



World's Best RF & Microwave Simulation Models

## NEWS RELEASE

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### MODELITHICS AND ANSYS ACCELERATE CREATION OF COMPLEX WIRELESS COMMUNICATION SYSTEMS FOR 5G AND THE IIoT

*Strategic partnership will enable extensive 3D model library*

**PITTSBURGH, December 18, 2018** –[Modelithics](#) and [ANSYS](#) (NASDAQ: ANSS) will develop the industry's first 3D electromagnetic simulation component model library that will enable customers to accelerate the design of wireless communication systems for 5G, smart devices and the industrial internet of things (IIoT). The partnership creates a new industry paradigm for sharing intellectual property (IP) and increases the accuracy of the radio frequency (RF) and microwave design process for networking equipment and mobile devices.

Components such as inductors, capacitors, connectors and packaged filters used in wireless communication devices are packed tightly together in compressed packages to achieve increased functionality and product miniaturization. The resulting component-to-component electromagnetic (EM) field interactions and coupling, which are typically ignored in a system-level modeling approach, can significantly influence circuit performance, especially at higher 5G and millimeter wave frequencies. The ability to predict these effects during simulation is critical to meeting development timelines within budget.

Modelithics and ANSYS will create a library of models that are defined by their physical geometry and material properties and can properly simulate interactions between components and their surrounding environment. These simulation-ready 3D components can simply be added to larger system designs in ANSYS® HFSS™ without the need to apply excitations, boundary conditions or material properties.

“Through the partnership, developers of discrete components can create simulation-ready 3D components in ANSYS HFSS and provide them to end users who can reference them in larger system simulation,” said Larry Dunleavey, president, Modelithics. “The ability to collaborate through 3D

components enables vendors to provide their customers with HFSS simulation-ready models, giving them a valuable edge in enabling first-pass design success.”

“The sharing of 3D simulation-ready components is a new paradigm in electronics design and is made possible through the use of high-level, standard encryption algorithms and ANSYS’ patented feature to hide model details in HFSS — keeping a vendor’s IP safe,” said Mark Ravenstahl, technical director, strategic partnerships and business development at ANSYS. “As the leader in providing RF and microwave models, Modelithics is the right partner to deliver these models. Multiple component vendors have already committed to participating in the initiative to prioritize 3D model development of their parts.”

### **About Modelithics, Inc.**

Modelithics, Inc. ([www.Modelithics.com](http://www.Modelithics.com)) was formed in 2001 to address the industry-wide need for high-accuracy RF and microwave active and passive simulation models for use in Electronic Design Automation (EDA). Modelithics’ premium product is the *Modelithics® COMPLETE Library*, which includes the *CLR Library™*, containing measurement-based *Microwave Global Models™* for a multitude of commercially-available passive component families, the *NLD Library™* (non-linear diode models) the *NLT Library™* (non-linear transistor models), and the *SLC Library™* (system level component models). The new Modelithics COMPLETE+3D component library is also available to enable full-wave EM simulations of components, connectors and packages within ANSYS HFSS. Modelithics’ services also address a wide range of custom RF and microwave measurement and modeling needs. Modelithics® is a registered trademark of Modelithics, Inc. *Microwave Global Models™*, *CLR Library™*, *NLD Library™*, *NLT Library™*, and the *SLC Library™* are also trademarks of Modelithics, Inc. The Modelithics Vendor Partner Program allows for collaboration and open communication during the development of advanced data sets and models for commercially available microwave components and devices, with flexible sponsorship and distribution arrangements for the resulting data and models. An example of such an arrangement is the Modelithics Qorvo GaN Library, a fully sponsored library distributed for free by Modelithics under sponsorship of Qorvo®.

### **About ANSYS, Inc.**

If you’ve ever seen a rocket launch, flown on an airplane, driven a car, used a computer, touched a mobile device, crossed a bridge or put on wearable technology, chances are you’ve used a product

where ANSYS software played a critical role in its creation. ANSYS is the global leader in engineering simulation. Through our strategy of Pervasive Engineering Simulation, we help the world's most innovative companies deliver radically better products to their customers. By offering the best and broadest portfolio of engineering simulation software, we help them solve the most complex design challenges and create products limited only by imagination. Founded in 1970, ANSYS is headquartered south of Pittsburgh, Pennsylvania, U.S.A., Visit [www.ansys.com](http://www.ansys.com) for more information.

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