

# Keysight EEsof EDA

Licensing Options

Configuration Guide

This guide provides an overview of licensing options which can help a user choose the appropriate product and license configuration that best suits their needs.

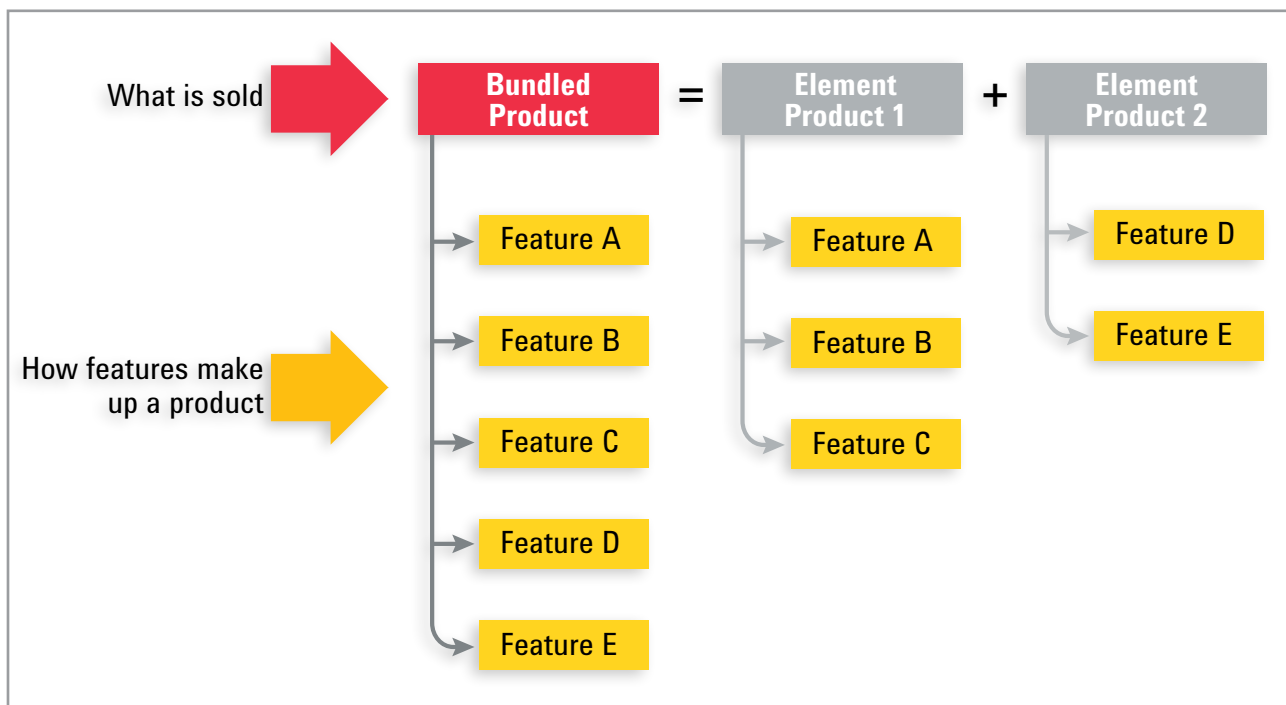
## License types

Keysight EEs of EDA provides software products in either a floating or node locked license configuration. Node locked and floating licenses are available either as perpetual or time based products.

## Product structure

Keysight EDA product structure consists of licensed elements and bundles. A bundle is a collection of licensed product element(s) designed to service a user's workflow. A bundle includes a product environment (UI) and numerous packaged features, and is a cost effective way of providing a broad range of capabilities to a user at an attractive price. Any feature accessed in a bundle will reserve the rest of the features in that bundle for the specific user.

An element is a collection of feature(s) designed for a specific task (e.g. a harmonic balance simulator element), and is typically used to extend product capability. An element reserves all features contained within it for the specific user. The relationship between bundles, elements, and features is shown in the figure below:



## License counting or job control

All Keysight EDA licenses are counted at the product license level. Simulators and certain models/libraries are counted job controlled features—a fixed count is assigned to the feature to regulate concurrent usage of the license. GUI features are not job controlled, and users can have multiple UI windows opened up simultaneously if they want.

## Bundle and element product trade-offs

The table below outlines the trade-offs between bundle only configurations and those configurations that utilize elements with bundles.

Description	Pros	Cons
Bundle only configuration	<ul style="list-style-type: none"> <li>– Reserves the entire bundled feature set for a user—access to all packaged features is guaranteed</li> <li>– Less license administration burden—fewer products to manage</li> <li>– May require less trips to license server for processes containing multiple features</li> <li>– Typically less expensive for customers with small seat counts</li> </ul>	<ul style="list-style-type: none"> <li>– If a user needs to run multiple concurrent jobs (simulations) an additional bundle may be needed to fulfill the feature request</li> <li>– Less flexibility to customize a configuration</li> <li>– Less efficient if a feature rich bundle is only utilized for a small subset of features</li> <li>– Typically more expensive for larger seat count installations</li> </ul>
Baseline bundle with augmenting elements	<ul style="list-style-type: none"> <li>– More flexibility to customize a configuration</li> <li>– More practical to run distributed simulations which need multiple simulation features</li> <li>– More cost effective for customers with moderate to large seat counts like enterprise configurations</li> </ul>	<ul style="list-style-type: none"> <li>– May require additional trips to license server for processes containing multiple features</li> <li>– Maybe more expensive to implement for small design groups</li> </ul>

## Product configuration best practices

For optimum performance, Keysight EDA recommends the following:

1. For larger installations we recommend the use of a baseline product bundle complemented by appropriate product elements to extend capability.
2. For node locked licenses or small groups using floating licenses, we recommend the use of product bundles that contain a complete feature mix that will provide the capability needed at the lowest cost.
3. Users should reduce or eliminate mixing of bundle types from the same product family. Try to decide on one base bundle that meets the design community needs. This provides the most robust behavior, user sessions are launched immediately without user intervention, and there is less chance of license denials if there is a feature contained in one bundle that is not included in other bundles.
4. If certain design groups need to utilize a specific group of products separately from other groups, there are several recommendations. First, products can be installed on an individual server and the Keysight EDA license wizard set up to only point to that primary server. Second, Flexera license file options can be used to include or exclude product use by individual user.
5. When using a bundle + elements configuration, make sure there are ample licenses of simulator and model set/library elements on the server. These products contain job controlled features, and additional purchased elements can help prevent license denials.
6. It is highly recommended that customers do not mix different versions of licenses for the same products on the same license server. Under certain circumstances this can increase the number of license queries to the server, significantly slowing the license search process — especially on global servers. In addition, the different product versions being served could consume licenses meant to support a specific product version, which could accelerate license denials for that version. Keysight recommends updating all licenses on a server to the same current version, or distributing the different versioned licenses on separate servers. Please refer to the Keysight EDA License Administration Guide for more detailed recommendations.

## Multi-core CPU support

Keysight EDA utilizes job control to manage concurrent feature usage (as opposed to CPU core counting). This enables users to exploit the capability of multi-core computers without needing additional licenses.

Remote and distributed simulation is supported. If a user has a floating license, the user may run a simulator feature that is part of a product bundle on a remote host.

## Remote and distributed simulation

For cost effectiveness, special product elements have been constructed to speed up simulation “sweeps”. These elements act as simulation accelerators. They consist of a distributed “N” pack (N is the number of parallel jobs that can be run) licenses which simulate as children alongside a standard simulator license. Distributed N pack licenses cannot run without a standard simulator license. LSF and Grid compute cluster managers are supported with distributed N packs along with job queuing. Generally speaking, distributed simulation “N” packs are effective in those cases where a sweep needs to be done and each sweep point takes more than 5 minutes to simulate. Please refer to applicable product documentation for more detailed information.

Supported operating systems	Supported license server configurations
<p>The generalized roadmap for Keysight EDA operating system support is provided in the link below. Please refer to the individual product requirements for additional details.</p> <p><a href="http://www.keysight.com/find/eesof-os-roadmap">www.keysight.com/find/eesof-os-roadmap</a></p>	<p>Keysight EDA supports all popular license server configurations supported by FlexNet. This includes single license servers, distributed license servers, and redundant servers. Single license servers are used for simple installations that do not require back-up. Distributed license servers distribute licenses over multiple machines. This may be done for one or all of the following reasons:</p> <ol style="list-style-type: none"><li>1. Assign one group to a pool of licenses</li><li>2. Provide usage overflow/peak use support</li><li>3. Improve license serving reliability</li></ol> <p>When the utmost in license server reliability is required, redundant or “Triad” servers are typically used.</p>

## Keysight EDA product structures

Keysight EDA product structures are available for viewing through the main Keysight EDA website located here:

[www.keysight.com/find/eesof](http://www.keysight.com/find/eesof)

## License dependencies

Keysight EDA products contain a broad range of capability, and some functions/features have a license dependency to other related products. A list of these product dependencies are provided through the link below.

[www.keysight.com/find/eesof-license-dependencies](http://www.keysight.com/find/eesof-license-dependencies)  
(Requires Knowledge Center Login)

**myKeysight**  
**www.keysight.com/find/mykeysight**  
A personalized view into the information most relevant to you.  
[www.keysight.com/find/eesof-os-roadmap](http://www.keysight.com/find/eesof-os-roadmap)

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: [www.keysight.com/find/contactus](http://www.keysight.com/find/contactus)

#### Americas

Canada	(877) 894 4414
Brazil	55 11 3351 7010
Mexico	001 800 254 2440
United States	(800) 829 4444

#### Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Other AP Countries	(65) 6375 8100

#### Europe & Middle East

Austria	0800 001122
Belgium	0800 58580
Finland	0800 523252
France	0805 980333
Germany	0800 6270999
Ireland	1800 832700
Israel	1 809 343051
Italy	800 599100
Luxembourg	+32 800 58580
Netherlands	0800 0233200
Russia	8800 5009286
Spain	0800 000154
Sweden	0200 882255
Switzerland	0800 805353
	Opt. 1 (DE)
	Opt. 2 (FR)
	Opt. 3 (IT)
United Kingdom	0800 0260637

For other unlisted countries:  
[www.keysight.com/find/contactus](http://www.keysight.com/find/contactus)  
(BP-07-10-14)