

Modelithics provides top quality simulation models for all types of RF & microwave components and semiconductor devices for use in popular Electronic Design Automation (EDA) tools. The **Modelithics COMPLETE Library** is an indispensable collection of highly scalable and non-linear simulation models for an extensive range of passive and active devices engineered to enable designers to go from concept to product faster and easier. These models for discrete die, surface mount and packaged devices are a must-have for anyone involved in PCB-based RF & Microwave circuit or module design.

Eliminate bench tuning and concentrate on your next design with accurate parasitic simulation. The versatility and accuracy of our substrate and part value-scalable models help to ensure proper component selection at the simulation stage. Our thoroughly validated non-linear active device models enable accurate predictions of large-signal as well as small-signal and noise performance, for a wide range of circuit design requirements. As the needs of design engineers vary, we offer a variety of library options for consideration.

Supported Simulators



Ansys® HFSS™
NuHertz FilterSolutions



Cadence® AWR Design
Environment® Platform
Cadence Spectre® RF



Keysight PathWave Advanced
Design System (ADS)
Keysight PathWave RF
Synthesis (Genesys)
Keysight PathWave System
Design (SystemVue)



Sonnet Suites™

Modelithics Library Options

Modelithics COMPLETE Library - Consists of the full collection of simulation models currently offered by Modelithics, including Microwave Global Models™ passive models and active device models, plus S-parameter models and the Modelithics Substrate Library. COMPLETE includes over 825 models from over 70 vendors, representing more than 25,000 components*. **Best Value!**

Modelithics COMPLETE+3D Library - Includes CLR component models, plus a collection of over 500 new 3D Geometry models. The 3D models are based on the physical characteristics of each component and can be used in full wave 3D electromagnetic (EM) simulation, including component interaction and effects of parts in close proximity.

Modelithics CLR Library - Contains passive components and is a subset of the Modelithics COMPLETE Library. It includes simulation models for various component body-sizes and part values for capacitor, inductor, and resistor families (RLC) from many popular vendors.

mmWave & 5G Library - A collection of models focused on supporting the next generation of cellular communication standards. All models in the mmWave & 5G Library are validated to a minimum of 30 GHz, with some validated up to 125 GHz!

System Components Library - An indispensable collection of simulation models active RF & Microwave devices engineered to enable designers to go from concept to product faster and easier. These models for discrete die, surface mount and packaged devices are a must-have for anyone involved in PCB-based RF & Microwave circuit or module design.

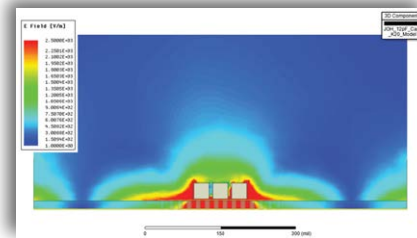
CLR Small Parts Sub-Library - A sub-library of the Modelithics CLR library of components with body sizes smaller than 0502, including 0402, 0201 and 01005.

Single Vendor Sub-Library - Includes all models for one selected vendor. EXAMPLE: Johanson, Kyocera-AVX, Smiths Interconnect, Passive Plus, etc. Choose from the 70+ vendors within the COMPLETE Library.

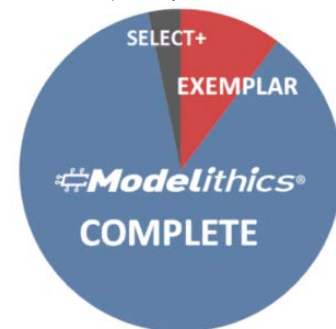
EXEMPLAR Library - A representative subset of the Modelithics COMPLETE Library. It is designed to be an effective evaluation and educational collection of models. The EXEMPLAR Library includes the example tutorial projects available on the Modelithics website and as part of the standard installation of Modelithics COMPLETE Library, plus all of the models needed to run these example projects.

SELECT+ Library

FREE downloadable collection of example models, including a select number of Modelithics Microwave Global Models™ for passives (capacitors, inductors and resistors) as well as some non-linear diode and transistor models as well as example non-linear diode and transistor models. The SELECT+ Library is a representative subset of all models available in the Modelithics COMPLETE Library™, and all SELECT+ Library models are fully functional versions of their Modelithics COMPLETE counterparts.



Magnitude E-field simulation of 3 capacitors in shunt configuration in close proximity.



**REQUEST A
FREE TRIAL TODAY!**
www.Modelithics.com/model

Modelithics License Options

Floating - There are various options available for floating licenses. A floating license gives shared usage of one or more licenses over a network within a defined area. The user(s) would need access to the server in order to use the license.

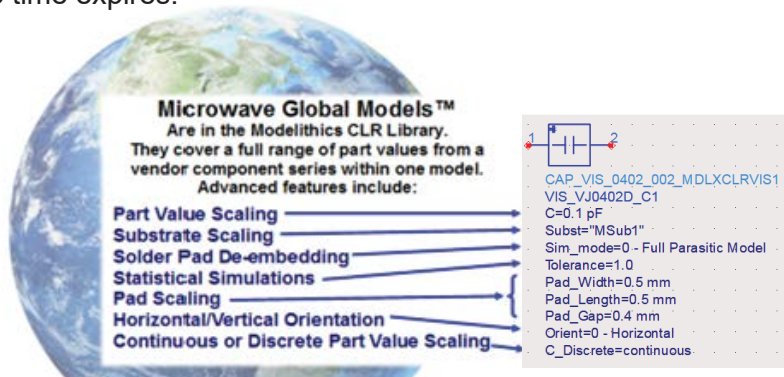
- Single-Site: *Valid for a 1-mile radius*
- Single Time Zone
- Multi-Time Zone
- North American
- Worldwide

Cloud – A cloud license is similar to a floating license. This option removes the need for IT overhead to update and maintain the license server, upgrades, adding new seats, etc. All license administrative activities are handled by Modelithics. License configuration on the client is simplified to saving a file. The client configuration is done one time and all licensing updates are handled in the cloud.

Node-Locked - Licenses are tied to a single user of a particular computer.

Dongle-Locked - Shared usage of a single license using a hardware lock. Licenses are tied to a USB dongle key. Dongle must be an RLM compatible dongle. Dongle hardware is available for purchase.

Roaming – Roaming licenses are a feature that can be added to your cloud or floating license for users that need to travel outside the defined licensing area or go off the network. A user checks a license out from the license pool for a specified limited time. The license is unavailable until the user checks the license back in or the time expires.



Model Features

- [Measurement Based](#)
- [Substrate Scalable](#)
- [Pad Scalable](#)
- [Pad Mode](#)
- [Sim Mode](#)
- [Part Value Scalable](#)
- [Advanced Pad Features](#)
- [Microwave Global Models™](#)
- [Well-Documented](#)
- [3D Models](#)

Know Your ROI

Modelithics has designed an ROI Calculator that is available for customers to use to enter their design costs to showcase the amount of savings with the Modelithics models. In just one or two design projects you will likely receive full return on your investment of the Modelithics COMPLETE Library. Try out the Modelithics ROI Calculator with your details.

www.Modelithics.com/FreeTools/ROI

The published articles outlined below from High Frequency Electronics will provide more in-depth details on using the ROI calculator as well as a customer testament of the time and money saved by using Modelithics models.

[Using Component Models to Achieve First Pass Success – A Transmitter Case Study: Part 1, Harmonic Filter Design](#)

[Using High Accuracy Models to Achieve First Pass Design Success - A Transmitter Case Study: Part 2, Power Amplifier Design](#)

Supported Software

Modelithics uses **Reprise Software RLM** licensing for all library versions 19 and above.

Operating systems we support:

Microsoft Windows (10 & 7)

Red Hat Enterprise Linux (RHEL) (7 & 6)

*Don't just use any models in your designs...
Use **Modelithics Microwave Global Models™***

To discuss the library and licensing options that best suit your needs, contact:

sales@modelithics.com