FEATURE HIGHLIGHTS

Point Cloud Classification:

VRMesh automatically classifies point clouds generated from airborne/mobile/terrestrial LiDAR and UAV images. It allows you to create an accurate TIN surface with no limitations on complex topography.

![Airborne LiDAR](image1)
![Mobile LiDAR](image2)
![UAV Images](image3)

Feature Extraction:

VRMesh automatically extracts building footprints, powerlines, railways, poles, and tree crowns in point clouds. It also allows you to quickly pick a line along a chosen ridge, ditch, railway, powerline, road markings, etc.

![Extract Powerlines/Poles/Railways](image4)
![Extract Tree Crowns](image5)
![Pick Ridge](image6)

Construction:

VRMesh can automatically fit a polygonal surface to point clouds for edges, curbs, traffic barriers, pipes, tunnels, etc. It can also fit a spline surface on a terrain surface with the control of slope and elevation for terrain resurfacing.

![Curb Fitting](image7)
![Bridge Design](image8)
![Road Resurfacing](image9)
**Point Cloud to Mesh & Mesh Editing:**

VRMesh provides best-in-class point cloud processing and various mesh repair/editing tools. It enables you to convert large point clouds to triangle meshes with high accuracy. It also allows you to optimize your designs in many ways.

**Registration:**

VRMesh can automatically align all visible point clouds or meshes together. It also allows you to separate overlapping laser points and register them for LiDAR strip adjustment.

**Measurement:**

VRMesh provides various analysis tools for helping you perform accurate inspections between digital reference models and measure points, distances, areas, volumes, and deviations easily.
OVERVIEW

Welcome! VRMesh is an advanced point cloud and mesh processing software tool. Our innovative technologies are aimed to provide powerful and easy solutions for engineering industries. The entire family of VRMesh consists of three packages targeted to different customers.

VRMesh Family:

- **VRMesh Studio**: A comprehensive solution covering automatic point cloud classification, feature extraction, and accurate point cloud meshing. It streamlines your work processes and powers up your productivity. It includes all features in VRMesh.
- **VRMesh Survey**: An advanced solution for point cloud classification and feature extraction. It automatically classifies vegetation, building roofs, and ground points with no limitations on complex topography. It can also automatically detect building footprints, powerlines, poles, tree crowns, railways and curbs in point clouds.
- **VRMesh Reverse**: A unique solution for point cloud meshing that helps you convert large point clouds into meshes with high accuracy. It delivers efficient point cloud cleanup, best-in-class triangulation and various mesh repair/editing tools. It also provides you with automatic registration, volume calculation, inspections and measurements.

Feature Comparison:

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<td>Construction Tools</td>
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File Formats:

- **Import**: e57, las, laz, zlas, ptx, pts, txt, asc, xyz, stl, obj, dxf, shp, ply, 3ds, fls, zfs, rdbx, wrl, vtk, csv, rcp/rcs
- **Export**: las, laz, zlas, pts, txt, asc, stl, obj, igs, dxf, fbx, shp, grid, wrl, ply, vtk, csv, x3d, pdf, rcp

Data Handling:

- No limit concerning the point cloud and mesh size
- Support batch processing of multiple files