



KitConnect

FEATURES

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KitConnect is an integrated Revit-to-Web solution to create and manage your configurable, modular, kit-of-parts content from design through manufacturing and construction.

Roles and Permissions

Account and project administrators can assign one or more project roles to their users to limit or expand access to certain KitConnect functions and feature sets; these roles may vary per project. User roles can define which users have permissions to create, publish and edit KitConnect library content, control access to content from the library, and run configuration rules to design a building.

Account Administrator

can enable BIM360 projects for use with Kit Connect; add users to projects; assign user project roles

Project Administrator

can add other users to the project they are an admin on; assign user project roles

Kit Manager

can publish and edit content in their projects' libraries; delete content from their projects' libraries; undo check-out of modules checked out by other users

Kit Designer

can publish and edit content in their projects' libraries

Kit Participant

can switch option set options and turn instances off and on in module presets; publish new module presets from existing

Project Designer

can insert family/assembly/module instances into their project and sync them with the project database using the Sync BOM feature

Project Participant

can view and insert content only. They cannot edit or write to the content library or project database. All users on a KitConnect project must have this role at a minimum.

Content Library & Management

Enable your existing BIM360 project for use with a KitConnect content library. The content library lets designers upload and download their models from any Revit document, using version-controlled BIM360 Docs storage. All inserted models maintain a dynamic connection to their library. Updates to models made internally or externally can be brought into the document at will by the designer.

Arrange published families and system types into assemblies and modules. Publish into existing content libraries to allow project access from anywhere.

Families

Publish your loadable Revit families as building blocks for the larger model types. Optionally select any instance parameters to be tracked when used in Assemblies and Modules. Currently supported hosting types include level hosted and wall hosted.

Assemblies

Arrange your families into assemblies and publish them as static combinations of elements. For example, as casework & vanity or a complex column weldment. KitConnect assemblies should not be confused with Revit assemblies, as this is a separate KitConnect managed definition.

System Types

Publish supported system family types into your content library for use in modules, or more simply for centralized control over your system families in a project. Currently supported Revit system families include

walls, floors, pipes, ducts, and conduit.

Modules

Modules are top-level, configurable models. Arrange your families, assemblies, and supported Revit system families into modules. Configuration rules such as option sets, shared instances, instance suppression, etc., constrain the ways project designers can make changes. A module can be constructed as a complex building system, an individual building component (i.e., a wall panel), or an entire building. There is no implied scale or typology for a KitConnect module. The core concept of a KitConnect module is flexible and configurable through rules sets.

Detailed Content Views

Users can see details of all families, assemblies, modules, systems, and option sets, including thumbnails, version numbers, and other metadata. Each view has a basic search bar for filtering.

Transfer Content

Users with the Kit Manager role on their project can transfer families, Assemblies, Modules, Systems, and Option Sets from an Enterprise Library into their Project Library. Once it's been moved into the project, content can be modified and revised separately as the project's requirements diverge without affecting the original Enterprise content.

Preview Dependencies

When the Kit Manager selects a component to transfer to their project, any content required as a dependency will automatically be added. For example, if a module uses three different system types, those will appear in the transfer queue when the module is added.

Save and Reload Queue

If the Kit Manager closes the application before the publish has been triggered, the queue will be saved and reloaded the next time the application is opened.

Populate Enterprise Library using Project Content

Enterprise Library Kit Managers can copy content from a Project Library back into an Enterprise library for later projects.

Audit / Get Content Updates

Suppose instantiated KitConnect content in your Revit model deviates from its correct definition in the cloud (due to errant deletion, family move/rotate, etc.). In that case, a user can correct the model with a "get content update" function that acts as a simple model audit. This gives the team confidence that your Revit model adheres to its cloud definition and accurately reflects your Bill of Materials. This audit will also check if you have the most current version of each family, assemble the module in your model, and replace an out-of-version piece of content with its up-to-date version in the cloud.

Automated Check-in / Check-out

When kit designers edit assemblies, they are automatically checked in or out to prevent other kit designers from accessing them.

Module Configuration Control

Leverage presets to iterate design options quickly or to represent alternative configurations of similar design modules. Add configuration rules to constrain the changes users are allowed to make.

Module Presets

Leverage presets to iterate design options quickly. Modules can have an unlimited number of module presets published. Module presets allow the kit designer to spin-off similar design options quickly and iterate on those options individually. When modules are inserted into the project, the designer can quickly switch between presets until they find the one most suitable for each condition.

Configuration Rules

Family and assembly instances used in modules may have some configuration rules applied so that designers with less kit-based knowledge can make proper design adjustments or so that kit designers can

establish commonalities between their module presets.

Option Sets

Publish option sets to your library for use in module presets. Assign option sets to family or assembly instances in a module preset. Option sets represent an arbitrary collection of families or assemblies that can be quickly switched when editing a module preset. For example, an option set may define a list of valid sink options or a range of W-Beam lengths. Option sets allow kit designers to communicate valid design options to those with less knowledge of the kit. Option sets may be created and managed via the KitConnect Revit Plugin or the Web App by a user with no access to Revit.

Shared Instances

Set a family or assembly instance as shared to force all other presets to inherit it. This is useful when a kit designer establishes the core commonality across module presets. For example, share the structural components of a module, and leave the interior cabinetry and furniture unshared to enable preset-specific layouts.

Off / On Instances

Turn any family or assembly instance off or on to remove it from the module preset without deleting it entirely. Especially powerful when a kit designer wants to make an exception for a shared instance in a module preset.

Level of Detail (LODt) Representations

KitConnect can represent multiple levels of detail (LODt) of the entire project, bounding box, or user-defined selection. Users may choose their level of design or development, including pre-design, feasibility study, SD, DD, CE, and more. Regardless of the chosen LODt, KitConnect will report an accurate Bill of Materials (BOM) for each module instance in the Revit file.

Users can match their KitConnect content to the current level of design or development in their Revit model (pre-design, feasibility study, SD/DD/CD, etc.). Modules can be individually swapped to other LODt within a Revit file. Regardless of the LODt representation, KitConnect will always report an accurate Bill of Materials (BOM) for each module instantiated in your Revit file as this information lives outside of the BIM context. Below is a list of the currently supported module levels of detail.

Default LODt

Created automatically when publishing or updating a module, the default LODt displays all elements in the module as their default Revit model representation.

Bounding Box LODt

Created automatically when publishing or updating a module, the bounding box LODt is a simple rectangular box representing the module's minimum and maximum extents.

User-Defined LODt

Optionally created when updating a module, the user-defined LODt is a Revit mass family that can sculpt any representational shape the kit designer desires. This is typically used when the Bounding Box LODt does not provide a good representation of the Module.

Project Bill of Materials (BOM) Management

Track family, assembly, and module instances inserted Revit projects using the BOM Sync feature. BOM Sync provides instance-level tracking and auditing against the linked KitConnect project database. Users requiring model context in their documentation may connect to the same KitConnect project database and fetch the entire as-published project model in any level of detail they choose.

Dynamo Nodes

Installing the KitConnect Revit plugin automatically exposes a library of nodes for use in Dynamo Revit. These nodes allow users to programmatically filter and insert content using Dynamo's functionality typically provided.

Web Application (app.kit-connect.com)

The Kit Connect web application serves various purposes and seamlessly delivers new features independent of the Revit plugin. Many functions such as editing metadata, lightweight modules edits, or rules creation can be performed in the Web Application allowing non- Revit users to participate in the same data flow as a Revit user with seamless data sharing between the web and BIM.

Account and Project Administration

The admin portal allows Administrators to enable BIM360 projects for KitConnect use, manage licenses, activate/deactivate users, invite users to projects and assign project roles.

Content Library

Users can view families, assemblies, and modules in their content libraries and edit specific fields, like "tags."

Module Configuration

Users can view 3D previews of their modules, get and export module BOMs to .csv, rename module presets, and suppress instances (provided the user has permission)

Option Sets

Users can create and manage option sets (provided the user has permission)

Project BOM

Users can view their project BOM, view files connected to the project BOM (and who joined them), and view BIM360 project metadata.

In the web app, a roll-up bill of materials can be viewed in real-time and exported to .csv for live quantity takeoffs or export to other software.