

Device Modeling IC-CAP Configuration

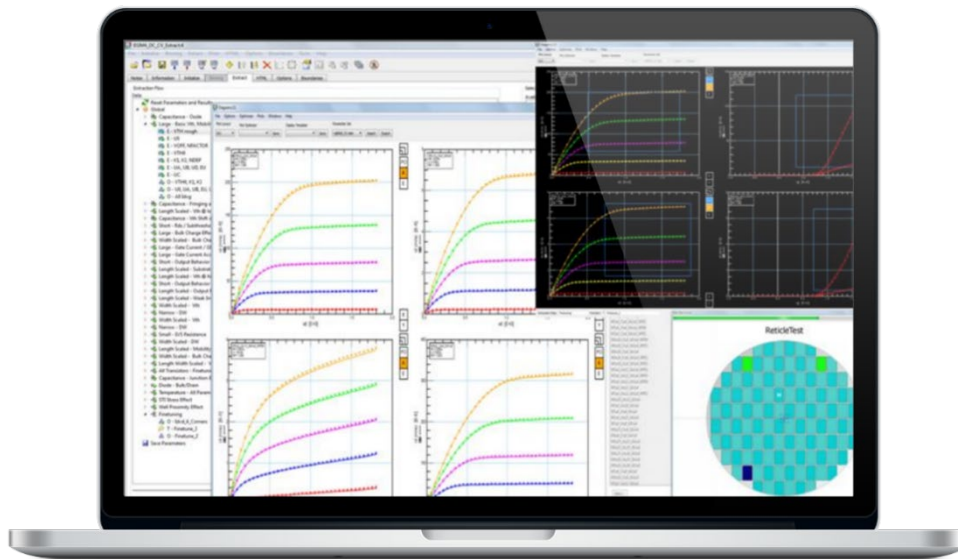
More value, simple to choose, easy to configure

Device Modeling IC-CAP Bundle Software

Device Modeling IC-CAP software bundles provide device modeling engineers with a choice of value-packed, pre-configured combinations of software built for specific device modeling design challenges. These combinations enable you to address your measurement and modeling needs efficiently.

Device Modeling IC-CAP and Measurement bundles are based on the W7001E IC-CAP Core and add separate IC-CAP or Measurement elements, each of which provides specific model extraction or measurement capabilities.

Model extraction elements are themselves comprised of one or more separate modules, which add additional modeling functions. These modules, which were formerly sold separately, are now grouped together into very efficient and effective combinations.



Configure Your New Software

This step-by-step process will help you configure your new IC-CAP software when making your initial order.

Step 1: Choose your software product

Bundles

The W7300B IC-CAP Device Modeling Platform is our core bundle and allows users to run any custom model extraction or unlicensed extraction examples, including basic measurements. The W7311B IC-CAP Wafer Professional Measurement bundle supports wafer-level automated measurements and is designed for measurement-only test benches. The W7325B IC-CAP CMC GaN RF Modeling adds the CMC GaN model extraction examples to the W7300B. The cross-platform W6325B MBP/IC-CAP Device Model Extraction is ideal for silicon users who plan to do baseband modeling with MBP and RF modeling with IC-CAP. Another cross-platform W6347B MQA/IC-CAP Modeling Bundle is suitable for users who want to do RF model extraction with IC-CAP and RF model QA with MQA.

Device modeling IC-CAP bundles

Model	Name	Description
W7300B	IC-CAP Device Modeling Platform	It contains all the tools to characterize and model semiconductor devices, including the software environment, all measurement drivers, optimization, Python/PEL programming, the Model Generator, and all simulation links with a 20-pack ADS simulator license. The legacy W8503EP DataPro is also included in this bundle.
W7301B	IC-CAP Model Generator Plus	It includes the W7300B and the W7008E Model Generator Advanced Tools, which enables tuning and optimization techniques to efficiently adjust important parameters to adapt the model to the new targets. It also includes the Model Generator QA and an additional 10-pack of ADS simulation licenses.
W7311B	IC-CAP Wafer Professional Measurement	It enables automated wafer-level measurement with turnkey measurement drivers and Python/PEL programming to customize measurement algorithms and data processing. This bundle does not include simulation.
W7325B	IC-CAP CMC GaN RF Modeling	The CMC GaN bundle includes the W7300B and the GaN RF modeling extraction examples for the ASM-HEMT and the MVSG models.
W6325B	MBP/IC-CAP Device Model Extraction	This cross-platform bundle includes the W7001E and W7010E IC-CAP Core Environment and Analysis elements and the W6300B MBP core bundle.
W6347B	MQA/IC-CAP Modeling Bundle	This cross-platform bundle Includes the W7001E and W7010E IC-CAP Core Environment and Analysis elements and the W6800B MQA core bundle.

Environment/simulation elements

Model	Name	Description
W7001E	IC-CAP Core Environment	Core, GUI, data display, PEL/Python programming, and Model Generator.
W7008E	IC-CAP Model Generator Advanced Tools	Adds the Model Generator Recentering and Targets tool with tuning and optimization techniques to efficiently adjust important parameters to adapt the model to the new targets. It also includes the new Model Generator QA.
W7009E	IC-CAP ANN Modeling Toolkit	Adds ANN solution to substitute the standard compact model with ANN technology to improve the model's accuracy
W7010E	IC-CAP Simulation and Analysis	Adds Optimization/tuning, simulation with ADS (20-pack simulations), and all other supported simulators. Note that most commercial simulators require a license.
W7014E	IC-CAP Wafer Professional (WaferPro) Add-on	Adds IC-CAP WaferPro for automated wafer-level measurement. Requires W7015 Instrument Connectivity.
W7015E	IC-CAP Instrument Connectivity	Enables all supported instrument drivers.

GaN, HEMT, MESFET model elements

Model	Name	Description
W7012E	IC-CAP FET Plus Extraction Package	Modeling extraction flow examples for EEHEMT, EEFET, Curtice, Root FET/Diode/MOS and Angelov-GaN.
W7013E	IC-CAP GaN Model Extraction Package Plus	GaN RF modeling extraction examples for ASM-HEMT, MVSG and Angelov-GaN models.
W7019E	IC-CAP NeuroFET Extraction Package	Keysight Artificial Neural Network (ANN) based model, NeuroFET extraction package for GaAs devices.
W7020E	IC-CAP DynaFET Model Generation	Keysight Artificial Neural Network (ANN) based model, DynaFET extraction package for GaN RF devices.
W7027E	IC-CAP CMC GaN RF Modeling Add-on	GaN RF modeling extraction examples for the ASM-HEMT and the MVSG models.

BJT model element

Model	Name	Description
W7011E	IC-CAP BJT Plus Extraction Package Plus	Keysight HBT, VBIC, Gummel-Poon and MEXTRAM models

MOS model elements

Model	Name	Description
W7021E	IC-CAP PSP Model Extraction Package	PSP model extraction package, target and corner modeling.
W7022E	IC-CAP HiSIM Model Extraction Package	HiSIM model extraction package, target and corner modeling.
W7023E	IC-CAP BSIMSOI Model Extraction Package	BSIMSOI model extraction package, target and corner modeling.
W7024E	IC-CAP BSIM3 Model Extraction Package	BSIM3 model extraction package, target and corner modeling.
W7025E	IC-CAP BSIM4 Model Extraction Package	BSIM4 model extraction package, target and corner modeling.
W7026E	IC-CAP HiSIM_HV Model Extraction Package	HiSIM_HV model extraction package, target and corner modeling.

Power electronics elements

Model	Name	Description
W7016E	IC-CAP Power Electronics PowerMOS SiC Extraction Package Add-on	Keysight PowerMOS SiC model for SiC and Si power devices for power electronics applications
W7017E	IC-CAP Power Electronics IGBT Extraction Package Add-on	Keysight IGBT model for power electronics applications
W7018E	IC-CAP Power Electronics GaN Extraction Package Add-on	ASM-HEMT model for power electronics applications

Step 2: Select desired license term

Table 1. License terms

License term	Description
Perpetual ¹	Perpetual licenses can be used indefinitely
Subscription	Subscription licenses can be used through the term of the license (6, 12, 24, or 36 months)

1. The purchase of EDA perpetual licenses is no longer available. For more information, refer to <https://www.keysight.com/find/eda-perpetual-license-letter>

Step 3: Select desired license type

Table 2. License types

License type	Description
Node-locked	License can be used on one specified instrument/computer
USB portable	License can be used on one instrument/computer at a time but can be transferred to another using a certified USB dongle (available for additional purchase, Keysight part number E8900-D10).
Floating	Networked instruments/computers can access a license from a server one at a time. Multiple licenses may be purchased for concurrent usage. Four types of floating license are available: N – Single site: 1-mile radius from the server; Q – Telecommuter: A time-zone in Americas; a country in Europe/Asia; R – Single region ² : Americas; Europe; Asia; W – Worldwide (export restriction identified in End User License Agreement (EULA))

2. Americas (North, Central, and South America, Canada); Europe (European Continent, Middle Eastern Europe, Africa, India); Asia (North and South Asia Pacific Countries, China, Taiwan, Japan).

Step 4: Choose your support subscription and duration

Table 3. KeysightCare Software support subscription

Subscription	Description
KeysightCare support subscription	Perpetual licenses are sold with a 12 (default), 24, 36, or 60-month software support subscription. Support subscriptions can be renewed for a fee after that.
	Subscription licenses already include a software support subscription through the term of the license.

Floating License Server Requirements

The Device Modeling IC-CAP floating license requires loading a vendor daemon on a license server. This server may be the same PC running the Device Modeling IC-CAP software. Full installation instructions and support are provided for compatible server operating systems: Microsoft Windows 10, Windows 11, RedHat Linux RHEL 7, RHEL 8, SuSe Linux SLES 12, and SuSe Linux SLES 15

Visit www.keysight.com/ind/license-server

Resources

Learn more about:

- [What's New in Device Modeling](#)
- [Device Modeling IC-CAP Design Software Technical Overview](#)
- [Software Terms, Types and KeysightCare Software Support Subscriptions](#)

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