



Cintoo Cloud Feature List

Collaboration, Sharing & Distribution

Admin

- Dashboard, Users list, Activities and Calendar
- Add co-Admins & Project Managers
- Define custom roles and permissions
- Manage groups of users
- Support of corporate Single Sign-On (SSO) (additional implementation fee required)
- Generate Usage Reports (date, users, companies, import/export of scans, crops or unified meshes)

Create Projects

- Choice of Automatic Cloud Hosting with CDN or selection of provider (AWS or Microsoft Azure) and region
- Choice of hybrid cloud with your own AWS or Azure instances (additional implementation fee required)
- Choice of private data center (additional implementation fee required)

Manage Scan Projects

- Map, Thumbnails, List
- Search

Collaborate

- Invite Users & Team members to each project (search tool available when inviting a new member)
- Manage access & sharing rights

Upload Terrestrial (Static) Scans

- Upload structured scan projects in RCP, e57, FLS or LSPROJ format
- Support of intensity
- Automatic point cloud-to-3D mesh transformation for each scan prior to the upload

Upload Indoor Mobile Lidar Scans

- Upload scans captured with NavVis, GeoSLAM, Gexcel, Emesent, Leica BLK2GO or Viامتري devices
- Upload unstructured scans in E57 together with camera path and source 360° images
- Restructuring or unstructured data with creation of 'static' 3D scans that preserve the source point cloud density and accuracy
- Automatic point cloud-to-3D mesh transformation for each scan prior to the upload

Upload drone data

- Upload drone data as point cloud in E57 format
- Automatically generate Virtual Vantage Points (VVPs) along an horizontal grid with a custom distance between each VVP

Upload 360° images (beta)

- Upload spherical images with their geolocation and orientation
- Orientation set as compass heading or quaternions

Face blurring at import

- Automatically blur faces on panoramic images when uploading static or mobile scans, or drone data

Upload documents

- Upload documents in .doc, .pdf, .xls or .jpg format

View

- Supports Google Chrome, Microsoft Edge (V79 or higher) and Mozilla Firefox
- Data, 2D Overview Map, 3D View
- Data: Thumbnails or list, with high-res panoramic picture display, scan or 360° images information and specific URL



- 3D View: Display scan data in Scan Mode or 3D Navigation Mode, in 3D RGB, 3D Intensity, 3D X-Ray, 3D Surface, 3D Height or 2D Panoramic Images (Scan Mode only) only – Display 360° images to navigate between scans and spherical images – Orthographic or perspective camera from any of the 6 axes – Scan sprites filtering (occlusion and/or range) in Scan Mode
- TurboMesh™ engine in 3D Navigation mode, to stream mesh data at the resolution of the source scans
- Navigation Map (mini-map) in 3D View showing scan and 360° images icons over RGB, DWG or Site Map background
- 2D Overview Map: Display scan data and 360° images in orthographic mode from any of the 6 axes, in 3D RGB, 3D X-Ray, 3D Surface or 3D Height
- Display BIM models in 3D RGB, 3D X-Ray, or 3D Height in Overview Map and 3D View

Site Map

- Site Map upload (jpeg, PNG)
- Alignment tool in Overview Map
- 3D Alignment tool in 3D View
- Use of Site Map in Navigation Map

Work Zones

- Create as many Work Zones and sub-Work Zones as necessary
- Assign scans or BIM/CAD models to each Work Zone or sub-Work Zone
- Manage team member access to Work Zones or sub-Work Zones
- Display each Work Zone individually or collectively

Resource Explorer

- Browse and organize your resources using the Resource Explorer
- For each scan, get the corresponding properties or use several available actions: edit, delete, add to Work Zone, share, download, export in CSV, go to, look at, hide, isolate...

Cropping Tools

- 3D crop box combined with XYZ sliders in 3D View
- XYZ sliders in Overview Map
- Rotate crop to align with screen in Overview Map
- Save & edit unlimited crops

Annotations

- Annotate as notes, private notes or issues
- Add labels, text, photo, video, URL, PDF to the annotations
- Assign private notes and issues to team members
- Search for annotations based on labels

Measurements

- Set unit system as metric, US or international Imperial with precision of measurement
- Add linear measurements in 3D View (Scan Mode or 3D Navigation Mode)
- Constrained measurements (X, Y, Z axis or disto)
- Pick 3D point and paste XYZ coordinates.

Play Sequence

- Play capture sequence via the timeline

Reports

- Generate Measurement & Annotation reports in PDF with hyperlinks to each entity
- Create screenshots

Distribute and download scans from the Cloud

- Select a project, a Work Zone or a crop for download
- Download and export scan data as point cloud in structured e57 or structured RCP for whole projects, sets of scans or Work Zones
- Download and export scan data as point cloud in Unified RCP / RCS / e57 / POD (Bentley Point Tools format) for crops

Download Unified 3D Meshes

- Download the Unified 3D Meshes in OBJ, FBX and STL format (requires a creation step as a Web Service)



Shared 3D viewer

- Share Cintoo Cloud viewer via URL or email
- Display high-resolution Scan data + BIM/CAD models in Google Chrome or Mozilla Firefox
- 3D View: Display scan data in Scan Mode or 3D Navigation Mode, in 3D RGB, 3D Intensity, 3D X-Ray, 3D Surface, 3D Height or 2D Panoramic Images (Scan Mode only)
- Add QR code
- Add company logo
- Set time limits and passwords
- Share metadata (measurements, annotations)
- Embed Shared Views in iframe from any domain

VR streaming

- Stream high-resolution Scan data + BIM/CAD models in stereoscopic mode using Mozilla Firefox
- Connect to Oculus Rift, Oculus Rift S, HTC Vive Pro, Meta Quest 1 or Quest 2 (tethered)
- Navigate from Scan-to-Scan positions
- Display in Scan Mode in 3D RGB, 3D X-Ray or 3D Surface mode
- Make point to point measurements or distance measurements

Tablet Viewer

- Support of Windows, IOS or Android tablets
- Project and Work Zone Selection
- Scan mode or 3D Navigation
- Display modes: 3D RGB, 3D Surface, 2D Panoramic Image
- Tools: Measure, Annotate

BIM & CAD Module

Autodesk Construction Cloud and BIM 360 Interoperability

- Push RVT, NWD, NWC, 3D DWG, JT or IFC files from Autodesk Construction Cloud or BIM 360 to Cintoo Cloud
- Upload BIM models together with hierarchy, disciplines, and metadata
- Look for model updates in Autodesk BIM 360 or Autodesk Construction Cloud
- Select transformation to be applied to the Revit model (Shared Coordinates or Origin to Origin)
- Push back issues from Cintoo Cloud to BIM 360 for project coordination

Upload BIM or CAD models from disk

- Formats: IFC, DWG
- Metadata not included

Model Explorer

- Browse your BIM or CAD model using the Model Explorer
- For each BIM model element, use the various available actions: hide, isolate, look at, go to
- Read the complete metadata for each model and each model element (for models imported from ACC and BIM 360 only)
- Pick a model element from the 3D view

Align Scan & BIM

- Align Scan to BIM/CAD or BIM/CAD to Scan
- Export the alignment to Revit and Navisworks

Compare Scan data & BIM/CAD Model (Scan vs. BIM/CAD)

- Overlay the BIM/CAD model to the scan



- Compare using the Visual Difference and Visual Check tools
- Generate heat map based on tolerance

Compare Scan versions (Scan vs. Scan)

- Display scan versions using the timeline
- Align Scan to Scan
- Compare using the Visual Difference and Visual Check tools
- Generate heat map based on tolerance input

Issue Tracking

- Export issues in BCF Format (BCF = BIM Collaboration Format)
- Interoperability with BIM Track (push or sync notes and issues between Cintoo Cloud and BIM Track)
- Interoperability with Autodesk BIM 360 (push issues from Cintoo Cloud to BIM 360)
- Interoperability with Procore (push issues from Cintoo Cloud to Procore)

Asset Tagging & Display

Tag Explorer

- Explore tag lists and tags in the DATA tab or the 3D View's Tag Explorer

List of tags and tags

- Create lists of tags and tags
- For each tag, add up to 20 metadata (metadata can be hyperlink to your Digital Twin or documentation platform)

Manual tagging

- Create a tag around an equipment using the bounding box tool
- Manually edit the tag to all necessary metadata

Tag List Import

- Import lists of tags in CSV file that contains the equipment ID, location, metadata, and hyperlink
- Edit tag lists (append existing lists, manually add new tags, edit each tag to adjust the bounding box for example)
- Delete tag lists

Automatically search for tags in your scans using Cintoo's AI Engine

- Automatically search for various tags to geolocate and classify them in your scans
- Available classes of tags: control boxes, electric boxes, electric motors, flanges, manometers, valves

Display tags in the 3D View

- Display tags with their best scan view(s) in the 3D View
- Edit the scan view or the 3D view for each tag
- Click on the tag in the list or in the 3D view to access asset information
- Display the tag metadata using the Tag Explorer

Search for tags

- Search for tags in the list with multiple elements

Share Tag Views

- Share Tag Views as hyperlink or QR code

Export Tag Lists

- Export Tag Lists in CSV or Excel file together with the Scan View for each tag



Web Services

Unified 3D Mesh Creation (BETA)

- Create Unified 3D Meshes with photo-texture from crops
- From up to 100 scans
- Select density starting at 0.2 cm / 0.1 inch
- Select format (OBJ, FBX, STL)

APIs

Cintoo Cloud APIs allow to call for most of Cintoo Cloud resources. Current API calls are the following:

- List or get your Cintoo Cloud projects
- Move project to another subscription
- List files, including Scans, Models, Geoimages
- List, create, update or delete Tags or Tag Lists
- List or get Groups of users
- List or get Roles
- List Subscriptions
- List or Get Users

Streaming SDK

Cintoo's Streaming SDK allows to stream Cintoo Cloud's high-resolution, mesh-based scan data into game engines like Unreal or Unity. Available APIs are in C++, C, wrapper C# for Windows only.

- Authentication to Cintoo Cloud
- Selection of Project, Work Zone and Scan
- Mesh streaming of scan data and models (if any) based on user's 3D space view
- Optimized for scan-to-scan navigation
- Handles proxys and upload of notes to project metadata