

# HP EEsof PC Products Comparison Guide

## Introduction

This guide is designed for customers who have an interest in HP EEsof's PC-based high-frequency design solutions, and need a comparison of features, price, and computer requirements to decide on the right product to meet their needs. Complete product information is contained in the data sheets for these products.

We have two families of products: Series IV/PC (which is the same as our UNIX circuit design products) and Touchstone and Libra for Windows (which are netlist-based products). Key differences are described below and specified in the table on the back.

## Series IV/PC vs. Touchstone and Libra for Windows

The Series IV/PC family represents our newest and most advanced PC-based EDA solutions. It features a design environment that contains a highly integrated schematic editor and simulators capable of analyzing complex circuits. Series IV/PC leverages the multi-tasking capabilities of Windows® 95 and Windows NT™ to give you tools that work together in a seamless fashion. Series IV/PC tools have tight links to manufacturing and are fully compatible with their UNIX counterparts.

Touchstone and Libra for Windows are HP EEsof's entry-level design products. They're netlist-based products that use a text editor as their primary interface, and are a good choice when working with circuits containing a small number of components. Touchstone and Libra for Windows require less computational power than Series IV/PC and are designed to operate under Windows 3.1. Other feature differences appear in the table on the back.

## Schematic Editors — Integrated vs. Non-Integrated

Schematic editors increase the accuracy of your work because component interconnections are shown graphically and there is no netlist syntax to remember. Series IV/PC features an integrated schematic editor that also provides a control point for simulation. Touchstone and Libra for Windows offer an optional schematic editor. This editor helps you construct a netlist but does not provide a control point for simulation. Therefore, netlist modifications made through tuning or optimization must be back-annotated to the schematic to avoid the risk incorrect documentation.

## Integrated Layout vs. Netlist Translation

Series IV/PC's integrated layout editor links directly to the schematic editor and simulators. This lets you edit and tune a layout while keeping your schematic fully synchronized. Since the layout editor shares the same interface as the schematic editor, you only need to learn one product. Touchstone and Libra for Windows do not have built-in layout tool capability, but offer a translator that converts the netlist into an AutoCAD™.dxf database file. This gives you a good starting point for finishing your design in a third-party layout tool.

## Network Licensing

Series IV/PC is available licensed to a single PC (with a hardware key) or in a network-licensed version. Network licensing allows multiple users to access Series IV/PC across a network and share simulators as needed. Touchstone and Libra for Windows are not available in a network-licensed version.

## More Information

Please refer to the following literature for more information:

- Series IV/PC Product Overview (5964-4392E)
- Series IV Technical Data Sheet (5962-6277E)
- Touchstone and Libra for Windows Data Sheet (5962-0208E)

Series IV/PC Products				Touchstone and Libra for Windows		
Touchstone Lite	Touchstone Design Suite	Libra Design Suite	J-Omega Design Suite	Touchstone Design Suite	Libra Design Suite	Libra Design Suite
E4606A	E4601A	E4602A	E4603A	E4740A	E4746A	E4747A

#### Design Environment

Schematic editor	yes	yes	yes	yes	optional	optional	optional
Netlist editor	-	-	-	-	yes	yes	yes
Layout editor	-	optional	optional	optional	-	-	-
Network licensing availability	-	optional	optional	optional	-	-	-
Supported Windows version	95, NT 3.51	95, NT 3.51	95, NT 3.51	95, NT 3.51	3.1	3.1	3.1
Required RAM (MBytes)	32	32	32	32	8	8	16

#### Simulators

Linear simulation	yes	yes	yes	yes	yes	yes	yes
DC-bias analysis	-	yes	yes	yes	-	-	yes
Network analyzer interface	-	yes	yes	yes	yes	yes	yes
Nonlinear simulation	-	-	yes	yes	-	-	yes
Phase-noise analysis	-	-	yes	yes	-	-	-
Performance contours (load pull)	-	-	yes	yes	-	-	-
SPICE-based transient simulation	-	optional	optional	optional	-	-	-
Convolution-based transient simulation	-	optional	optional	optional	-	-	-
Arbitrary swept parameter analysis	yes	yes	yes	yes	-	-	-
Pass parameters to subnetworks	yes	yes	yes	yes	-	-	-
Maximum number of network ports	9	99	99	99	20	20	20
Performance optimizers	2	10	10	10	8	8	8
Discrete-value optimization	-	yes	yes	yes	-	-	-
Custom model development kit	-	yes	yes	yes	-	-	-

#### Simulation Models and Libraries

Passive model families	12	13	13	13	11	11	11
Passive RF element set (standard/optional)	7 / -	7 / 28	7 / 28	35 / -	22 / -	22 / -	22 / -
Passive model types (total)	215	215	215	243	161	161	161
Nonlinear model types	21	21	30	30	4	4	13
S-parameter library (manufacturer supplied)	yes	yes	yes	yes	yes	yes	yes
Surface mount (SMT) component library	-	optional	optional	80,000+	-	-	-
Nonlinear device library (packaged/chip)	-	optional / 225	optional / 225	453 / optional	optional	255 / 123	255 / 123
Nonlinear diode library	-	optional	84	optional	-	-	-
Analog parts library	-	optional	optional	optional	-	-	yes

#### Statistical Design Tools

Yield analysis	-	yes	yes	yes	optional	yes	yes
User defined distributions	-	yes	yes	yes	-	-	-
Yield optimization	-	yes	yes	yes	optional	yes	yes
Design of experiments	-	yes	yes	yes	-	-	-

#### Integrated Schematic Editor

On-screen editing	yes	yes	yes	yes	-	-	-
Customizable toolbars and palettes	yes	yes	yes	yes	-	-	-
Edit multiple designs simultaneously	yes	yes	yes	yes	-	-	-
Edit multiple views of same design	yes	yes	yes	yes	-	-	-
Output to Mentor Graphics & other 3rd parties	-	optional	optional	optional	-	-	-

#### Integrated Layout Editor

Auto-generation from schematic	-	optional	optional	optional	-	-	-
Auto-synchronization with schematic	-	optional	optional	optional	-	-	-
Simulation from layout	-	optional	optional	optional	-	-	-
User-definable artwork generation	-	optional	optional	optional	-	-	-

#### Layout Translation

AutoCAD DXF format	-	optional	optional	optional	optional	optional	optional
Gerber, IGES, HPGL, GDSII	-	optional	optional	optional	-	-	-

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**For more information, call your local HP sales office listed in your telephone directory.**

**Data subject to change.**

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