 9) to API Level 29 (Android 10).

**Documentation and contact information**

All software and system requirements are collected and kept up to date in the article "Hardware and software requirements" (see Figure 5).

To keep up with the fast pace at which the Android platform evolves, the Android API level supported by LuciadCPillar will increase with the Android versions that Google actively supports. Because Google releases a new version of the Android operating system approximately every year (cfr. https://en.wikipedia.org/wiki/Android_version_history), the oldest API level supported by LuciadCPillar will change with each major LuciadCPillar release. The table below illustrates this planned evolution.
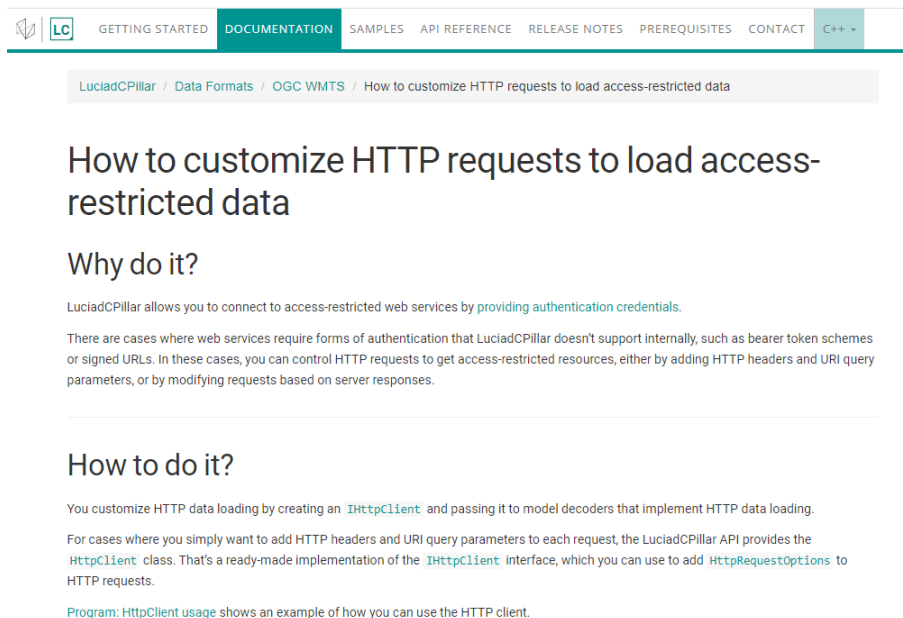
| LuciadCPillar version | 2023.0 | 2023.1 | 2024.0 | 2024.1 | 2025.0 | ... |
|---|---|---|---|---|---|---|
| Supported API version | API Level 29 (Android 10) | API Level 29 (Android 10) | API level 30 (Android 11) | API Level 30 (Android 11) | API Level 31 (Android 12) | ... |

*Figure 5: The policy for supported Android versions is included in the documentation, as part of the article "Hardware and software requirements."*

If you have questions or feedback, please contact the Luciad product management team at product.management.luciad.gsp@hexagon.com.

# Other improvements

- You can now request military unit symbols as icons. This comes in handy when you want to use the military icons in UI components, in addition to visualizing your tactical plans on the map. An example of such a UI component could be a mission-specific order of battle (ORBAT) view.

- You can now add authentication headers and query parameters to HSPC, OGC 3D tiles, WMS and WMTS requests. You can also change these headers and parameters. Additional information is available in the article "How to customize HTTP requests to load access-restricted data" (see Figure 6).

- The WMTS client now supports data organized in an irregular tile structure. This improvement relates to the WMTS tile matrix set concept. For instance, a set of tile matrices can define distinct tile matrices and can be optimized for specific scales with distinct top left corners.



*Figure 6: This release offers additional documentation on adding authentication headers to HSPC, OGC 3D tiles, WMS and WMTS requests.*

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

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