

# Cluso InvMan Software Integration

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There are few words more terrifying to the Electronic Manufacturing Community than "software integration" and there has been good reason for that dread. For many years, attempts to achieve software integration with different platforms have led to enormous problems, for which no single software entity could be held to be solely responsible. There have always been at least two or more entities involved, and any issue could lead to a great deal of finger pointing, invariably obfuscating the actual problem without necessarily bringing relief to the manufacturer who needs to rely on a successful integration to maintain performance.

Cluso InvMan integration does not actually involve software integration with any other software system. Instead, we utilise a simple system of data sharing without any software handshake required. Data such as part number inventory, BOM's, feeder picklists, etc, all exist on various MRP/ERP and Machine Equipment Software platforms of many kinds. Regardless of any platform, virtually all of this data is exportable in the form of a text file or csv file. Indeed, just the act of printing a feeder picklist is essentially exporting that data to a printer.

In order to share data that Cluso will require for operation, all that needs to be done is to set up a shared folder somewhere on the system (maybe 5 minutes of time) and then export the data as a file from any existing platform to that shared folder. This can be done at any time with a mouse click or it can be set up to automatically run on a scheduled basis of hourly, daily, etc. Once that is done, you can now point Cluso to that shared folder location and file and download that data into Cluso. For the first instance of downloading, you simply need to identify the configuration of the file as maybe a csv file or a text file, and note the particular differentiators separating the various columns (possibly 2-3 minutes). Cluso has action buttons for this process. The final step within Cluso is to establish the columns comparison so that a column of data from another file matches the column within Cluso (5 minutes). Again there is a help feature automatically available within Cluso that will help you to match the column data. You are finished. Cluso will now download the data correctly, without any further intervention and the Cluso software will now function.

The dataflow can be unidirectional or bi-directional, depending on how you want to operate. Further, you can also move to real time continuous updating through the use of an ODBC (Open Database Connectivity) link. Cluso provides their ODBC link upon request and you would need the corresponding ODBC link for any other software system. With both links, the real time information flow can be set up easily and quickly. Regardless of whether you utilise ODBC or just manual or scheduled data export/import, Cluso is now fully functional within your facility.

There are some cases where manufacturers may want a slightly higher level of software integration, particularly with various Machine Equipment Software. This frequently is wanted in order for the placement equipment software to communicate directly with Cluso in order to automatically light up the position of a reel that is next in line (FIFO) to replace a reel on the placement equipment that is just about to run out. Now this can also be accomplished without software integration as the operator only needs to scan the UID of the reel that is running out in order to light up the next reel position, but some manufacturers want to eliminate that step. This can be done through the Cluso InvMan API (Advanced Programming Interface). Several major placement equipment manufacturers already have this API and it can be available to any others upon request.

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