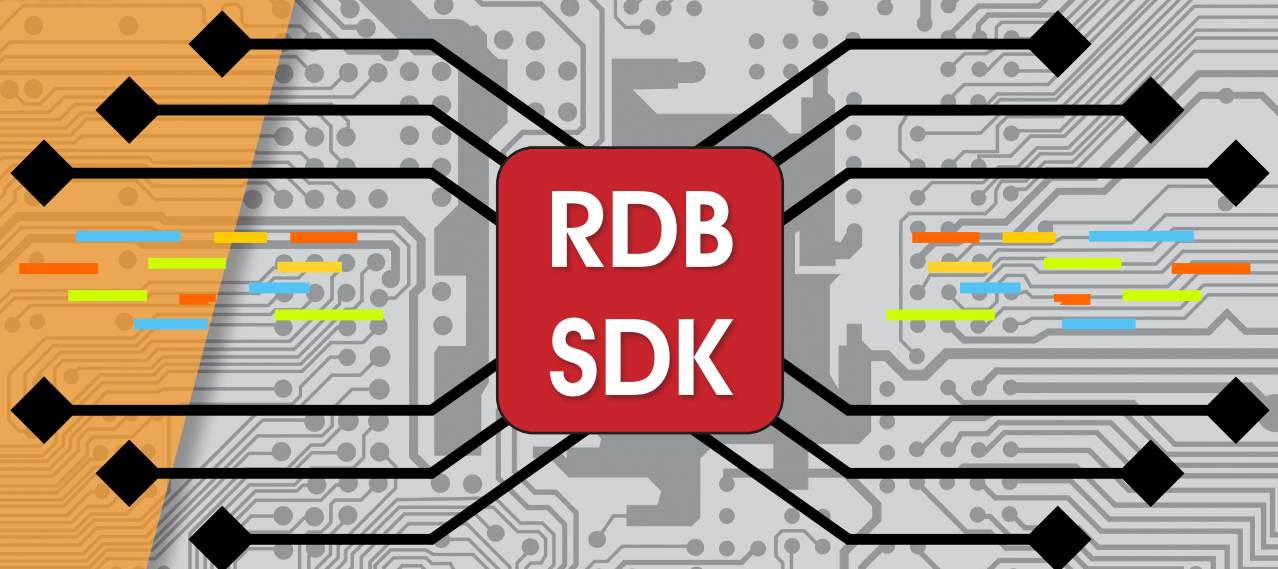


RDBLib

Software Library for Accessing Native *RIEGL* Data

The RDBLib is a software library for reading and writing various types of data (e.g. point clouds, trajectories, voxels) from and to *RIEGL*'s native RDB file format.

The free software package enables software developers to support *RIEGL* point cloud data in their own software products.



INSPECT

READ

MODIFY

WRITE



www.riegl.com



Feature

RIEGL software stores a variety of information in the RDB (RIEGL Data Base) file format. The RDBLib is a library to provide easy and straightforward access to the stored data, thus eliminating the need to manually decode and handle a proprietary data format. The file format handles data of static and kinematic LiDAR projects.

RIEGL Data File Examples

3D content

- RDBX** spatially sorted point cloud
- SODX** laser pulse direction vectors
- SBX & SP** waveform sample data

map representation

- MPX** WebMercator raster data

trajectory

- POFX** position & orientation
- POQX** quality

3D content

- RDBX** spatially sorted point cloud
- VXLS** voxelized point cloud
- PTCH** plane patch decomposition of point cloud

Accessible Data



RDBLib

data type	examples
point coordinates	xyz
point attributes	reflectance, amplitude, color, timestamp, class, ...
meta data	device type, serial number, location, scan pattern, ...
statistics	bounding box, attribute min/max/spread value, ...
transactions	history of modifications (log)

included rdbadmin tool for quick inspection of any RDB file

Python Code Sample

```
with riegl.rdb.rdb_open("pointcloud.rdbx") as rdb:
    for point in rdb.points(
        "(rie.gl.xyz[2] > 5) && (rie.gl.reflectance < 2)",
        ["rie.gl.id", "rie.gl.xyz", "rie.gl.reflectance"]
    ):
        print(point)
```

opens pointcloud.rdbx file and reads points with a subset of attributes (id, coordinates and reflectance) matching a selection criteria (z coordinate > 5 m and reflectance < 2 dB)

System Requirements

The SDK is available for:

Windows (x86 32 bit & 64 bit), Linux (x86 32 bit & 64 bit, ARM, ARM64), macOS (x86 64 bit)

Supported compilers / environments:

Any C++11 compatible compiler, Delphi 7, Delphi XE5 or newer, Python 3.4 or newer

RDB SDK Content

RDBLib runtime library, API for C, C++, Pascal, Python documentation & code examples in C++ and Python tools for quick RDB inspection & development: rdbadmin, rdbinfo, rdblog



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