



Packaging Libraries

A well recognized commercialization barrier for MEMS enabled products has been and continues to be packaging. The various technical problems have resulted in custom packaging development for each application, leading to very high overall package costs. Packaging of MEMS components differs significantly from the packaging of microelectronics, primarily because unlike microelectronics, the functional specification of the MEMS chip is critical to the design of the package.

Coventor develops Standard Package Libraries (SPLs) for MEMS that facilitates the selection process by providing ready-made package models. These SPLs can in turn be used to analyze the effects of the packages on MEMS devices. With access to package geometry and materials data, designers can choose specific package concepts from a variety of package types, initiate performance-based design (such as thermo-mechanical effects), and modify package data to specific microsystem requirements. The use of the package library helps shorten the design cycle, reduce risk and decrease time-to-market. ARCHITECT can be used to couple device/package modeling, for example, providing the ability to include package stress effects at the system level.

Coventor has partnered with packaging providers to offer libraries that contain pre-built, meshed models for more than 30 standard packages. These libraries can be used in conjunction with MEMS process design kits and enable rapid evaluation of MEMS packaging options early in the design cycle.

The main libraries are available for

- Kyocera ceramic open-tool packages
- Hymite wafer-level-packaging

Other Info:

[Kyocera Paper on Development and Verification of a Standard Packaging Library for Advanced MEMS Design](#)

