VISUAL CADLink User Manual

Version 1.0

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Overview

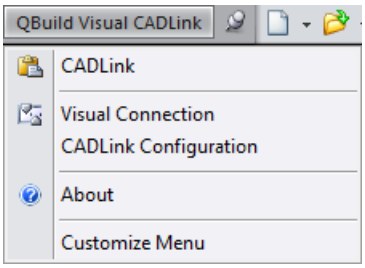
CADLink serves as a bridge between your Computer Aided Design (CAD) system and Infor VISUAL Manufacturing. It allows the user to automatically create, update, and modify Engineering Master (EM) and Part data within VISUAL.

Please note that CADLink uses a direct database connection to integrate with VISUAL. This means any changes saved by CADLink will bypass restrictions imposed by the VISUAL user interface. For example, CADLink can still write to fields that are restricted/locked out in VISUAL if the database still allows write access.

CADLink simplifies and streamlines the process of transferring engineering data between CAD and VISUAL. The purpose of this document is to outline the functions and features of CADLink. If any of your questions are not answered, please feel free to reach out to inforsupport@qbuildsoftware.com for assistance.

Launching CADLink

CADLink can be launched directly from your CAD system toolbar, or as an external program. Upon launching, CADLink will begin to work with the current active CAD file open in your CAD system.

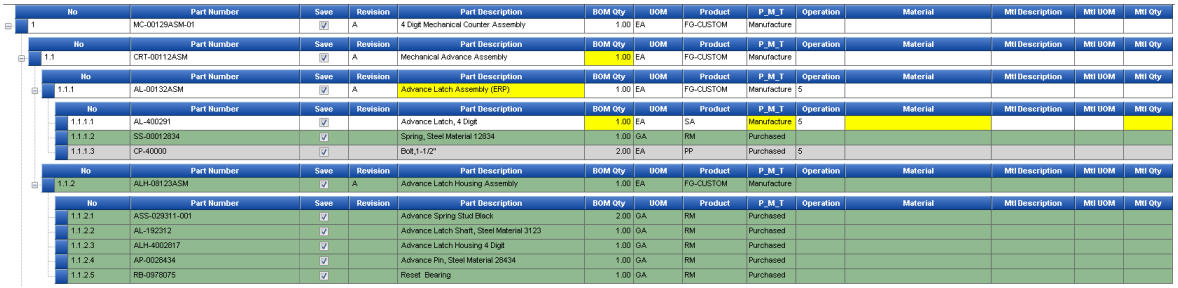


After launching, a CADLink splash screen will appear. In this screen, you can see CADLink examine the entire Bill of Material (BOM) structure of your active CAD file, as it also pulls Engineering Master (EM) and Part data from VISUAL.

Once it has completed this process, it will display the CADLink BOM Grid which highlights and compares the differences between the CAD BOM and VISUAL EMs.

Bill of Materials Grid

CADLink will open up to the BOM Grid after launching:



No	Part Number	Save	Revision	Part Description	BOM Qty	UOM	Product	P_M_T	Operation	Material	Mtl Description	Mtl UOM	Mtl Qty
1	MC-00129ASM-01	☑	A	4 Digit Mechanical Counter Assembly	1.00	EA	FG-CUSTOM	Manufacture					
1.1	CRT-00112ASM	☑	A	Mechanical Advance Assembly	1.00	EA	FG-CUSTOM	Manufacture					
1.1.1	AL-00132ASM	☑	A	Advance Latch Assembly (ERP)	1.00	EA	FG-CUSTOM	Manufacture	5				
1.1.1.1	AL-400291	☑		Advance Latch, 4 Digit	1.00	EA	SA	Manufacture	5				
1.1.1.2	SS-00012834	☑		Spring, Steel Material 12834	1.00	GA	RM	Purchased					
1.1.1.3	CP-40000	☑		Bolt,1-1/2"	2.00	EA	PP	Purchased	5				
1.1.2	ALH-08123ASM	☑	A	Advance Latch Housing Assembly	1.00	EA	FG-CUSTOM	Manufacture					
1.1.2.1	ASS-029311-001	☑		Advance Spring Stud Black	2.00	GA	RM	Purchased					
1.1.2.2	AL-192312	☑		Advance Latch Shaft, Steel Material 3123	1.00	GA	RM	Purchased					
1.1.2.3	ALH-4002617	☑		Advance Latch Housing 4 Digit	1.00	GA	RM	Purchased					
1.1.2.4	AP-0028434	☑		Advance Pin, Steel Material 28434	1.00	GA	RM	Purchased					
1.1.2.5	RB-0978075	☑		Reset Bearing	1.00	GA	RM	Purchased					

In this screen, line items or fields may be highlighted in different colors to indicate differences between the CAD BOM and VISUAL EM. The default color scheme is described in 5 colors:

White: Part already exists in the VISUAL Part Master.

Green: Part does not exist in VISUAL, and will be created by CADLink after saving.

Grey: Part is not present on CAD BOM, and will be removed from VISUAL EM

Blue: Part is not present on CAD BOM, but will not be removed from VISUAL EM

Yellow: There is a discrepancy between CAD and VISUAL data, which is resolved after saving.

Right-clicking on a yellow field will open a small window showing the different pieces of data from CAD and VISUAL:

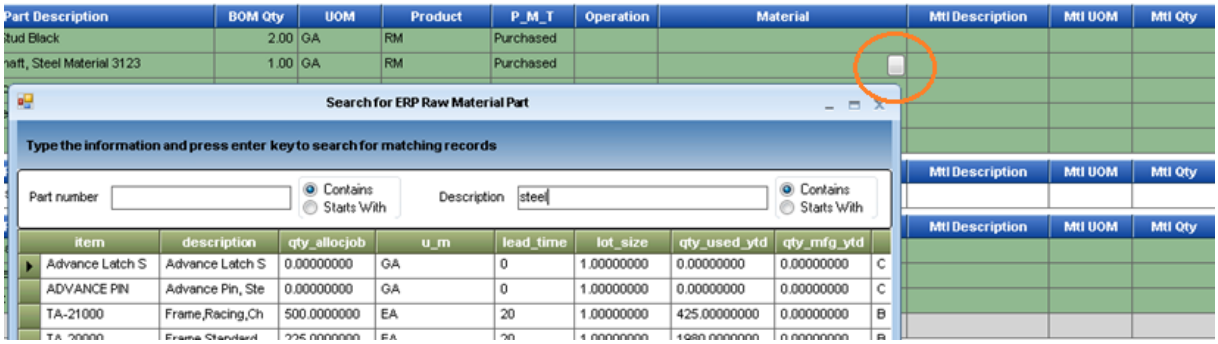
	Part Number	Part Description	Opr Seq	Unit Qty	UOM	Class Code	Group Code	Part Type
1	08LCF01	LATCH-LIFT AND TURN,FLUSH MOUNT	0	1.00	EA	Hardware	Machine Part	Manufactured
1.1	X09087-1	100 Series Metric Pawl	0	1.00	EA	Hardware	Fabricated Parts	Purchased
1.2	L45324	Latch	0	1.00	EA	Hardware	Machine Part	Manufactured
1.3	624009	62 series metric hadware	0	1.00	EA	Hardware	Fabricated Parts	Manufactured
1.4	N39676	Non Locking Chrome	0	1.00	EA	Hardware	Machine Part	Manufactured
1.5	X09087	100 Series Metric Pawl	0	1.00	EA	Hardware	Machine Part	Purchased

The user can select a description to use, or type a new description that CADLink will write to both the CAD system and VISUAL.

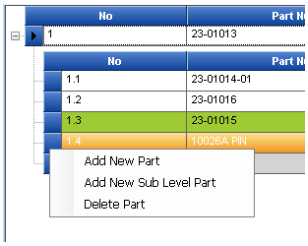
Important Part data such as Part ID, Description, Revision, etc. will also be exposed in this grid.

- VISUAL-specific fields such as Unit of Measure and Product Code can be assigned for new parts.
- Some data cannot be changed for existing parts, such as UOM.

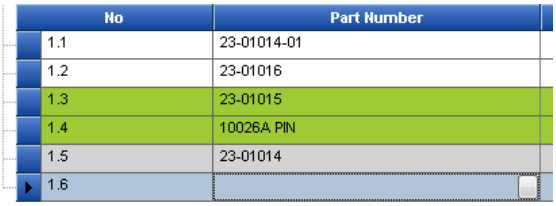
Raw materials can be assigned directly through the CADLink interface. Right-clicking on the Material column and selecting ‘Add Material’ will open a search window into your VISUAL Part master. There, you can search for the correct raw material by Part ID or Description, and then provide a quantity in the Mtl Qty column.



Similar to raw materials, line items can be added to the VISUAL EM manually without modelling them in your CAD. Right-clicking on a blue square on the far left of a line item will open a menu to add new Parts.

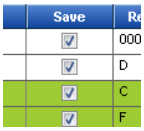


Adding a new part will create an empty row in the selected level or sub-level. Right clicking on the Part Number column for this row will provide the option to open the part search window (same as raw materials). A quantity can then be typed into the BOM Qty column for the selected part.



Grey rows (parts to be removed from the EM) can be converted into Manual Parts by opening the Manual Parts menu on that line item.

The Save column can be used to ignore changes to specific line items in CADLink. When you save the EM, CADLink will ignore any lines where the Save checkbox is deselected. This is helpful for transferring long lead-time items into VISUAL even if the full design is not yet complete.

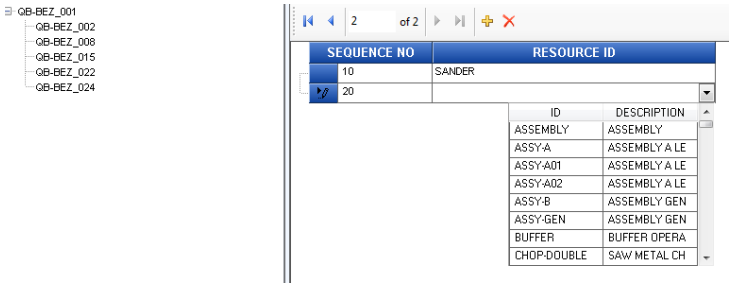


Operations/Routing

CADLink facilitates the assignment of operations and routing through the Operations tab.

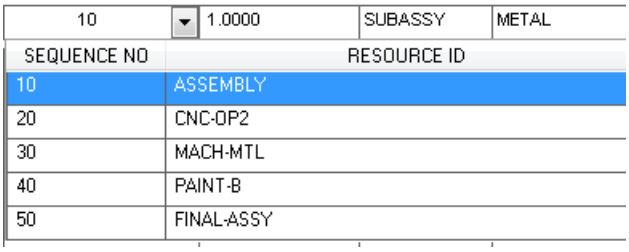
For existing parts, the operations and operation sequences will be loaded from VISUAL.

For new parts, a sequence template can be loaded from your CADLink settings, which can then be edited for each specific part. Alternatively, the routing sequence can be created by individual resources.



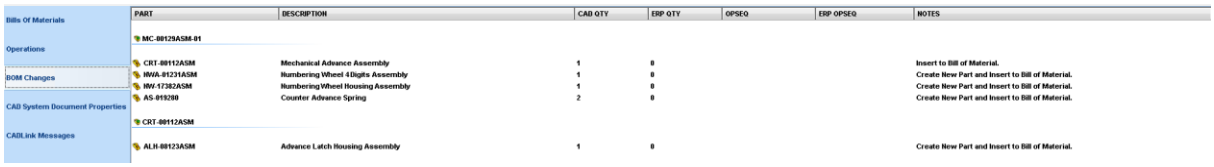
The available operations are taken directly from your VISUAL database.

After you have finished assigning operations to the sequence, you can material cards to Resources from the BOM Grid tab:



BOM Changes

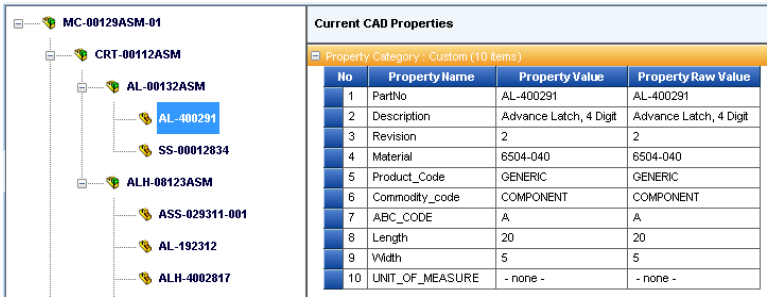
The BOM changes tab is a snapshot summary of the changes CADLink will be making upon saving. It is read-only, but updates live as you make changes in the BOM Grid and Operations tabs.



This tab is particularly useful for record keeping purposes, or if you are making minor changes to a large assembly.

CAD System Document Properties

The CAD properties tab is another read-only tab. It is simply a window into the CAD properties of the active CAD file, to avoid jumping between CADLink and your CAD system frequently.



No	Property Name	Property Value	Property Raw Value
1	PartNo	AL-400291	AL-400291
2	Description	Advance Latch, 4 Digit	Advance Latch, 4 Digit
3	Revision	2	2
4	Material	6504-040	6504-040
5	Product_Code	GENERIC	GENERIC
6	Commodity_code	COMPONENT	COMPONENT
7	ABC_CODE	A	A
8	Length	20	20
9	Width	5	5
10	UNIT_OF_MEASURE	- none -	- none -

To make changes to these properties, you must save new properties using CADLink or exit and change them manually in the CAD system.

CADLink Messages

CADLink Messages is an important validation step. Here, you will be notified of any warnings or errors.

Warning: Alerts the user of a low-impact issue.

e.g. Description exceeds character limit and will be truncated

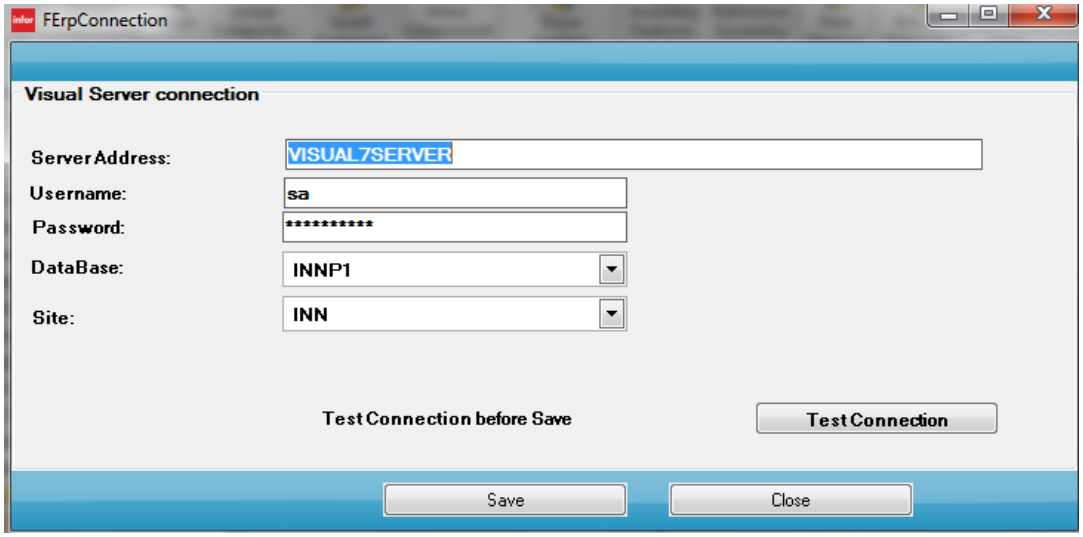
Error: A more serious issue where the save function is disabled to preserve data integrity

e.g. A part cannot have the same Part Number as its parent

VISUAL Connection Settings

CADLink connects to your VISUAL database using a direct database connection.

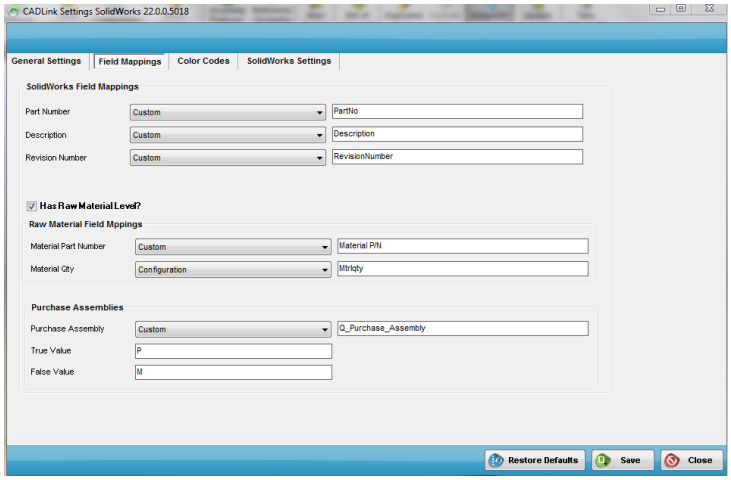
The connection can be set up in the VISUAL Connection Settings. Use the Test Connection button to confirm that the information entered is valid.



CADLink Configuration

The CADLink Configuration settings allow you to choose field mappings, color-coding, and Item templates.

Field Mapping: These are used to define where CADLink should search to find part data, such as Part Number, Part Description, Revision, etc. from your CAD files. Your VISUAL Part UOM and Raw Material UOM are written to your CAD properties.

Color Codes: Choose the color scheme CADLink uses to highlight fields in the user interface

Other Settings: General settings for the CADLink interface.