# MeshyAndI

Datasheet | 0.23 | Rev 1.0

## 01 Product overview

MeshyAndI combines camera scanning, geometric measurement and reporting on a phone. It supports spatial documentation, local plans, outlines and stockpile estimation from measured surfaces. It is available standalone and inside TS GNSS Alb.

**Project** → **Record or Measure** → **Review** → **Export**

| Feature | Specification |
|---|---|
| Platform | Android 8.0 or later; ARCore-supported device for AR camera functions. |
| Languages | Albanian and English, selectable after installation. |
| Modes | 3D + RGB scanning; 2D plan; Scatch 3D. |
| Shapes | Irregular shape, rectangle, triangle, circle, arc, ellipse, cylinder. |
| Measurements | Dimensions, areas, XYZ; analytic cylinder volume; 2.5D stockpile volume. |
| Display | Whole-surface height gradient; names; colour and geometry On/Off. |
| Organisation | Projects, scan library, multiple figures within one AR session. |
| Activation | Online device-bound licensing; offline use within the licence validity period. |

Camera accuracy depends on the phone, tracking, range, texture and lighting. RTK FIX is not an accuracy statement for the point cloud.

# 02 Data and limits

| Output | Contents |
|---|---|
| PDF / DXF / CSV | Plan figures in a combined report; names, dimensions and XYZ coordinates. |
| PLY | XYZ point cloud and RGB where colour is present; does not contain the source photographs. |
| ZIP | Scan package and sidecars; RGB, trajectory and RGB-D where recorded. |
| Volume OBJ / DXF | Measured surface; DXF can include mesh, base and 3D boundary. |

### Practical requirements

Grant camera access and keep Google Play Services for AR updated. Raw Depth is used when supported; otherwise scanning may be sparse. Camera availability does not imply RGB-D availability. Provide space for both capture and the export package.

Scanning stops at 10 million accepted points or 15 active minutes, whichever comes first. Plans allow up to 50 measurements and 200 irregular-polygon corners. These are software limits, not performance promises for every phone.

### Coordinates and model

Coordinates are local AR metres. Plan CAD mapping: X = AR X, Y = −AR Z, Z = AR Y. Regular 2D figures use the first point height; Scatch 3D uses the spatial point plane. Separate sessions are not aligned automatically.

DXF curves use 64 segments per full revolution with accompanying analytic parameters. Ellipse perimeter uses Ramanujan II approximation. Columns are not automatically subtracted from an outer footprint. Stockpile volume is 2.5D, without automatic gap filling or overhang support.