

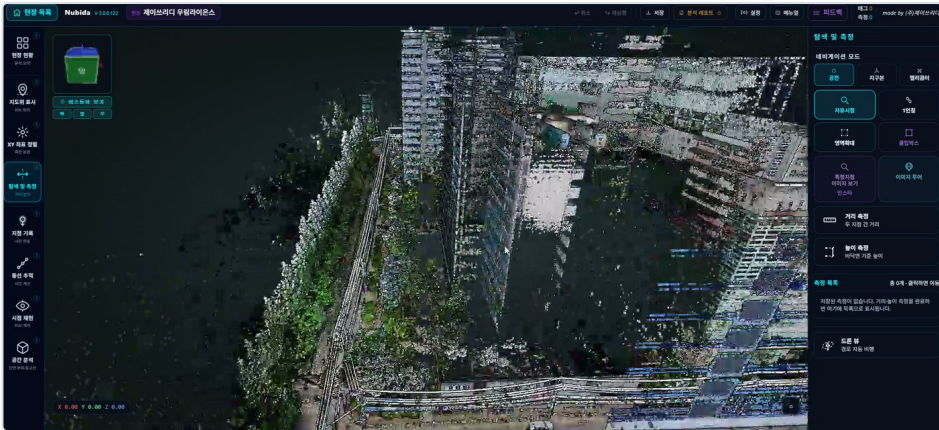
Nubida

3D Site Digital Twin Platform

Walk the site, record it, analyze it — all on real-world coordinates.

Walking a digital space is worth something on its own. Nubida opens heavy point clouds in a plain browser, lets you walk them in first person, and turns what you see into measurements, records and change figures.

Requirements surface through use. So getting it used comes first. Spatial-analysis software is normally specified from a plan — and the people who do the work are not in that room. The purpose is clear, yet nothing ends up actually used on site. Nubida is not a finished product; it is the place where field requirements are gathered, and once J3D turns them into features it becomes software that is genuinely used. Because it never aims at a finished product from the outset, the cost of being wrong shrinks to a single feature.



Actual screen — point cloud site overview

Georeference > Navigate · Measure > Annotate · Tag > Paths · Video > Spatial Analysis > Gaussian

One scan answers the site's questions, and what comes out — tour video, photoreal 3D, reports — doubles as promotional material. The resolution is a choice: taking the minimum the work needs is what lets an ordinary user do navigation, annotation and analysis in a browser. The six below are not the point — what matters is how easily this grows into the software your own work needs.

- | | | | | | |
|--|---|---|--|---|--|
| 01
Map Placement
Aligned to real map coordinates | 02
Navigate & Measure
Walk at eye level; measure distance, height | 03
Annotate & Tag
Names, photos, documents at the exact point | 04
Paths & Fly-through
Click a route; tour video is produced | 05
Spatial Analysis
Cross-section, volume, contour, time-series | 06
Gaussian Viewer
Teleport, mark and route through photoreal 3D |
|--|---|---|--|---|--|

Where it is used any work that has to record a space and look at it again

- | | | | | | |
|--|--|---|---|--|--|
| Rivers · Dredging
Dredging volumes, bed change | Slopes · Embankments
Displacement and collapse signs | Facility · Safety
Bridges, tunnels, plants — remotely | Earthworks · Stockpiles
Stockpile and earthwork volumes | Warehouse · Inventory
Warehouse walk + auto counting | Public · Asset Mgmt
Asset register in 3D |
|--|--|---|---|--|--|

It is worth a great deal, and nobody can open it

Spatial data rewards analysis in many directions, and **simply roaming it is already worth something**. And yet—

01

The data is large

Tens of gigabytes. It takes a **high-spec PC** to open at all — the machine on the desk cannot even load the file.

02

It takes dedicated software

And that software is **built for specialists**. It is hard enough to drive that **simply walking around** is out of reach.

03

It grows more complex the more it is used

It grew by absorbing many specialist requirements. Reaching the one function you need means **going through several steps**.

04

It is fitted to somebody else's work

Not because the product is poor. Another organisation's procedures are already set, so something is always missing for yours.

So the person who knows the site best never reaches the data. And if the people with the requirements cannot reach the data, **the requirements are never collected at all.**

So even new software goes unused

Build software without those requirements and the same thing happens once more.

01

It starts from a plan

Commission a platform and **the overall plan is set first**. The requirements of the people doing the work come after it.

02

It ends up detached from the work

The purpose is clear, yet **nothing is actually used on site**. That is why purpose-built software goes unused.

03

Wrong once, and it is all sunk

The moment the direction is off, **the whole spend disappears**. Nothing is left to revise.

The two problems are really one

People cannot **reach the data, so requirements never gather**; and with no requirements, **whatever is built goes unused**. So Nubida began not by adding features but by **making it reachable** — anyone can open it, anyone can roam it.

So we change the order

Rather than building the platform first and fitting requirements to it, **get it used first and design the platform from what comes out.**

01

Use it first

One scan file and your people are walking through it in a browser. **Nothing to install, no GPU server.**

02

Requirements surface

It roams like a game, so people use it daily. Daily use surfaces the friction, and they send it **from inside the product.**

03

Requirements become tools

J3D builds them for that work and attaches them — and **detaches them** when not needed. Seven have arrived that way.

04

Your platform takes shape

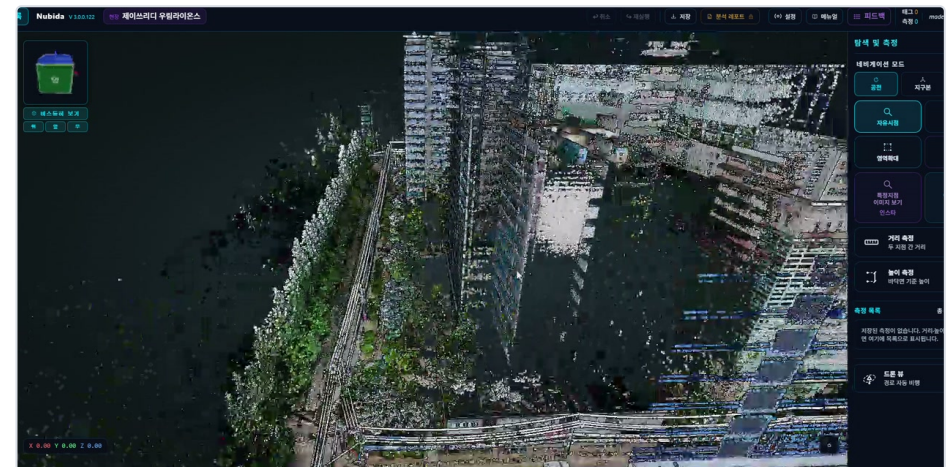
Revising what you need, over and over, is **what makes it clear.** Only then can you specify the real platform precisely.

Nubida is the intermediate stage on the way to that platform. Not the destination but the place you pass through — never aiming at a finished product is the intent, and in exchange **the cost of being wrong shrinks to a single feature.**

So you start today, from one scan file

It opens in a browser with no install and no GPU server. **Your people walk in first-person,** and what they find they need becomes the next feature.

Real-world alignment > Roam · measure > Annotate · tag > Path · video > Spatial analysis > Gaussian



Actual screen — one scan opened in a browser

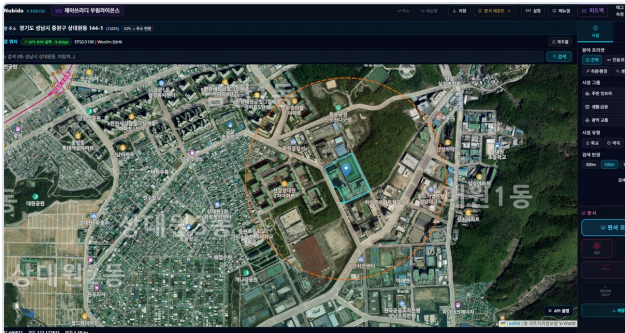
Put the site on the map — then walk it and record it

Give real-world coordinates to a scan that is otherwise a floating blob — walk it at eye level and measure — and pin site knowledge to the exact point.

01 · GEOREFERENCING

Map Placement

On its own, a point cloud is a **relative-coordinate blob** with no known origin. Nubida reads the RTK survey coordinates and aligns it to **absolute coordinates** on the real map.



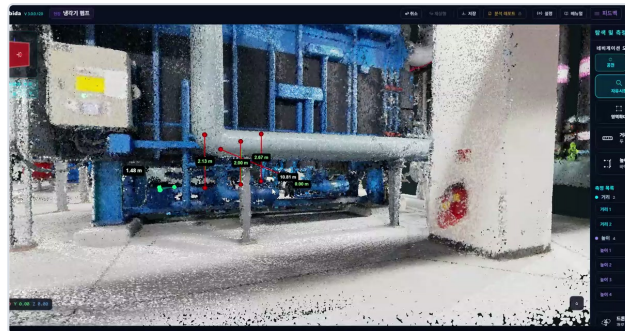
- **Coordinates extracted automatically** from the RTK data attached to the SLAM LiDAR
- Aligned to national coordinate systems (UTM-K, Korea Central Belt, etc.)
- Overlaid on **V-World · Kakao · Google** maps
- Reverse geocoding assigns the administrative address automatically
- RTK quality (FIXED / FLOAT) diagnostics → alignment confidence as a number

Only once it is georeferenced can scans from **different dates and different devices be compared on the same coordinates** — the prerequisite for time-series analysis.

02 · NAVIGATE & MEASURE

Walk the site in first person

Instead of orbiting a model from the outside, you explore the interior **as if actually walking through it at eye level**.



- **First-person view (POV)** — eye-level camera, WSAD + mouse look
- **Site walkthrough from your desk** with no return visit — narrow passages, behind equipment, high areas, all without risk
- **Distance · height · area · angle** — two clicks
- Measurement history list · minimap always showing your position
- Tilted scans are levelled with **XY alignment** before measuring

Measurement accuracy verified — measuring on the LOD data shown on screen agrees with direct readings from the raw source to **within 0.5%** at default settings.

03 · ANNOTATE & TAG

Site knowledge, stored on the 3D

Attach information to **the exact point** in 3D space. Records once scattered across drawings, photos and spreadsheets **gain coordinates**.



- Marker at any point → **asset name and category tagging** (structure / equipment / object / damage / marking / hazard)
- **Photo · video · audio · document** attached to each marker
- Walk in first person and mark right where you stand

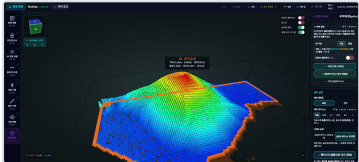
Uses — 3D visualization of the asset register · defect and fault locations · safety hazard zones · handover documentation.

Beyond measurement — into research and decision data

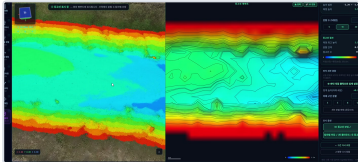
Build a walk-through video with clicks — quantify change with cross-section, volume, contour and time-series — and explore photoreal 3D.

05 · Spatial Analysis the measurement tool hub

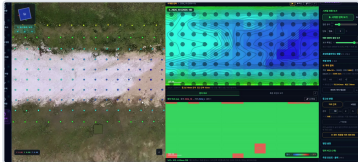
Tool	Status	What it does
Cross-section	Available	Cut with any plane → measure distance, angle and area on the 2D section
Pile volume	Available	Define an area → integrate volume above a datum floor. Stockpiles, earthwork, haulage conversion
River contours (deposition & scour)	Available	Align to flow direction → divide into N → elevation-coloured contours + cross-section chart
River change over time (deposition & scour)	Available	Grid-sample multi-epoch scans to compare deposition, erosion and deformation (Δz). Deviation map, trend chart, CSV
Thermal time-series analysis	Available	Walk under the roof a drone cannot reach and capture temperature across the space; overlay layers per survey and compare the deviation
Inventory	In development	Digital warehouse walk-through — manual measurement + automatic counting → list management



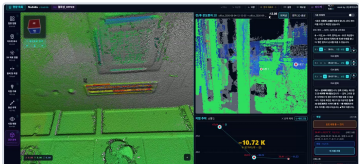
Volume — DEM above the datum



Contour — plan + cross-section



River change — deviation (Δz) map



Thermal time-series — deviation · point

04 · Paths & Fly-through a tour video from clicks



- **Click waypoints** → the path builds itself, with travel time per leg
- The **camera drives itself** along the path → viewpoint reproduced
- **Screen recording built in** → straight out as a video file
- Reporting views (front · side · plan · bird's-eye) and first person, both supported

Uses — progress and completion reports · site introduction for proposals · remote briefing. No editing software or specialist needed.

06 · Gaussian Viewer photoreal 3D



- **Teleport** — create waypoints and jump between them · free first-person movement (mouse look + WASD)
- **Annotate & mark** — record flags / name tags (9 colours), photo · video · audio · document attachments, saved to the server automatically
- Path creation → auto drive + video output · compass · minimap

Division of roles — Gaussian splats are a photo-based approximation, so they are never used for precise measurement. **Photoreal walk-through: Gaussian. Measurement and analysis: point cloud.**

Deployment — only what you need, on the PC you have

Add only the tools you need to the base licence, and run it on your own network. The server needs no GPU, and there is nothing to install on the user's PC.

Licensing base + only the tools you need

Stand Alone — single PC (node-locked) **BASE**
Locked to one PC by three hardware fingerprints. Verified offline, no internet required

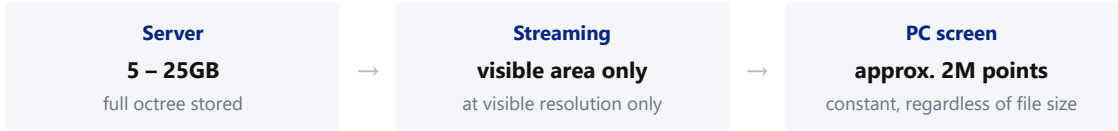
Network — internal network access (5 seats base) **EXT**
N concurrent seats on one server. Issued by adjusting the seat count **(planned)**

Per-feature issuance — base features + spatial analysis
Buy only the tools you need. Later purchases add just that feature

Analysis feature	Licence
2D cross-section	Included · free
Pile volume	Add-on
River contours (deposition & scour)	Add-on
River change over time (deposition & scour)	Add-on
Thermal time-series analysis	Add-on
Inventory analysis	TBD · in development
Time-series (terrain · slopes)	TBD · in development

Security — Ed25519 signature · offline verification · 14-day expiry grace · clock-rollback detection. A licence request takes **one fingerprint file** from the target PC. **Custom development and reports** available separately (additional cost).

Recommended PC file size is not the same as PC spec



Item	Minimum	Recommended	High-end
OS	Windows 10 (64bit)	Windows 10 / 11 (64bit)	Same
CPU	x86-64 4-core	x86-64 6-core or more	8-core or more
RAM	8GB	16GB	32GB
GPU	Integrated (WebGL)	Discrete GPU · VRAM 4GB+	RTX class · VRAM 8GB+
Display	1920 × 1080	1920 × 1080 or higher	2560 × 1440 or higher
Browser	Latest Chrome / Edge	Same	Same
Network	LAN 100Mbps	LAN 1Gbps	1Gbps
Auto point budget	300k – 500k pts	1M pts	2M pts
Experience	Usable, limited precision	Smooth navigation, measurement, analysis	Dense detail, large displays

The “auto point budget” is what the product actually does — on connection it detects the PC’s GPU and memory and sets the budget itself (manual range 200k – 5M pts). Low-spec PCs are handled by a dynamic budget, GPU context-loss recovery and auto-attenuation. **Spend on the GPU before RAM.**

Server storage · delivery · no GPU needed

CPU	Mid-range or better (multi-core for conversion — 8-core+)	Storage	Source size × 2.5 or more
RAM	32GB (headroom for 25GB-class conversion)	GPU	Not required — each client PC renders
Network	LAN 1Gbps	Internet	Not required (on-prem) · needed for V-World

More concurrent users never means adding server GPUs · conversion happens **only once**, at upload.

Operating environment adoption and operation

On-premises
Closed network
— only map tiles need internet

Installer / Docker
Windows or Docker — fits your infrastructure

Separate data
Survives reinstalls · backup tools included

Browser only
Nothing to install — open the server address

3D FOR AUTOMATION

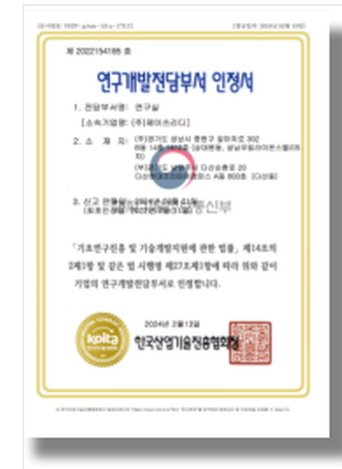
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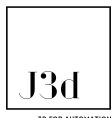
Now make it yours.

J3d Co., Ltd. / (주)제이쓰리디

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PURCHASE INQUIRIES