# Library Integration Toolkit

PULSONIX

## An ASCII Based Library Toolkit

The Library Integration Toolkit cost option provides Pulsonix users with the ability to automatically create library items derived from internal or external text based data sources.

The source data may be imported from an existing CAD system where the details have been specified in a text format, or from data downloaded from the Internet. The files are of a fixed ASCII format and are imported using a licensed interface mechanism.

## Who Might Use This Toolkit?

This toolkit would be used by someone who has the source library files in a format that isn't supported by one of the Pulsonix library import filters, and where the volume of data may prevent manual creation of the items using the standard Pulsonix library editor features.

This toolkit isn't required for the standard product library creation. All the tools required for building your own libraries are supplied with the Pulsonix package at no charge. This tool is for building library items where the source file is in another format.

## Standard Import Mechanism

Access is provided through the use of a license which opens up the standard import mechanism from within the Library Manager dialog on each of the library pages.

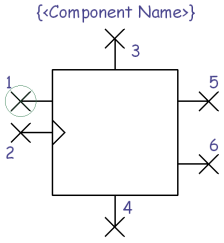
The format of the files themselves is structured so that it is neutral and highly flexible, allowing multiple items to be created from simple groups of common information or pattern changes. Each file type uses a simple command driven language with input values to describe the item. The items are described down to the detail required, for example the pad style and drill hole diameter within a pad on a footprint.

## Excel Format Files May Be Used

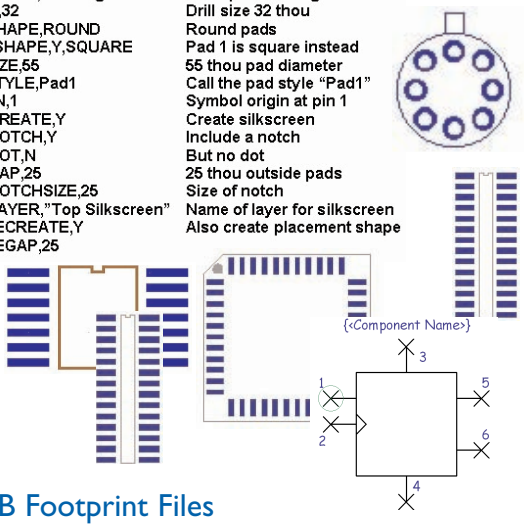
The Parts or Footprints may be in an Excel spreadsheet, CSV (comma separated value) file, database, or indeed anywhere from which you can generate the Pulsonix neutral format files. For example, from within Excel you can extract the Pulsonix neutral format using the powerful Visual Basic macro language. If required, we have programmers who can even write this code for you (under our consultancy services scheme).

## Schematic Symbol Files

A Schematic Symbol file can be formatted to support ANSI and IEEE standard symbols. Using the format definition, rows of pins can be added with varying lengths of terminal lines. The direction around the symbol shape can be defined for the pins as can their notation (Normal, Inverted, Clock, Polarity In, Polarity Out).

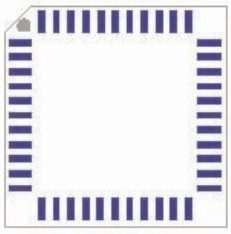



```
FORMAT,FGF,1          Always first command
UNITS,1,1,2           Thou
TYPE,                 DIP
PADLAYER,<Through Board>  Make pads through-hole
DRILL,32              Drill size 32 thou
PADSHAPE,ROUND        Round pads
PAD1SHAPE,Y,SQUARE    Pad 1 is square instead
PADSIZE,55            55 thou pad diameter
PADSTYLE,Pad1         Call the pad style "Pad1"
ORIGIN,1              Symbol origin at pin 1
SILKCREATE,Y          Create silkscreen
SILKNOTCH,Y           Include a notch
SILKDOT,N             But no dot
SILKGAP,25            25 thou outside pads
SILKNOTCHSIZE,25      Size of notch
SILKLAYER,"Top Silkscreen"  Name of layer for silkscreen
PLACECREATE,Y         Also create placement shape
PLACEGAP,25
```




## PCB Footprint Files

The PCB Footprint files can be formatted for any of the predefined pad patterns, such as DIL, QUAD, BGA etc, or by using specific positions pads can be placed in exact locations. This is ideal for complex footprints where pads are defined off-grid or which are referenced on the manufacturers datasheets using non-standard patterns.



## Parts Library Files

Where Parts libraries are to be created the file can contain single instances and multiple Part types as well as 'groups' of Parts, (Parts such as resistors or capacitors where for example just the Part Name, Value or Tolerance of the device changes but the Schematic symbol and PCB Footprints referenced are the same).

## Library Integration Toolkit Support

When you purchase the Library Integration Toolkit, the maintenance package is mandatory. This will cover you for any service patches and bug fixes in the first 12 month period. The support package covers the command language syntax, problem diagnosis and fixing, it does not cover assistance writing the files themselves. For this purpose we have available a code writing service which can be purchased separately. The support package will also provide any new commands added to the neutral format during this period.

## Consultancy Services Scheme

The 'source' data may reside on an SAP/MRP II system or in an Excel spreadsheet (if the data has been scanned in or input manually). We have experience of extracting data from these systems in the required format and can therefore offer the full front-to-back service. Where this service is provided, we guarantee that the neutral format files written will import into Pulsonix without any problems or errors. Before any consultancy service work is carried out, our engineers will assess the source system to ensure that all data can be written in the neutral format.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