

PADS Suites & Layout Bundles Described								
	PADS Suites			PADS Solutions				Product Description
	DS	LS	ES	AMS Design Suite	Std	Std Plus	Pro	
Design Definition								
PADS DX Designer 040	X	X	X	X	X	X	X	Entry-level schematic capture plus basic constraint entry, design navigation, logical reuse, and cross probing with layout.
PADS Logic	X	X	X	X	X	X	X	Base schematic entry tool with design-rule entry, automatic part packaging, electrical rule checking and cross probing with PADS Layout.
PADS SPICEnet	X	X	X	X	X	X	X	Exports standard SPICE netlist from PADS Logic
PADS Logic PDF	X	X	X	X	X	X	X	Allows PADS Logic customers to create and share intelligent PDFs of their schematics with anyone.
xDX PDF	X	Opt.	X	X	X	X	X	With xDX PDF, customers can make intelligent PDFs of their schematics. Design hierarchy is preserved, nets are cross-referenced, and a search can be performed on any text that is visible in the schematic.
xDX DataBook for PADS	X	NA	X	X	X	X	X	Supports all ODBC compliant databases (Access, Excel, MySQL, etc.)
Spice integration	Opt.	Opt.	Opt.	Opt.	NA	Opt.	Opt.	Exports standard SPICE netlist from PADS DX Designer
Variant Manager for PADS	X	Opt.	X	X	NA	X	X	Logical variant management capability in PADS DX Designer
Analysis								
PADS AMS	NA	NA	X	X	NA	NA	X	VHDL-AMS and SPICE-based modeling and simulation technology enable virtual prototyping for mixed-signal/mixed-technology PCB circuits and optimization for real-world variability and conditions
HyperLynx Analog	Opt.	Opt.	X	Opt.	NA	X	X	Easy-to-use, cost-effective solution for full, board-level analog simulation. Prerequisite: EZwave Viewer (purchased separately). EZwave Viewer is included in the ES, Standard Plus, and Professional Suites.
HyperLynx LineSim	NA	NA	X	X	NA	X	X	Pre-layout signal integrity analysis tool. Enables modeling and simulation of complex interconnect scenarios including clock topologies, cross sections, board stackups, termination strategies and maximum trace lengths prior to physical layout. No PCB Layout Interface is required.
HyperLynx BoardSim	NA	NA	X	NA	NA	X	X	Post-layout signal integrity analysis tool.
HyperLynx Thermal for PADS	NA	NA	X	NA	NA	X	X	Thermal analysis tool for the Suites (limited functionality). This version does not have the ability to move/place components, change card outline, or start new designs.)
HyperLynx ESX	Opt.	Opt.	Opt.	Opt.	NA	X	X	Ability to conduct pre and post layout crosstalk analysis for spacing requirements and validation
PADS HL DC Drop	NA	NA	NA	NA	Opt.	Opt.	Opt.	Validate the power distribution network early. Avoid unexpected or unpredictable circuit behavior by identifying power-delivery issues early in the product creation process.
PADS HL DDR	NA	NA	NA	NA	Opt.	Opt.	Opt.	Identify and correct weaknesses in DDR1/2/3 and LPDDR1/2/3 designs. Reduce design and debug cycles with powerful wizard-based analysis of DDR-based designs.

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PADS HL DRC	NA	NA	NA	NA	Opt.	Opt.	Opt.	Electrical design checking eliminates manual board checking, looks for things that can't be simulated easily, and checks for EMI problems such as traces crossing splits and broken references.
PADS FloTHERM XT	NA	NA	NA	NA	Opt.	Opt.	Opt.	3D CFD thermal analysis. Understand the heating effects of package selection, PCB layout, and board structure within an enclosure.
DFMA	NA	Opt.	Opt.	NA	NA	Opt.	NA	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 the error can be quickly identified and corrected in the PCB database.
Core Layout								
Analog Tool Kit w/ Array Placement	Opt.	X	X	Opt.	X	X	X	Enables automatic and interactive jumper capability, and advanced teardrop and pad filleting controls for high density single and double sided designs. Provides the ability to automatically place components in radial or planar arrays. Includes pattern step and repeat, radial placement grids, array pattern wizards and additional tools for managing rotated parts and components. Also enables any-angle routing in PADS Router.
Auto Dimensioning	Opt.	X	X	Opt.	X	X	X	Provides robust dimensioning tools to automatically document the PCB form factor. Includes automatic leader break, radius/diameter dimensions, angle dimensions, and support for user-defined tolerances.
Core Layout, cont.								
DXF Link*	Opt.	X	X	Opt.	X	X	X	Provides bi-directional data exchange using Autodesk® DXF file format.
Constraint Management	NA	X	X	NA	X	X	X	Spreadsheet-based constraint management system. Automatic assignment of differential pairs. Highlight actual trace-length constraints that are in violation or out of tolerance of the constraint.
Land Pattern Creator	NA	X	X	NA	X	X	X	Parametrically create IPC-standard footprints
* Part of core product but also available as an option.								
Layout Options (many now included in specific configurations)								
Advanced Packaging Toolkit	NA	Opt.	Opt.	NA	NA	NA	NA	Automated, any-angle BGA package routing capability including automatic connection generation and substrate array pad fanout, with plating tail capability. Die and Die Flag Wizard. Import of GDSII files for die part construction, with GDSII file preview capability. Includes the Chip on Board Toolkit. (Not available for new PADS Solutions)
Advanced Rule Set (ARS)	NA	Opt.	X	NA	NA	X	X	Expands the default rule base to include rule settings for layer, class, group, pin pair, and conditional levels in addition to differential pairs. Also includes PADS AutoRouter autorouting based on expanded rule settings (except for differential pairs, min/max length, and matched lengths). Includes PCB layer stack up editor, parasitic verification of capacitance and impedance rules, verification of fast circuit design rules for cross talk, signal delay, and stub control. Includes the setting and adherence to Component Entry Rules.
Assembly Variants	NA	X	X	NA	X	X	X	Provides a quick and easy methodology for creating design variations from a single-source PCB design. Variants can be created through a simple, table-driven user interface. As variations are created, designers can preview their changes through a graphical preview option available through the same user interface.

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Clusterplacement	NA	X	X	NA	X	X	X	Includes interactive, semi-automatic, and automatic component grouping and placement. Allows both hard and soft grouping.
DFF Audit	NA	X	X	NA	X	X	X	Searches your design for manufacturability problems such as: Acid Traps, SolderMask Slivers, and Silkscreen over pads.
Design Archive	NA	NA	X	NA	X	X	X	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.
Enhanced DFT Audit	NA	Opt.	Opt.	NA	NA	NA	NA	Perform testability auditing during PCB design using embedded auditing tools developed for programming in-circuit test equipment. DFT Audit provides automated database updates for test-point insertion and preservation and enables the test engineer to evaluate the testability of PCBs based on user-defined test strategies for optimal results. Also includes PADS AutoRouter test-point autorouting capability for optimal testpoint insertion. (not available of new PADS Solutions)
IDF Link	NA	X	X	NA	X	X	X	Bi-directional interface to PADS Layout for converting PADS Layout databases to 3D Pro/ENGINEER (Creo® Parametric) databases, or other mechanical CAD tools that output/input IDF files
Hierachical placement	NA	NA	NA	NA	NA	NA	X	Automatically group and place components on the PCB based on the schematic hierarchy
Physical Design Reuse (PDR)	NA	Opt.	X	NA	NA	X	X	Physical Design Reuse enables the designer to capture and store a physical Reuse Element, including routing.
Sketch Routing	NA	NA	NA	NA	NA	NA	X	Sketch routing for auto-assisted interactive routing
New 3D Viewing	NA	NA	NA	NA	X	X	X	Enhanced 3D viewing. STEP Import and Export
New 3D Design with DRC	NA	NA	NA	NA	NA	X	X	New 3D design with DRC. STEP Import and Export
PADS AutoRouter	NA	X	X	NA	X	X	NA	Shape-based autorouter with true diagonal routing. Includes component fanout, pattern routing, and via optimization. Enables simultaneous routing of unlimited layers.
PADS Router	NA	X	X	NA	X	X	X	Fast, interactive route editor with unique aids for the interactive routing of length-constrained signals. This interactive route editor is shaped-based and gridless, with unmatched push, shove and plowing features, multiple DRC modes, and new trace editing features. Provides unlimited database for PADS Layout. Provides the shell GUI environment for PADS Layout.
PADS Router HSD	NA	Opt.	X	NA	NA	X	X	Interactive high-speed routing aids for differential pairs, min/max lengths, and matched lengths. PADS 075, 125, and LS Suite requires ARS option.

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Layout Options cont.								
PADS AutoRouter HSD	NA	Opt.	Opt.	NA	NA	NA	NA	Batch routing of max/min length, matched length, differential pairs, Tune Pass. Interactive routing features including differential pairs, addition of accordions. Note: 'PADS Router HSD' is part of 'PADS AutoRouter HSD. PADS 075, 125, and LS Suite requires ARS option. For PADS Standard Plus, this functionality is included in the PADS Standard Plus Options BND. (not available for new PADS Solutions)
PADS MCAD Collaborator	NA	Opt.	Opt.	NA	Opt.	Opt.	Opt.	Communicate design intent between electrical and mechanical CAD systems. Provides a graphical platform for collaborative "discussions," ensuring you meet both ECAD and MCAD design requirements. Based on ProSTEP standard, supports all major MCAD vendors.
PADS Multi-Trace HSD Routing	NA	NA	NA	NA	Opt.	Opt.	NA	Ability to select individual or multiple traces to autoroute, while adhering to high-speed rules such as max/min lengths, matched lengths, and differential pairs. Also ability to select already routed traces, and Tune to meet all constraints, including high-speed.
PADS Pro Multi-Trace HSD Tuning	NA	NA	NA	NA	NA	NA	Opt.	Select and tune multiple traces simultaneously. Additional high-speed rule support including timing constraints, advanced topologies, and differential pair checks. Parallelism rule definition and violation detection.
PADS Standard Plus Options BND	NA	NA	NA	NA	NA	Opt.	NA	The Advanced PCB Layout bundle includes PADS AutoRouter HSD, Advanced Packaging Toolkit, and Enhanced DFT Audit.
PADS Professional Advanced 3D	NA	NA	NA	NA	NA	NA	Opt.	Includes ECAD/MCAD Collaborator and M3DL - a library of 4 millions 3D component models
PADS Professional Design Review	NA	NA	NA	NA	NA	NA	Opt.	The Design Review option for PADS Professional lets you easily review complex PCB schematic and layout designs, add feedback, and share design information between departments and with manufacturers.
PADS Professional FPGA-PCB	NA	NA	NA	NA	NA	NA	Opt.	Optimize FPGA I/O in the context of the PCB, all the time keeping your FPGA in sync with the PCB. Also includes FPGA vendor-neutral logic synthesis that lets you keep your options open before committing to a specific architecture.
PADS Professional RF	NA	NA	NA	NA	NA	NA	Opt.	Use the Advanced RF Design option to draw RF shapes and to interface with Keysight ADS. Parametrically create RF circuits in PADS Professional and send them to ADS for simulation.