PADS Suites & Layout Bundles Described							
	Layout 585	DS	Pro DS	Std	Std Plus	Pro	Product Description
Design Definition							
PADS DX Designer 040	Opt.	X	X	X	X	X	Entry-level schematic capture plus basic constraint entry, design navigation, logical reuse, and cross probing with layout.
PADS Logic	Opt.	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	Opt.	X	--	X	X	X	Exports standard SPICE netlist from PADS Logic.
PADS Logic PDF	Opt.	X	--	X	X	X	Allows PADS Logic customers to create and share intelligent PDFs of their schematics with anyone.
xDX PDF	Opt.	X	X	X	X	X	Make intelligent PDFs of your schematics while preserving design hierarchy. Nets are cross-referenced and searches can be performed on any text that is visible in the schematic.
xDX DataBook for PADS	--	X	X	X	X	X	Supports all ODBC-compliant databases (Access, Excel, MySQL, etc.).
Spice integration	Opt.	X	X	--	Opt.	Opt.	Exports standard SPICE netlist from PADS DX Designer.
Variant Manager for PADS	Opt.	X	X	--	X	X	Logical variant management capability in PADS DX Designer.
Analysis							
HyperLynx LineSim	--	X	X	--	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	--	--	--	--	X	X	Post-layout signal intgrity analysis tool.
HyperLynx Thermal for PADS	--	--	--	--	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.	--	--	--	X	X	Ability to conduct pre- and post-layout crosstalk analysis for spacing requirements and validation.
HyperLynx Analog	Opt.	--	--	--	X	X	Easy-to-use, cost-effective solution for full, board-level analog simulation. Prerequisite: EZwave Viewer (included in the PADS ES, Standard Plus, and Professional Suites; other configurations require separate purchase).
PADS AMS (simulator)	--	X	X	--	X	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. **Free, cloud-based analog simulation is available for use with all PADS bundles and suites.**
HyperLynx DRC Free Edition	X	X	X	X	X	X	Automate the verification process, eliminate design review oversight, and save hours of manual inspection time with HyperLynx DRC. The Free Edition includes eight free electrical design rule checks. Separate download required. Annual, renewable subscription. No maintenance fee.
HyperLynx DRC Gold Edition	Opt.	--	--	Opt.	Opt.	Opt.	Includes 22 electrical design rule checks. Separate download required. Available in 3- and 12-month, low-cost renewable subscriptions. For a list of which rules are included in each HyperLynx DRC configuration, see the datasheets posted on mentor.com.
HyperLynx DC Drop PE	--	--	--	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.
HyperLynx DDR PE	--	--	--	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.
HyperLynx DRC PE	--	--	--	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	--	--	--	Opt.	Opt.	Opt.	3D CFD thermal analysis. Understand the heating effects of package selection, PCB layout, and board structure within an enclosure.
DFMA	Opt.	--	--	--	Opt.	--	Design for fabrication and assembly analysis based on Valor® technology, the industy-leading analysis tool in fabrication and assembly shops. Includes more than 106 separate checks. 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	X	--	--	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	X	--	--	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.
DXF Link*	X	--	--	X	X	X	Provides bi-directional data exchange using Autodesk® DXF file format.
Constraint Management	X	X	X	--	X	X	Spreadsheet-based constraint management system. Automatic assignment of differential pairs. Highlight actual trace-length constraints that are in violation or out ot tolerance of the constraint.

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	Layout 585	DS	Pro DS	Std	Std Plus	Pro	Product Description
Core Layout, cont.							
Land Pattern Creator	X	--	--	X	X	X	Parametrically create IPC-standard footprints. This capability is a stand-alone application for PADS Std/StdPlus; it is embedded in Library Manager for PADS Professional.
Advanced Rule Set (ARS)*	X	--	--	--	X	X	Expands the default rule base to include rule settings for layer, class, group, pin pair, and conditional levels. Also includes high-speed rules such as 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 creation of, and adherence to, component entry rules.
PADS AutoRouter	X	--	--	X	X	--	Shape-based autorouter with true diagonal routing. Includes component fanout, pattern routing, and via optimization. Enables simultaneous routing of unlimited layers.
Assembly Variants	X	--	--	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 though the same user interface.
Clusterplacement	X	--	--	X	X	X	Includes interactive, semi-automatic, and automatic component grouping and placement. Allows both hard and soft grouping.
DFF Audit	X	--	--	X	X	X	Searches your design for manufacturability problems such as: Acid Traps, SolderMask Slivers, and Silkscreen over pads.
Design Archive	X	X	X	X	X	X	Creation and management of design archives. Ability to view schematic and layout in same UI, with cross-probing. Report generation to HTLM files. Data and graphical comparisons between archives.
IDF Link	X	--	--	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.
3D viewing	--	--	--	X	X	X	Enhanced 3D viewing. STEP import and export.
Interactive Routing	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.
MCAD Collaborator	X	--	--	X	X	X	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.
High-speed Interactive Routing	X	--	--	--	X	X	Interactive high-speed routing aids for differential pairs, min/max lengths, and matched lengths.
Physical Design Reuse (PDR)	X	--	--	--	X	X	Physical Design Reuse enables the designer to capture and store a physical reuse element, including routing. PADS Professional includes Informal Reuse which supports cutting and pasting to/from the clipboard for immediate use and also to a specified folder location for use across multiple designs. Component placement and all routing is preserved and can be remapped for designs with different part/net names.
3D Design with DRC	X	--	--	--	X	X	Physical design rule checking with STEP import and export.
Hierachical placement	--	--	--	--	--	X	Automatically group and place components on the PCB based on the schematic hierarchy
Sketch routing	--	--	--	--	--	X	Sketch routing for auto-assisted interactive routing
Automation	X	--	--	X	X	X	PADS Layout supports access to automation methods for custom outputs, scripts, etc. PADS Pro has full (Xpedition) automation except for IDE (Dialog Builder) and External Engine (automation pro) support.
* Part of core product but also available as an option.							
Layout Options							
PADS Standard Plus Options BND	--	--	--	--	Opt.	--	The Advanced PCB Layout bundle includes PADS AutoRouter HSD, Advanced Packaging Toolkit, and Enhanced DFT Audit.
PADS Multi-Trace HSD Routing	--	--	--	Opt.	Opt.	--	Select individual or multiple traces to autoroute while adhering to high-speed rules such as max/min lengths, matched lengths, and differential pairs. You can also select already routed traces, and Tune to meet all contraints, including high-speed.
PADS Pro Multi-Trace HSD Tuning	--	--	--	--	--	Opt.	Select and tune multiple traces simutaneously. Additional high-speed rule support including timing constraints, advnced topologies, and differential pair checks. Parallelism rule definition and violation detection.
Design Review	--	--	--	--	--	Opt.	Lets you easily review complex PCB schematic and layout designs, add feedback, and share design information between departments and with manufacturers.
FPGA-PCB Co-design	--	--	--	--	--	Opt.	Optimize FPGA I/O in the context of the PCB while 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.
RF Design	--	--	--	--	--	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.
Rigid-Flex	--	--	--	--	--	Opt.	Model the electrical product with multiple stackups by area, including defined stiffener, cover layer, and bend areas. User control over all parameters of a flex design are easily accomplished and, once completed, can be visualized and checked for mechanical clearances within the integrated 3D environment.