

| U-Arm                  |                       |                                      |             |
|------------------------|-----------------------|--------------------------------------|-------------|
| Specification          |                       | UA-1000                              | UA-2000     |
| Min.Range              | (m)                   | 1.5                                  | 2.5         |
| Operation distance (m) | $\rho \geq 20\%$      | 500                                  | 1000        |
|                        | $\rho \geq 60\%$      | 1500                                 | 2000        |
| Range Accuracy         | (mm)                  | 5@100m                               | 5~8@100m    |
| Laser class            |                       | Class I                              | Class I     |
| Max.Pulse Frequency    | (kHz)                 | 600                                  | 600         |
| Wavelength             | (nm)                  | 1550                                 | 1550        |
| Echoes                 |                       | Multiple                             | Multiple    |
| Beam Divergence        | (mRad)                | ~0.35                                | ~0.3        |
| Field of View          | Horizontal            | 360°                                 | 360°        |
|                        | Vertical              | 300°                                 | 300°        |
| Angular Resolution     | Horizontal            | 0.001°                               | 0.001°      |
|                        | Vertical              | 0.001°                               | 0.001°      |
| Scan Speed             | Vertical Scan Speed   | 1800 (RPM)                           | 1800 (RPM)  |
|                        | Rotation Rate (Hz)    | 10-50                                | 10-50       |
|                        | Horizontal Scan Speed | 0.1~5 (°/s)                          | 0.1~5 (°/s) |
| GNSS Receiver          |                       | GNSS card and GNSS antenna interface |             |
| Camera                 |                       | 2 X 5 million pixel digital camera   |             |
| Manipulation Mode      |                       | Wired/Wireless control               |             |
| Data storage           |                       | Pluggable USB                        |             |
| Interface              |                       | Ethernet, USB 3.0                    |             |
| Operating voltage      | (V DC)                | 18~28                                |             |
| Power consumption      | (W)                   | < 80                                 | < 100       |
| Operation temperature  | (°C)                  | -20~65                               | -20~65      |
| Storage temperature    | (°C)                  | -35~70                               | -35~70      |
| Dimensions (mm)        |                       | 282(L) x 150(D) x 354(H)             |             |
| Weight                 | (kg)                  | ~9                                   | ~10         |

|        |   |       |                        |
|--------|---|-------|------------------------|
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## U-Arm Laser Scanner








U-Arm Laser Scanner are featured with long range, high precision, efficiency, small size and light weight.

U-Arm scanners work well for long range scanning and include 2 models according to the max range, i.e. UA-1000 and UA-2000.

Field of view: 360°(H)X 300°(V). Pulse frequency goes up to 600kHz.



### Features

- 
 ·Long detection range:  
 UA-1000 Max. range  $\geq 1500\text{m}$   
 UA-2000 Max. range  $\geq 2000\text{m}$
- 
 ·High frequency: Max. 600KHz
- 
 ·High accuracy: 5~8mm@100m
- 
 ·High scan speed: 3-6 min / station
- 
 ·Insurance: Guaranteed maintenance and upgrade
- 
 ·Light Weight:  $\leq 9\text{kg}$
- 
 ·High temperature tolerance:  $-20^{\circ}\text{C} \sim 65^{\circ}\text{C}$
- 
 ·Broad vision:  $360^{\circ} \times 300^{\circ}$

### Applications



3D modeling



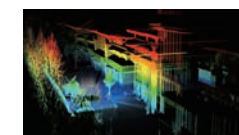
Powerline survey



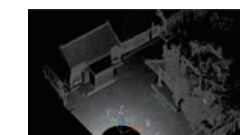
Pile measurement



Civil engineering



Building Inspection



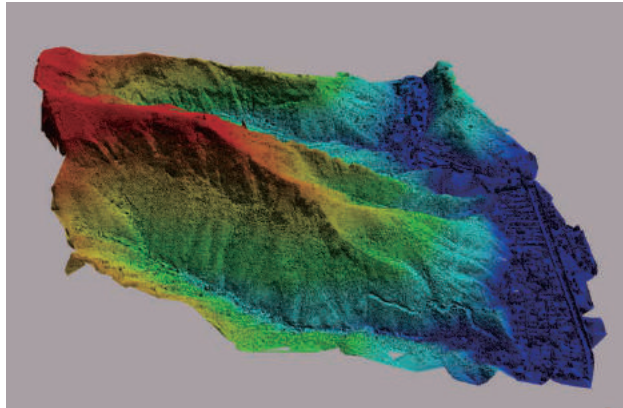
Archaeology

- Transmission line survey
- Corridor mapping
- Civil engineering
- Pile measurement
- Emergency survey
- Vegetation survey
- Archaeology

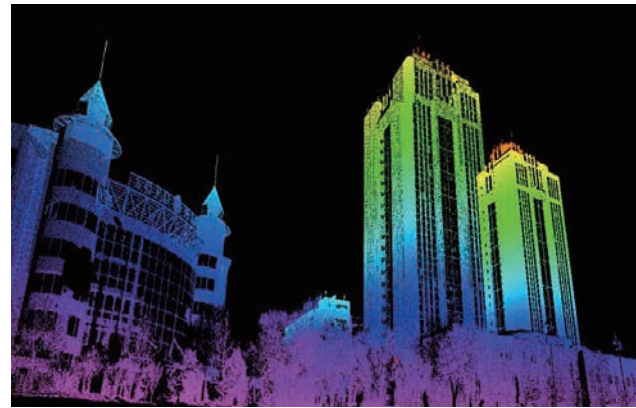


BIM

U-Arm terrestrial laser scanners enable quick obtaining of 3D data of large buildings. Database of digital cities, infrastructure and classic buildings can be efficiently established through reverse 3D modelling, digital restore and system analysis.



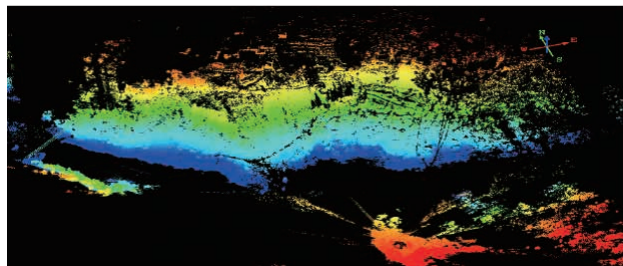
Topography



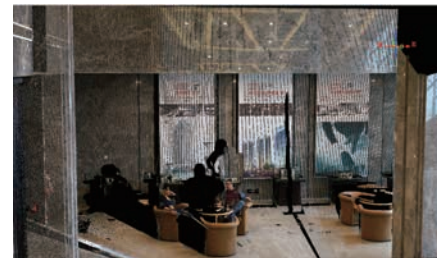
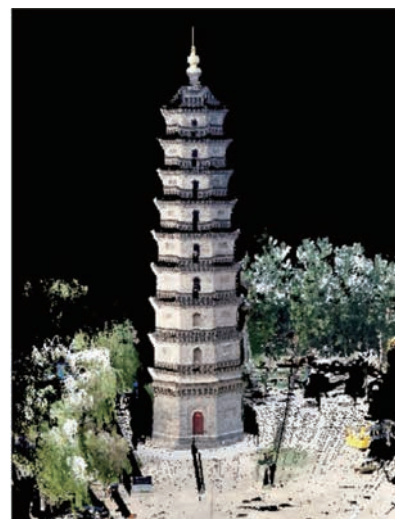
Urban Modelling

Slope Survey

U-Arm uses multiple echoes to detect objects and is able to obtain information of vegetation and complex terrain.



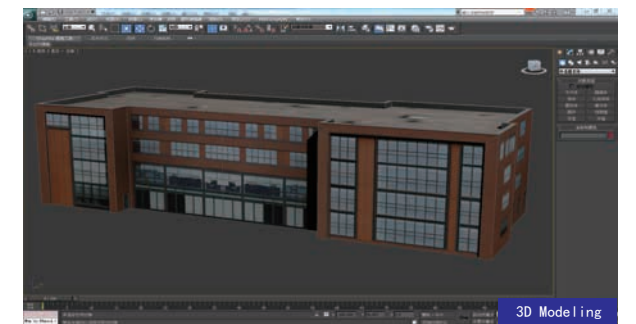
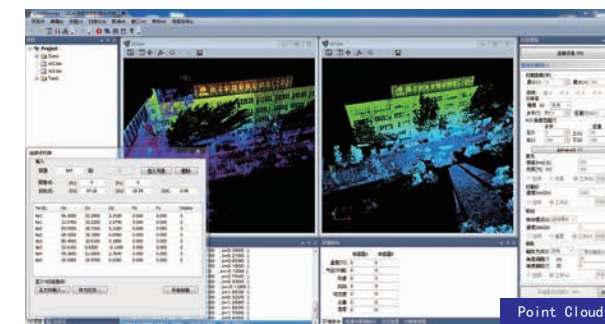
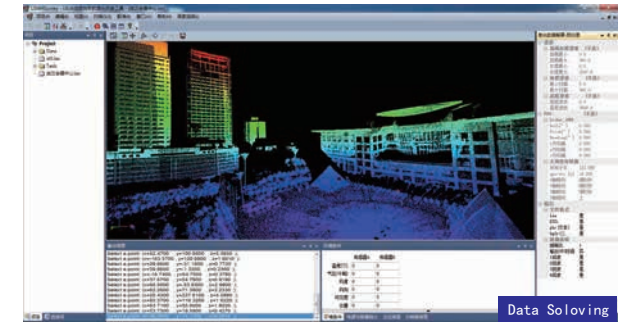
Color Point Cloud



U-Arm 3D laser scanner integrates multiple digital cameras on the ground, thus can obtain quickly and accurately 3D data and color images.

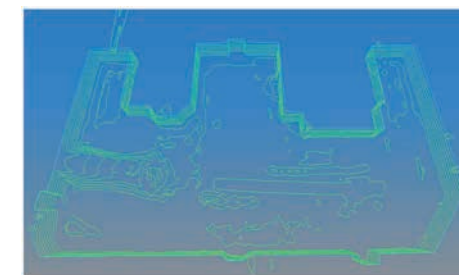
Data Acquisition Software

UiUA enables data collection, data solving and point cloud filtering, registration and merging, point cloud classification, point cloud visualisation in 2D & 3D as well as colorization. Data output formats are selectable.

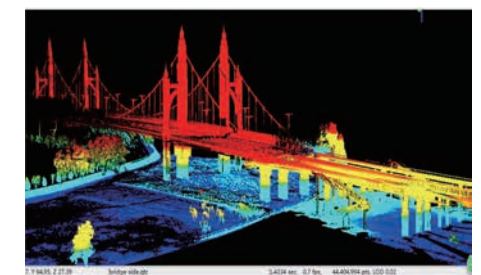


Post-processing Software

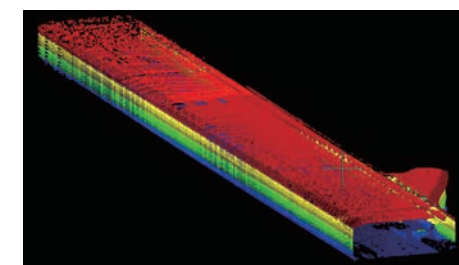
JRC Rconstructor can export point clouds and meshes, PDF reports, polylines and cross sections for CAD environment, planarity/change detection maps. It can output volumes calculation, cut & fill, topographic meshes, isolines extraction, crest & toe, tunnelling.



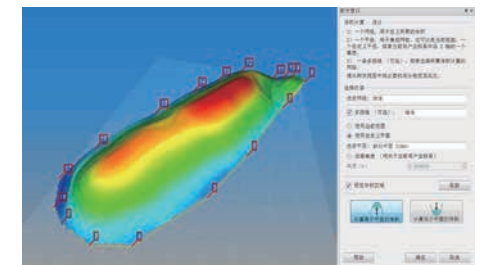
Foundation Pit Volume Calculation



Bridge Inspection



Tunnel Survey



Pile Measurement