

PADS	PADS® Standard	PADS Standard Plus	PADS Professional	Description
Schematic design	**	***	***	Schematic capture, hierarchy with cross probing to layout. Project Navigator to view parts, nets, and properties. Table-based design for high pin-out devices. PADS Standard Plus and Professional support integrated projects with integration to constraint editor.
Component Management	***	***	***	Component management system allows parametric part selection from a single database, eliminating redundancy and improving efficiency.
Variant definition		***	***	Logical and physical definition and management of variants from the schematic, passed into layout
Integrated project		***	***	Support for synchronized databases, centralized library, and constraint management system.
Constraint management	*	**	***	PADS Standard supports dialog box Design Rule Editor. PADS Standard Plus and PADS Professional support spreadsheet-based constraint editing system.
Library creation	**	***	***	PADS Standard supports unmanaged libraries; Standard Plus and Professional support centralized libraries, with the ability to define partitions to help manage content.
Advanced constraints	*	***	***	PADS Standard Plus and PADS Professional support hierarchical constraint definition including classes, groups, and pin pairs. Constraints include high-speed constraints differential pairs, matched lengths, and maximum/minimum lengths.
PCB layout	*	**		PADS Standard and Standard Plus based on proven PADS Layout technology.
			***	PADS Professional based on industry-leading Xpedition technology includes higher system performance, self-healing copper pour, and flex design features, placement planning and Sketch Router.
Interactive routing of high-speed nets		**	***	Ability to interactively route differential pairs, matched lengths, and maximum/minimum lengths.
Physical design reuse		**	***	Physical Design Reuse enables the designer to capture and store a physical Reuse Element, including routing for channel-based designs and/or golden circuits.
3D layout	*	**	***	PADS Professional comes with integrated, full 3D design capabilities with DRC, STEP import and export, and 3D PDF. (With the PADS VX.1.2 release, PADS Standard will have 3D viewing and rendering with STEP support, and PADS Standard Plus will have the same 3D functionality as PADS Professional.) PADS Professional includes 3D support of wirebonds and cavities, 3D placement planning, and model creation.
Manufacturing prep	**	**	***	CAM output generation including Gerber, NC Drill, and ODB++. PADS Professional includes IPC-2581 and GenCad export, copper balancing, and Gerber import.
Drafting and documentation	**	**	***	Create fabrication and assembly drawings, easily add dimensioning and text. PADS Professional includes detailed views and automation.

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Archive management	***	***	***	Creation and management of design archives. Ability to view schematic and layout in same UI, with cross-probing. Report generation to HTML files. Data and graphical comparisons between archives.
Starter library	***	***	***	Proven, IPC-compliant library including xDX Designer™ symbols and footprints with xDX Databook information.
PartQuest™ (supplier part data)	***	***	***	Integration with partquest.com provides access to component supplier part catalog, populated with EDA data (schematic symbol, footprint, and parametric information).
SI analysis (HyperLynx®)		***	***	Pre- and post-layout signal integrity analysis. Enables modeling and simulation of complex interconnect scenarios including clock topologies, cross sections, board stackups, crosstalk effects, termination strategies and maximum trace lengths. Determine rules, constraint, and stackup before layout, or verify that the design meets signal integrity goals post layout. Powered by HyperLynx®.
Thermal analysis (HyperLynx®)		***	***	Thermal analysis to identify "hot spots" earlier than ever. Supports convection, radiation, and conduction cooling for heat dissipation. Add mechanical devices (heatsinks, screws) to analyze their effects.
Analog simulation (HyperLynx®)		***	***	Easy-to-use, cost-effective solution for full, board-level analog simulation. EZwave™ viewer is included.
OPTIONS				
PADS DS Suite	Option	Option		Front-end suite including schematic capture, component management, variant management, and PDF output.
Advanced PCB Option		Option		High-speed autorouting, advanced packaging, and automatic testpoint assignment.
DFMA		Option		Design for fabrication and assembly analysis based on Valor® technology, the industry-leading analysis tool in fabrication and assembly shops. Over 106 separate checks done. Allows graphic synchronization with PADS layout so errors can be quickly identified and corrected in the PCB database.
PADS Collaborator		Option		Real-time communication/integration between PADS and mechanical CAD tools via the ProSTEP standard.
Advanced analysis (DDR, IR Drop)			Option	Signal integrity analysis of DDR signals, with DDR wizard for easy and fast setup. IR drop and current density analysis. All powered by HyperLynx®.
Advanced DRC			Option	Automate manual rule checks for potential EMI, SI, and PI problems with an easy-to-use graphical user interface. Based on HyperLynx DRC.
Standalone design review			Option	Collaborate with other groups by viewing the schematic and layout in one tool, with markup, redline, and compare capabilities. Stand-alone option will not tie up a PADS Professional license.