Build AR

ver 2.0.0

What is Build AR 2.0?

A BIM Data-Driven Aerial Drone Augmented Reality Solution for Large-Scale Construction Sites

By leveraging augmented reality, Build AR 2.0 enables verification of construction accuracy and attribute information, streamlining the Construction Management pipeline.

Without the need for physical drawings on site, a 1:1 scale BIM model can be overlaid directly onto the construction site, enhancing efficiency and accuracy.

Supports hybrid AR modes including marker-based AR, markerless AR, and GNSS-based AR.

Facilitates seamless on-site communication, enabling early detection of potential issues during the construction process.

DJI Matrice 350 RTK

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- Innovative Construction Solution Through the Fusion of Drones and Augmented Reality
- Build AR 2.0 is a drone-based AR solution powered by BIM data, designed for large-scale construction sites.
- Using drones equipped with high-resolution cameras and GPS, it overlays BIM data in real time across wide areas.
- Goes beyond individual buildings, expanding to block and city-scale visualization, delivering intuitive and accurate spatial information.

01. Large-Scale Real-Time BIM-AR Integration

Enables remote real-time sharing through a web viewer.
Expands AR visualization from individual buildings to entire cities using drone data.

*Image left: Augmented factory section crop function

02. GPS and Magnetic Field–Based AR Alignment

Receives real GPS coordinates from the site and overlays BIM models with precise spatial alignment.

*Image left: Adjusting transparency of layers inside an augmented factory

03. Hybrid AR Operation (Marker & Markerless)

Supports both QR marker–based and markerless AR, ensuring flexibility in deployment.
Enables real-time validation of alignment, design, and construction errors.

*Image left: Executing routing by setting start and end points of instance nozzles

04. Automatic Piping Design (Auto Routing)

Pipelines can be auto-routed by setting nozzle attributes such as start, end, and group.
Features include 3D BIM property inquiry, transparency/on-off control, AR result adjustment, and issue registration, ensuring smoother on-site collaboration.

*Image left: Auto-Routed Pipeline

SLZ - Space Leader Zee

SLZ

SLZ Inc. is a global startup that integrates Architecture & Engineering, Digital Twin, AI, and Robotics technologies.
With deep industry expertise and strong innovation capabilities, we develop smart solutions optimized for complex, large-scale construction and manufacturing environments, delivering differentiated digital transformation solutions to our clients.

Our AI-powered Digital Twin and AR solutions revolutionize construction operations by enabling design optimization, cost and schedule reduction, and real-time decision support. By leveraging advanced automation and immersive technologies, SLZ streamlines complex design processes, prevents costly clashes, and maximizes efficiency throughout the entire construction lifecycle.