



# iTwin<sup>®</sup> Capture Manage & Extract

## Reality Data Management and Feature Extraction Software

iTwin Capture Manage & Extract empowers you to organize, catalog, verify, and adjust your reality data, no matter the size or type.

Additionally, the desktop application allows you to complete simple and complex measurements, extract features, and perform advanced analysis using any reality data.

### REALITY DATA AND TRADITIONAL GIS

Hardware-neutral, independent from any post-processing software, and scalable, iTwin Capture Manage & Extract lets you take massive amounts of spherical images, planar images, oblique images, point clouds, and textured meshes and combine them with traditional GIS resources, such as vector data, orthophotos, and raster images. The software enables you to import reality data captured with terrestrial, mobile, and aerial mapping systems, taken on the road, rail, water, and in the air, both indoor and outdoor, and aboveground and belowground.

### VISUALIZE AND NAVIGATE

With iTwin Capture Manage & Extract you can view and navigate your mapping data in 2D or 3D, automatically play through all supported images, and overlay any 2D and 3D vector data. iTwin Capture Manage & Extract lets you set various point cloud legend options, such as transparency and view depth. By defining point cloud viewing modes, you can see stereo, perspective, and isometric 3D views. You can also effectively overlay your point cloud data on images using colorized hovering capabilities to detect underlying surfaces, snap to the nearest point, and interpolate between points to track surfaces, ridges, and corners.

### MANAGE, CATALOG, AND ADJUST REALITY DATA

iTwin Capture Manage & Extract enables you to manage, catalog, access, adjust, and verify your reality data. Smart templates simplify and enable automation to import your reality data from any capturing system and post-processing software. You can verify and correct the captured data using ground control points, trajectory adjustment, and capabilities for post-collection calibration. The software enables you to catalog and organize your data, and then complete metadata and tagging to keep your project overview and get easy access to any data at any time.

### EXTRACT FEATURES AND ADVANCED ANALYSIS

iTwin Capture Manage & Extract allows you to complete simple and complex measurements, extract features, and perform advanced analysis. You can make measurements using any reality data and extract them into GIS features.

With iTwin Capture Manage & Extract, you can create and verify your asset inventory and perform manual, semi-, and fully automated measurements using point cloud data, combined with object-oriented workflows and domain-specific analysis, such as bridge clearance, clash detection, profiles and cross sections, and road rutting analysis.

Enable artificial intelligence (AI) by annotating your reality data, launching trained AI models on imagery and point clouds, verifying auto-generated reality data annotations, and turning annotations into real 3D objects.

### TEAMWORK USING A CENTRALIZED DATABASE

Operators can work independently or collaborate to become efficient feature production teams.

Team managers can set up your production unit, import reality data, prepare feature extraction workflow, and manage workspaces for multiple operators.

Extracted features can be stored in the centralized database that provides real-time adjustments for all operators. Additional metadata, attribute information, documents, and snapshots can be added or attached.

Simple procedures maximize the operator's productivity. Your team's activity, as well as the user's, is logged to create reports and get insights for finetuning your production.



Upload and share 3D mapping data.

## SYSTEM REQUIREMENTS

**RECOMMENDED:** 64 bit, 16 GB RAM, Intel Core i7 equivalent or higher, Windows 7 or higher, Windows Server 2003 or higher

# iTwin Capture Manage & Extract At-A-Glance

## VIEW AND NAVIGATE

- ◆ Display and navigate in 2D and 3D
- ◆ Display point clouds and reality meshes
- ◆ Display spherical, oblique, and nadir images
- ◆ Display traditional GIS resources
- ◆ Display footprints on reference view
- ◆ Overlay vector data and point clouds on images
- ◆ Create 3D fly-through movies
- ◆ Slice horizontally, vertically, and randomly

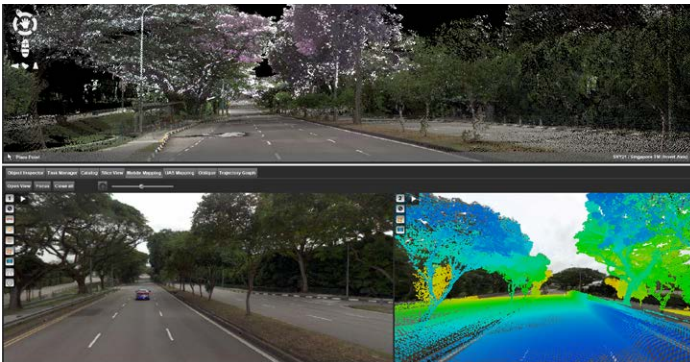
## REALITY DATA MANAGEMENT

- ◆ Import data of any size from any system
- ◆ Load ground control points
- ◆ Analyze and correct positional accuracy
- ◆ Catalog, index, and search
- ◆ Consolidate, merge, and archive
- ◆ Clean multiple passes
- ◆ Clean noise and ghosts from point-cloud data
- ◆ Georeference data

- ◆ Optimize and colorize point cloud data
- ◆ Prepare and upload to iTwin Capture Reality Management and Publisher

## ANALYSIS

- ◆ Measure and extract features on imagery, point clouds, reality meshes, dem, and vector references
- ◆ Measure points, lines, areas, and simple volumes
- ◆ Measurements by point clouds, meshes, dem, reference planes, and forward intersection
- ◆ Automatically recognize points, surfaces, ridges, and corners
- ◆ Apply assisted and automated measurements
- ◆ Utilize advanced tools for point cloud data feature extraction
- ◆ Generate fast and efficient feature extraction workflows
- ◆ Generate and export profiles and cross sections
- ◆ Auto-detect poles and traffic signs
- ◆ Create 2D floor plans
- ◆ Calculate and report 2.5D volumes
- ◆ GIS vector data toolbox
- ◆ Save measurement in GIS and export to CAD



Process and colorize point cloud data for sharing.



Manage massive amounts of companywide 3D mapping data.



Analyze mapping data and create reports.



Navigate mapping data in full 2D or 3D view.

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